

INFORMATION SHEET

**OFFICIAL COPY**

PRESIDING: Finley, Beatty, Brown-Bland, Bailey, Patterson and Gray

PLACE: Dobbs Building, Raleigh, NC

DATE: Tuesday, April 18, 2017

TIME: 9:30 a.m. – 12:27 p.m.

DOCKET NO.: E-100, Sub 148

COMPANY: Duke Energy Carolinas, LLC; Duke Energy Progress, LLC; and Virginia Electric and Power Company d/b/a Dominion North Carolina Power

DESCRIPTION: General Electric – Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities - 2016

VOLUME: 2

APPEARANCES

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**FILED**

**MAY 02 2017**

Clerk's Office  
N.C. Utilities Commission

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WITNESSES

Lloyd M. Yates

John Samuel Holeman, III

Panel: Glen A. Snider, Kendal C. Bowman and Gary Freeman

EXHIBITS

Cypress Creek Renewables Cross Examination Exhibits 1 and 2 (I/A)

Confidential Cypress Creek Renewables Cross Examination Exhibit 3 (I/A)

Freeman Exhibit 1 (I)

Freeman Rebuttal Exhibits 1 and 2 (I)

NCSEA Panel Cross Examination Exhibit 1 (I)

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COPIES ORDERED: Email: Harrod, Fenterss, Somers, Kells, Culley, Ledford, Mitchell, Bowen, Dodge, Fennell, Edmondson and Josey

Hard Copies: Finley, Buffkin, Sessoms

REPORTED BY: Kim Mitchell

TRANSCRIBED BY: Kim Mitchell

DATE TRANSCRIBED: April 27, 2017

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TOTAL: 483

1  
I/A  
vol. 2

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

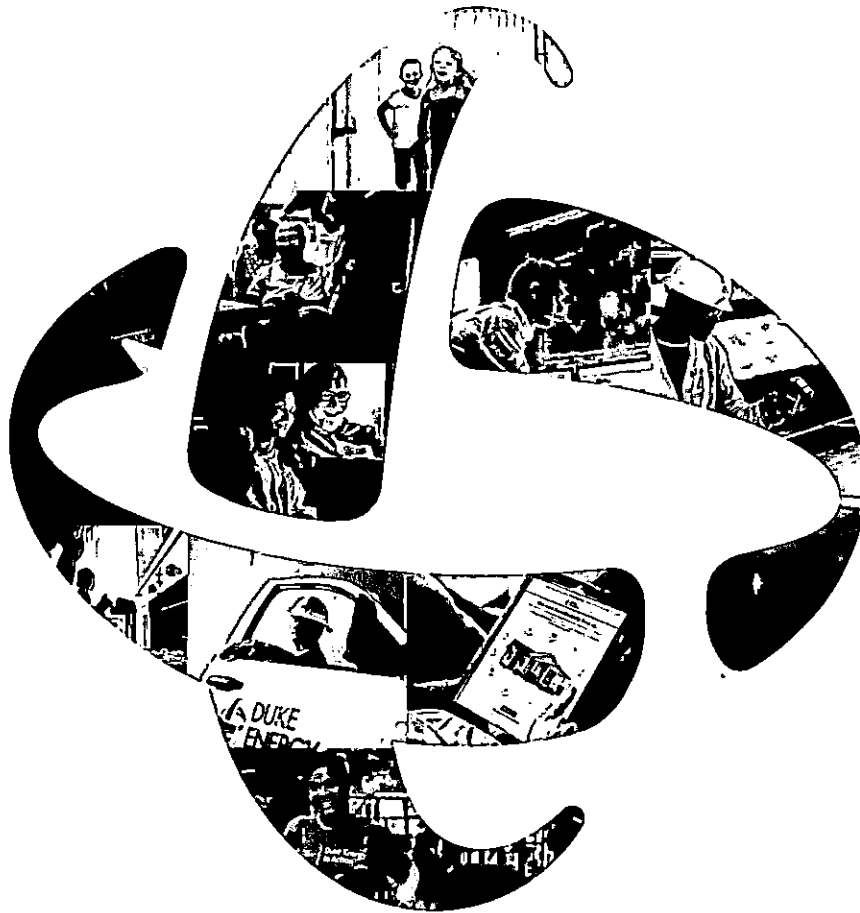
DOCKET NO. E-100, SUB 148

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

Pre-marked as Cypress Creek Renewables Cross Exhibit No. 1

(Duke Energy 2016 Annual Report)

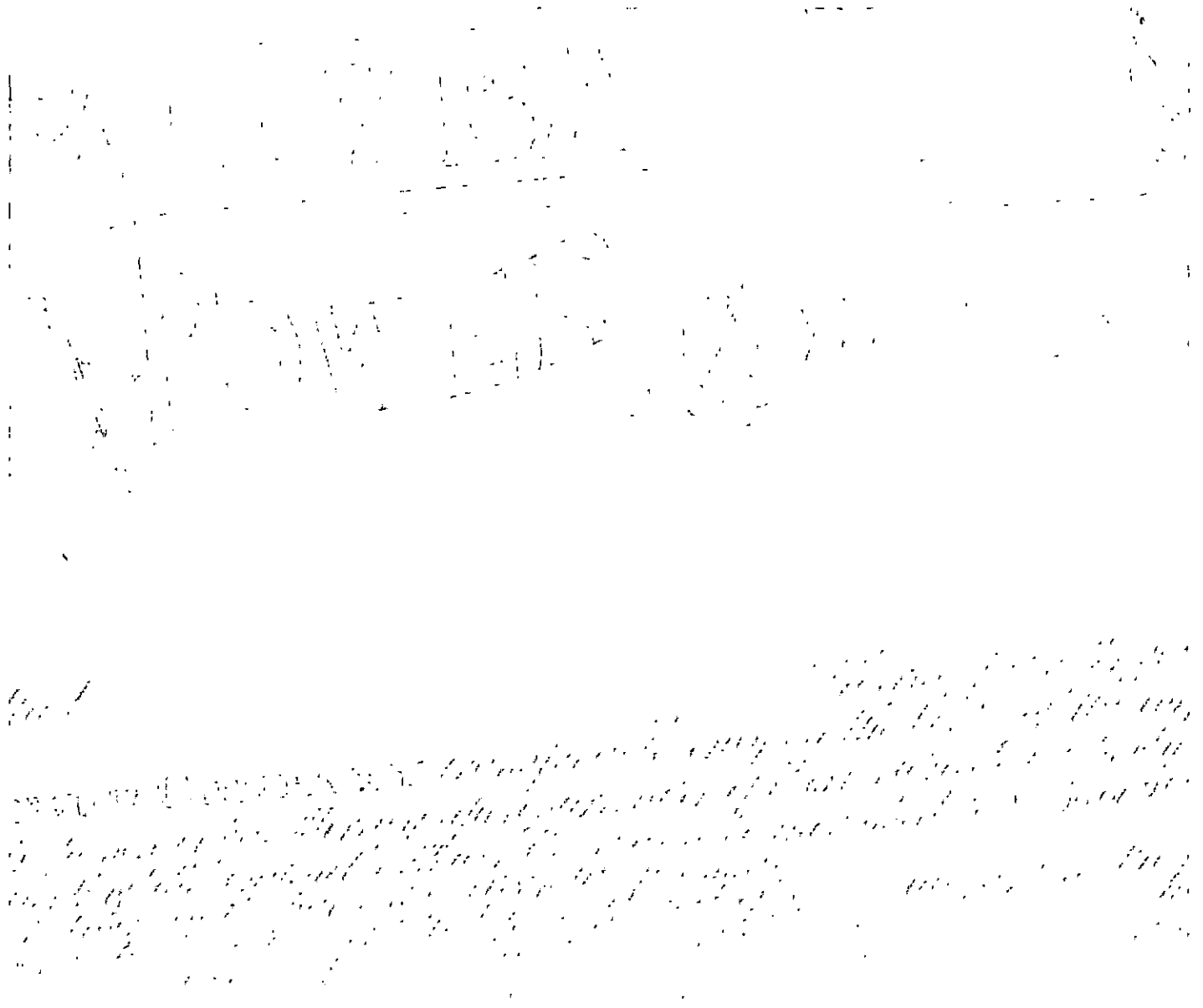
**HEARING EXHIBIT NO. \_\_\_\_\_**



Bringing the future to light.

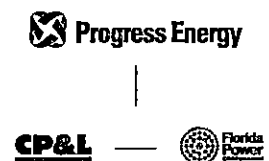
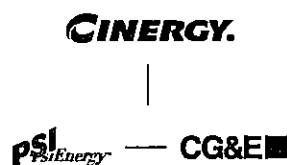
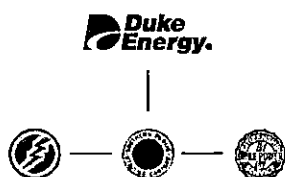


2016 ANNUAL REPORT AND FORM 10-K



## Our annual report enters the digital age.

We are driving innovation in everything we do, including how we connect with our shareholders and customers. That's why next year we'll deliver a new, interactive digital format of the annual report – and why this 2016 report will be the last printed in its current format.







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

## Dear Stakeholders:

Customer demand, market forces, policy choices and more are challenging our industry as never before. The companies that succeed in this dynamic environment are those that anticipate and adapt.

I am pleased to say Duke Energy is leading the way.

In the past year, we completed our multiyear portfolio transition, lowering our business risk to provide shareholders with more consistent earnings and cash flow growth. We sold our assets in Latin America and completed our acquisition of Piedmont Natural Gas, a premier natural gas company that will give us critical mass in this growing sector. As a result, Duke Energy now operates almost exclusively in stable, predictable regulated businesses.

As we transitioned, our long-term strategy continued to guide our company forward. Last year, we improved our industry-leading safety performance. We responsibly managed costs out of the business while keeping our growth capital plan on track. We also delivered financial results at the high end of our projections and continued to pay our dividend, now going on 91 consecutive years.

2016 was a pivotal year. It represented the culmination of work underway since 2013 to transform the company. Today's Duke Energy now stands as a leading, regulated electric and natural gas infrastructure business. Our success in driving this transformation, while also delivering solid financial results, gives us great confidence about the future.

In this letter, we outline last year's accomplishments and share our vision for where we want to take Duke Energy. As you will see, we have an ambitious, achievable strategy focused on modernizing our energy grid, generating cleaner energy and building our natural gas infrastructure – all while providing customers with the service they value.

This is our path forward. With a clear strategy and a focus on delivering value to customers, our future is bright.

# Our Financial Highlights<sup>a</sup>

(In millions, except per-share amounts and ratios)

## Operating Results

Total operating revenues	\$22,743	\$22,371	\$22,509
Income from continuing operations	\$2,578	\$2,654	\$2,538
Net income	\$2,170	\$2,831	\$1,889

## Cash Flow Data

Net cash provided by operating activities	\$6,798	\$6,676	\$6,586
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## Common Stock Data

### Shares of common stock outstanding

Year-end	700	688	707
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Weighted average – basic and diluted	691	694	707
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Reported diluted earnings per share (GAAP)	\$3.11	\$4.05	\$2.66
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Adjusted diluted earnings per share (Non-GAAP)	\$4.69	\$4.54	\$4.55
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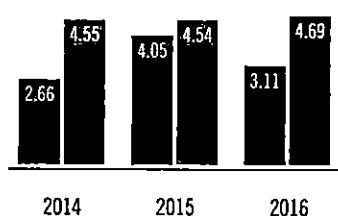
Dividends declared per share	\$3.36	\$3.24	\$3.15
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## Balance Sheet Data

Total assets	\$132,761	\$121,156	\$120,557
Long-term debt including capital leases, less current maturities	\$45,576	\$36,842	\$36,075
Total Duke Energy Corporation stockholders' equity	\$41,033	\$39,727	\$40,875

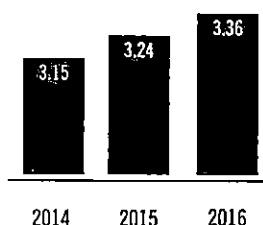
### Earnings Per Share

(in dollars) ■ Reported Diluted ■ Adjusted Diluted



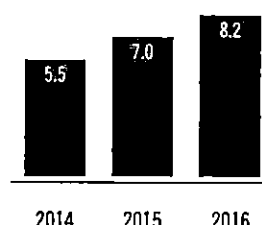
### Dividends Declared Per Share

(in dollars)



### Capital and Investment Expenditures

(dollars in billions)



<sup>a</sup>Significant transactions reflected in the results above include: (i) the sale of the International Disposal Group in 2016, including a loss on sale recorded within discontinued operations (see Note 2 to the Consolidated Financial Statements, "Acquisitions and Dispositions"); (ii) the acquisition of Piedmont in 2016, including losses on interest rate swaps related to the acquisition financing (see Note 2); (iii) 2014 impairment of the Midwest Disposal Group (see Note 2); (iv) 2014 incremental tax expense resulting from the decision to repatriate all cumulative historical undistributed foreign earnings (see Note 22, "Income Taxes"); (v) 2014 increase in the litigation reserve related to the criminal investigation of the Dan River coal ash release (see Note 5, "Commitments and Contingencies"); and (vi) costs to achieve mergers in 2016, 2015 and 2014.

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





"We produced strong financial results this year, with positive shareholder returns, solid earnings per share and successful execution on our growth capital plan — while reducing operating costs."

Steve Young / Executive Vice President and Chief Financial Officer

## Delivering Financial Results

In 2016, we produced strong financial results. We delivered adjusted diluted earnings per share of \$4.69, which was at the high end of our guidance range. These results were driven by our outstanding safety and operational performance, continued cost discipline and successful deployment of growth capital consistent with our strategy.

We understand we represent a solid, long-term holding for our investors. Foundational to this is the strength of our dividend. This year will mark the 91st consecutive year we have paid a quarterly dividend, and we expect to maintain our annual dividend growth at a rate consistent with our earnings growth. This is a tradition we are proud to continue as we return value to investors.

Our total shareholder return was 13.5 percent in 2016, compared to negative 10.8 percent in 2015. The utility industry outperformed the broader market last year, despite rising interest rates and speculation on policy and regulatory changes impacting the energy industry.

The total shareholder return of the Philadelphia Utility Index (UTY) was 17.4 percent in 2016, compared to negative 6.3 percent in 2015. Despite solid returns to investors last year, we trailed the UTY due to the uncertainty associated with our portfolio transition. Thanks to a great deal of hard work, we put that uncertainty behind us in 2016 and are now focused on executing our regulated growth strategy for years to come.

This February, we announced our 2017 adjusted diluted earnings guidance range of \$4.50 to \$4.70 per share. Our five-year, annual long-term growth rate remains 4 to 6 percent and is underpinned by delivering strong results on our growth capital plan, which we increased by 25 percent to \$37 billion. With this five-year plan, we are focused on meeting the changing needs of our customers and communities, and delivering superior returns to our investors. We will continue our cost management efforts throughout our business, keeping our pledge to maintain flat operating and maintenance expenses through 2020.

We are confident in our ability to continue delivering a reliable, growing dividend and achievable earnings growth, providing an attractive, risk-adjusted shareholder return for our investors. As a capital-intensive industry, our growth is supported by the strength of our balance sheet, which remains a continued focus for our company.

## Executing Our Strategy

For the past several years, we have worked to realign our business portfolio. An important step in this process was to remove volatility from our financial results.

Last year, we announced our intention to exit our international business to focus on predictable, stable earnings and cash flows. In October 2016, we reached agreements to sell our holdings in Brazil to China Three Gorges Corporation



Anthony Alston and James Mendenhall / Solar Technicians, Dogwood Solar Site

for approximately \$1.2 billion, and sell our remaining Latin American assets to I Squared Capital for approximately \$1.2 billion. These transactions were complex undertakings and our team worked to complete them ahead of schedule, closing both in December 2016. The cash proceeds, approximately \$1.9 billion, were used to reduce Duke Energy holding company debt and support our balance sheet.

With our transition complete, our vision for where we want to take Duke Energy is clear. We're focused on modernizing our energy grid, generating cleaner energy and building our natural gas infrastructure. And we will build on our foundation of customer satisfaction and stakeholder engagement. Everything we do begins with customer service and we understand that working with our stakeholders is critical to our success.

We see great opportunities ahead as we continue investing in infrastructure our customers value and delivering sustainable growth for our investors.

### Modernizing the energy grid

In this era of transformation, the demands on our system have never been greater. Robust investment to modernize our energy grid is essential to providing greater flexibility, better reliability and more products and services for our customers.

Our transmission and distribution system is the largest in the nation, when measured in line miles. The scale of this system requires consistent investment, and we have a 10-year, \$25 billion plan to modernize the energy grid. Our initial grid investment plan focuses on enhancing basic service offerings with smart meters and communications technologies, increasing power quality and improving reliability. These investments will also support more distributed energy resources on our system and make the grid more resilient to storms and cybersecurity threats.

Smart meters help us meet the changing needs of our customers who want more choice and control over their energy usage, while giving us the ability to manage the grid more efficiently.

"Uniting Duke Energy and Piedmont establishes scale for our natural gas platform that will provide strong growth opportunities for years to come."

Frank Yoho / Executive Vice President – Natural Gas Business





"We're constantly challenging ourselves to meet and exceed customers' expectations by enhancing our technologies to deliver smarter, more advanced solutions."

Doug Esamann / Executive Vice President – Energy Solutions  
and President – Midwest and Florida Regions

We began deployment in the Midwest in 2009, have moved to the Carolinas and we have plans to deploy in Florida over the next several years.

Already, our initial grid investments saved millions by automating manual processes and reducing the number of trips to start and stop service for customers. These investments have also allowed us to save over 50 million outage minutes for customers in 2016, a two-fold increase from 2015. As we modernize our grid, we expect to reduce our outage frequency and duration rates by 50 percent over the next 10 years.

#### Generating cleaner energy

Investing in cleaner, natural gas generation and renewables helps us move toward a low-carbon future. Our focus on generating cleaner energy, along with the retirement of more than 40 older coal units, has led to a 29 percent reduction in our carbon dioxide emissions since 2005.

Last year, we made progress on our major natural gas-fired generation projects. That included our Western Carolinas Modernization project in Asheville, North Carolina, the Lee combined-cycle facility in South Carolina and our Citrus County plant in Florida. These projects continue to move forward as planned, remaining on time and on budget.

Natural gas investments complement our continued focus on expanding our renewable portfolio. Last year, Duke Energy Renewables, our commercial business unit, added 550 megawatts

– 400 megawatts of wind and 150 megawatts of solar. Our growing portfolio now includes 21 wind projects and 63 solar facilities across 14 states.

In our regulated service territories, we connected over 500 megawatts of renewables to our systems. In 2016, we received approval for our Crane naval station solar plant in Indiana, announced two new solar projects in Florida as well as two projects totaling 75 megawatts in our Duke Energy Carolinas service territory.

Our commercial investments – more than \$5 billion over the past 10 years – plus our regulated renewables footprint have positioned us as a top five renewables company in the country with over 3,000 combined megawatts.

Our investment plan will continue to advance that position. In the next decade, we will invest \$11 billion on new, highly efficient natural gas generation and cleaner renewable energy sources. These renewable energy sources include hydro, wind and solar projects. With these investments, and our carbon-free nuclear generation, by 2026, we will reduce carbon emissions by 35 percent from our 2005 levels.

#### Building our natural gas infrastructure

It takes an extensive, resilient distribution network to deliver the benefits of natural gas, and we have made significant progress in building that infrastructure.



"We continue to engage and develop relationships with stakeholders, as we recognize the important role they play in our ability to deliver on our strategy."

Julie Janson / Executive Vice President, Chief Legal Officer and Corporate Secretary

In October 2016, we completed our \$4.9 billion acquisition of Piedmont Natural Gas. Uniting Duke Energy and Piedmont created scale for our natural gas platform that will provide strong growth opportunities for years to come. With this acquisition, we now operate a five-state natural gas distribution business and have sizable investments in midstream natural gas pipelines. We now rank second nationally for natural gas consumption across our electric utilities and local distribution companies.

We are excited about our growing midstream business as we invest in the Atlantic Coast, Sabal Trail and Constitution pipelines. This infrastructure will bring much needed natural gas supplies to the eastern United States, spurring economic growth and helping us grow our customer base in the Southeast.

Natural gas will play a major role in our company's continued growth. We plan to double the contribution of our natural gas infrastructure business, accounting for 15 percent of our portfolio in the next 10 years.

### Transforming the customer experience

As customer expectations continue to evolve, we're enhancing our technology infrastructure to deliver smarter, more advanced customer solutions.

During 2016, we enhanced our basic services to customers, including proactive outage notification options via voice, email and two-way text. In addition, customers can get predictive high bill usage alerts, giving them greater control over their monthly bill. Last year, we began testing a prepayment billing program in select regions of South Carolina, giving customers greater choice in how they pay their bills.

The rate of innovation, driven by our customers' experiences with other industries, demands we constantly challenge ourselves without sacrificing affordable rates or reliable service and we're doing that at Duke Energy. The investments we are making support our goal of moving the company into the first quartile for customer satisfaction and maintaining that position for years to come.

"We believe smart investments to modernize our energy grid are essential to providing greater flexibility, better reliability and more products and services for our customers."

Lloyd Yates / Executive Vice President — Customer and Delivery Operations and President — Carolinas Region





Matt Robinson / Lineman, Hurricane Matthew Response Team

### Engaging stakeholders

We understand the important role stakeholders play in our ability to deliver on our strategy and meet our customers' expectations. We continue to engage with them, and we're committed to finding the right balance between safety, reliability and affordability.

Our industry continues to transform and our investments are changing with it. We believe our method of recovery must adapt as well. Over the next 10 years, we will work with regulators and legislators to modernize our recovery mechanisms in all of our jurisdictions.

### Maintaining Safe, Efficient Operations

The foundation for our growth and success is our continued operational excellence. That remains a constant focus for our company, and it always starts with safety. We improved on our industry-leading performance from 2015, reducing our total incident case rate and OSHA-reportable employee safety incidents. In 2016, we had no work-related fatalities.

Today, Duke Energy leads the industry in employee safety and we will continue our focus moving forward. Nothing will deter us from our commitment to safety.

Our generation fleet met the demands of our customers, despite a summertime record for usage in the Carolinas. In 2016, our nuclear fleet increased its capacity factor for the fourth consecutive year to 95.7 percent, a new record and the 18th consecutive year our capacity factor was above 90 percent. Our fossil-hydro organization also made improvements. Our Bad Creek hydro facility celebrated its 25th anniversary, and we announced plans to upgrade the facility, adding nearly 200 megawatts of clean generating capacity. Our Edwardsport gasified-coal plant continued to improve its performance, setting continuous operation records.

We maintained this performance while responding to three natural disasters – one of which left significant damage throughout the Carolinas in its wake. Hurricane Matthew was a historic storm, requiring an equally historic response. In the Carolinas, we set a company record for restoring power, reducing outages from

"Safety and operational excellence are critical to our growth and success. I'm proud to say that in 2016 we improved upon our industry-leading performance."

Dhiaa Jamil / Executive Vice President and Chief Operating Officer





"Volunteerism is an integral part of our commitment to customers. In 2016, our employees volunteered thousands of hours of community service in their local communities for a variety of causes and organizations."

Melissa Anderson / Executive Vice President –  
Administration and Chief Human Resources Officer

1.4 million to fewer than 60,000 in five days. We tapped resources from across our company to support our customers. We also leveraged our industry partnerships and communication channels, placing over a million proactive calls to customers and sending more than 3 million emails.

The lengths our employees went through to support impacted communities was truly inspiring. They showed the very best of Duke Energy: excellence and commitment to our customers, regardless of the conditions or situations.

Our commitment to operational excellence extends to environmental stewardship. In 2016, we reduced reportable environmental events by 17 percent compared to 2015. We also made significant progress closing our coal ash basins to help protect communities and the environment while managing costs. For example, in North Carolina, we safely excavated more than 5 million tons of coal ash, moving it to permanent storage locations. In June 2016, North Carolina's coal ash legislation was updated, giving us the opportunity to use capping systems to safely close many basins in place once certain near-term projects are completed. We also published our basin closure plans across our service territories and announced two locations where coal ash will be reprocessed for use in concrete products.

In addition, we exceeded the promised savings to customers as part of our Progress Energy merger. The dedicated efforts of our teams allowed us to complete this important milestone – \$687 million in guaranteed savings – a full year ahead of our original commitment.

Our foundation of safety, operational and environmental excellence is unwavering. Any success we achieve starts here.

## Serving Our Communities

Our commitment to our customers and communities extends beyond the services we provide.

We are proud to be an economic engine for the communities we call home. Last year, Duke Energy helped attract \$4.1 billion in capital investment in our service territories, leading to the creation of over 14,000 jobs. For the 12th consecutive year, Duke Energy was named to Site Selection magazine's annual list of Top Utilities in Economic Development.

In 2016, the Duke Energy Foundation donated more than \$30 million in charitable gifts to communities and local organizations, focusing on early childhood literacy, science, technology, engineering and mathematics (STEM) education, workforce preparedness and environmental stewardship. Our efforts helped address the needs of our communities across our service territories. In Indiana, our Power of Reading

Summit brought over 400 teachers together, focused on improving literacy and arming teachers with new tools and tactics to support students.

Volunteerism is also an integral part of Duke Energy's commitment to customers. Throughout the year, our employees volunteered thousands of hours of community service in their local communities for a variety of causes and organizations.

Our sustainability efforts contribute to the vitality of our communities. For the 11th consecutive year, Duke Energy was named to the Dow Jones Sustainability Index. Since 1999, the index has identified top performing companies in each sector based on various environmental, economic and social criteria.

We want to do what's right for our customers and communities and our work last year shows our long-term commitment to them.

## Bringing The Future to Light

Every hour of every day, more than 25 million people and businesses count on Duke Energy for safe, reliable and affordable energy. The service we provide is the lifeblood of our communities and we have an obligation to help propel them forward. That's an awesome responsibility.

Since I became CEO in 2013, I have seen that conviction every day at Duke Energy. I see it in the eyes of 29,000 employees who remain dedicated to putting our customers first. Their dedication was on full display this year as they responded to three major storms.

This conviction was shown as we completed our portfolio transition to put our company in the best position for long-term growth and success. And I saw the conviction in our company's leadership, from our Board of Directors to our senior leadership team, who helped chart the right course for Duke Energy.

It's truly an honor to serve as the CEO of this company.

## Aspirations for the next decade.

- Invest \$25 billion in modernizing our energy delivery system.
- Invest \$11 billion in generating cleaner energy through natural gas and renewables.
- Double the contribution of our natural gas infrastructure business to 15 percent.
- Achieve and sustain top quartile customer satisfaction.
- Maintain our world-class safety standards and operational excellence.
- Modernize the regulatory constructs in all of our jurisdictions.

As the photos in this report show, Duke Energy has a rich, 113-year history of serving our customers. We've adapted to their ever-changing needs and that now extends to this report. Starting next year, we will create an enhanced, digital annual report, complementing our move to an online annual shareholder meeting.

I'm confident today's Duke Energy will continue to adapt. As I travel and interact with customers, employees and stakeholders, I am reminded of the impact our company has on the communities we serve – and why our transformation is so important to so many who have a stake in Duke Energy's success. Our performance in 2016 only renews my confidence in our employees, our leadership and our strategy as we continue to bring the future to light.



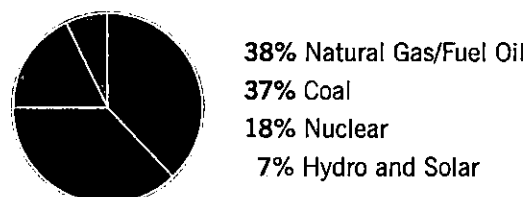
Lynn J. Good  
Chairman, President and Chief Executive Officer

March 2, 2017

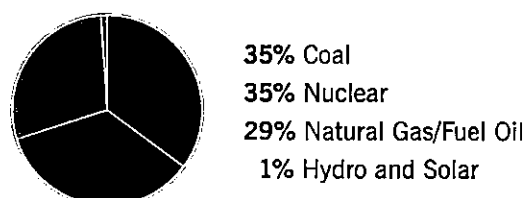
# Duke Energy At A Glance

## Electric Utilities and Infrastructure

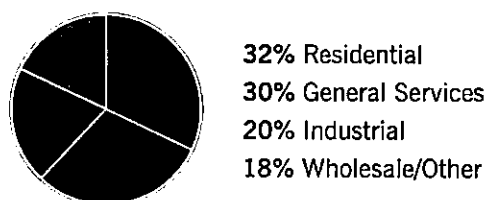
Generation Diversity (percent owned capacity)<sup>1</sup>



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



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



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

### Electric Operations

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

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

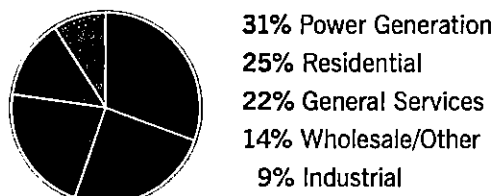
<sup>2</sup> For the year-ended December 31, 2016.

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

## Natural Gas Customer Diversity

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

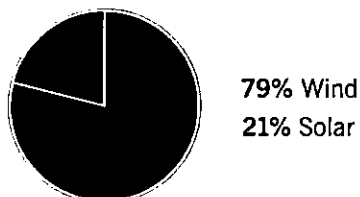
Natural Gas Operations<sup>3</sup>



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

## Duke Energy Renewables

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



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

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

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



# Board of Directors



From left to right: Ann Maynard Gray (Retiring at 2017 Annual Meeting of Shareholders), James B. Hyler, Jr., John H. Forsgren, Daniel R. DiMicco, Carlos A. Saladrigas, Thomas E. Skains, Lynn J. Good, John T. Herron, E. Marie McKee, William E. Kennard, Michael G. Browning, William E. Webster, Jr., Michael J. Angelakis, Charles W. Moorman IV and Theodore F. Craver, Jr. (Not Pictured)

## Michael J. Angelakis

Chairman and Chief Executive Officer – Atairis Management, L.P.

- Chair, Audit Committee
- Member, Finance and Risk Management Committee
- Director of Duke Energy since 2015

## Michael G. Browning

Chairman – Browning Consolidated, LLC

- Independent Lead Director
- Chair, Corporate Governance Committee
- Member, Compensation Committee, Finance and Risk Management Committee
- Director of Duke Energy since 2006

## Theodore F. Craver, Jr.

Retired Chairman, President and Chief Executive Officer – Edison International

- Member, Finance and Risk Management Committee, Regulatory Policy and Operations Committee
- Director of Duke Energy since 2017

## Daniel R. DiMicco

Chairman Emeritus, Retired President and Chief Executive Officer – Nucor Corporation

- Member, Corporate Governance Committee, Nuclear Oversight Committee
- Director of Duke Energy since 2007

## John H. Forsgren

Retired Vice Chairman, Executive Vice President and Chief Financial Officer – Northeast Utilities

- Chair, Finance and Risk Management Committee
- Member, Audit Committee
- Director of Duke Energy since 2009

## Lynn J. Good

Chairman, President and Chief Executive Officer – Duke Energy Corporation

- Director of Duke Energy since 2013

## Ann Maynard Gray

Retired Vice President, ABC, Inc. and President, Diversified Publishing Group of ABC, Inc.

- Member, Corporate Governance Committee, Finance and Risk Management Committee
- Director of Duke Energy since 1997

## John T. Herron

Retired President, Chief Executive Officer and Chief Nuclear Officer – Entergy Nuclear

- Chair, Nuclear Oversight Committee
- Member, Regulatory Policy and Operations Committee
- Director of Duke Energy since 2013

## James B. Hyler, Jr.

Retired Vice Chairman and Chief Operating Officer – First Citizens BancShares, Inc.

- Chair, Regulatory Policy and Operations Committee
- Member, Audit Committee
- Director of Duke Energy since 2012

## William E. Kennard

Non-Executive Chairman – Velocitas Partners, LLC

- Member, Corporate Governance Committee, Finance and Risk Management Committee, Regulatory Policy and Operations Committee
- Director of Duke Energy since 2014

## E. Marie McKee

Retired Senior Vice President – Corning Incorporated

- Chair, Compensation Committee
- Member, Audit Committee
- Director of Duke Energy since 2012

## Charles W. Moorman IV

President and Chief Executive Officer – Amtrak

- Member, Compensation Committee, Nuclear Oversight Committee
- Director of Duke Energy since 2016

## Carlos A. Saladrigas

Chairman – Regis HR Group

- Member, Audit Committee, Compensation Committee
- Director of Duke Energy since 2012

## Thomas E. Skains

Retired Chairman, President and Chief Executive Officer – Piedmont Natural Gas Company, Inc.

- Member, Nuclear Oversight Committee, Regulatory Policy and Operations Committee
- Director of Duke Energy since 2016

## William E. Webster, Jr.

Retired Executive Vice President, Industry Strategy for the Institute of Nuclear Power Operations

- Member, Nuclear Oversight Committee, Regulatory Policy and Operations Committee
- Director of Duke Energy since 2016

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-100, SUB 148

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

Pre-marked as Cypress Creek Renewables Cross Exhibit No. 2

(Screenshots of Duke Energy Renewables website:

<https://www.duke-energy.com/our-company/about-us/businesses/renewable-energy>)

HEARING EXHIBIT NO. \_\_\_\_\_

I/A  
vol. 2

## Duke Energy Renewables

Duke Energy Renewables is a leader in developing innovative wind and solar energy solutions for customers across the country. Use the interactive map to explore our different renewable generation facilities.

By developing renewable and clean energy technologies, we're working to reduce our company's environmental footprint. Since 2007, Duke Energy has invested more than \$4 billion to grow our portfolio of wind and solar power projects. We're also developing an expertise in advanced technologies – like our groundbreaking [Notrees Battery Storage Project](#) – to help us expand the use of renewable energy and become even more efficient at serving our customers.

As well as operating its own assets, the business offers operations and maintenance services to third-party renewables operators through Duke Energy Renewable Services. Operations and maintenance of renewables sites is supported by the sophisticated Renewable Control Center in Charlotte, North Carolina, which uses powerful and secure technology to optimize performance at wind and solar power plants across the country.

**We now own and operate about 2,900 megawatts (MW) of renewable energy:**

- 2,300 MW wind power
- 600 MW solar power

## Wind and Solar Projects

### Site Selection














We consider many factors when building wind and solar projects. We select sites that have:

- Abundant wind and solar resources at the site
- Favorable federal and state policies for renewable energy

## Renewables In The News

[View Press Releases](#)

### Related Links

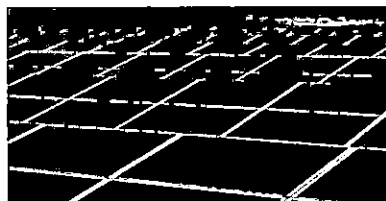
-  [Map Renewable Projects](#)
-  [Sustainability Summary](#)
-  [Renewable Control Center](#)
-  [RCC Brochure](#)
-  [Solar Power Projects](#)
-  [Solar Power: Educational Information for Kids](#)
-  [Wind Power Projects](#)
-  [Wind Power 101](#)
-  [Wind Power Education for Kids](#)
-  [Video: The One-Minute Wind Farm \(YouTube\)](#)
-  [Photos: Duke Energy Wind and Solar Farms \(Flickr\)](#)
-  [U.S. Department of Energy - Solar](#)
-  [AWEA Power of Wind](#)
-  [Supplier Registration](#)

# Duke Energy Renewables U.S. Portfolio



## Solar Power Projects

### Duke Energy Renewables



At Duke Energy, we believe generating electricity from renewable resources will play an increasingly important role in the transition to cleaner energy. That's why we're developing innovative, renewable power projects to serve communities throughout the United States.

Name/Location	In-Service Date	Capacity (AC)	PV Panels	Power Offtake
<b>Blue Wing</b> San Antonio, TX	Nov. 2010	14 MW	214,500	CPS Energy
<b>Sunset Reservoir</b> San Francisco, CA	Dec. 2010	4.5 MW	24,000	San Francisco Public Utilities Commission
<b>Ajo</b> Pima County, AZ	Sept. 2011	5 MW	21,168	Arizona Public Service Co.
<b>Bagdad</b> Yavapai County, AZ	Dec. 2011	15 MW	71,512	Arizona Public Service Co.
<b>Stanton</b> Orange County, FL	Dec. 2011	6 MW	25,172	Orlando Utilities Commission
<b>Murfreesboro</b> Murfreesboro, NC	Dec. 2011	5 MW	19,960	NCEMC (Power) GreenCo (RECs)
<b>Black Mountain</b> Mohave County, AZ	Nov. 2012	10 MW	40,000	UniSource Energy Services
<b>Gato Montes</b> Tucson, AZ	Dec. 2012	6 MW	48,000	Tucson Electric Power Company
<b>Washington Whitepost</b> Beaufort County, NC	Dec. 2012	12.5 MW	53,000	North Carolina Eastern Municipal Power Agency
<b>Highlander</b> Twentynine Palms, CA	June 2013	21 MW	100,188	Southern California Edison
<b>Millfield</b> Beaufort County, NC	Nov. 2013	5 MW	27,450	North Carolina Eastern Municipal Power Agency
<b>Washington Airport</b> Washington, NC	Dec. 2013	5 MW	23,000	North Carolina Eastern Municipal Power Agency
<b>Dogwood</b> Halifax County, NC	Dec. 2013	20 MW	93,000	Dominion NC Power
<b>Windsor Cooper Hill</b> Bertie County, NC	Dec. 2013	5 MW	23,000	Dominion NC Power
<b>Bethel Price</b> Pitt County, NC	Dec. 2013	5 MW	23,000	Dominion NC Power
<b>Pumpjack</b> Kern County, CA	Dec. 2014	20 MW	85,500	Southern California Edison
<b>Wildwood</b> Kern County, CA	Dec. 2014	20 MW	85,000	Southern California Edison
<b>Everetts Wildcat</b> Martin County, NC	Dec. 2014	5 MW	23,300	Dominion NC Power
<b>Halifax</b> Halifax County, NC	Dec. 2014	20 MW	100,000	Dominion NC Power
<b>Capital Partners, Phase I</b> Elizabeth City, NC	Dec. 2014	20 MW	93,000	George Washington University, American University and GWU Hospital
<b>Capital Partners, Phase II</b> Kelford and Whitakers, NC	Dec. 2015	33.5 MW	147,300	George Washington University, American University and GWU Hospital

<b>Battleboro</b> Edgecombe County, NC	Apr. 2015	5 MW	23,300	Dominion NC Power
<b>Creswell</b> Washington County, NC	Feb. 2015	14 MW	66,500	Dominion NC Power
<b>Sunbury</b> Gates County, NC	Aug. 2015	5 MW	23,000	Dominion NC Power
<b>Shawboro</b> Currituck County, NC	Dec. 2015	20 MW	95,000	Dominion NC Power
<b>Conetoe</b> Edgecombe County, NC	Dec. 2015	80 MW	361,450	Corning, Inc., 50 MW
<b>Seville I</b> Imperial County, CA	Dec. 2015	20 MW	270,000	San Diego Gas & Electric
<b>Seville II</b> Imperial County, CA	Dec. 2015	30 MW	350,000	Imperial Irrigation District
<b>Tarboro</b> Edgecombe County, NC	Dec. 2015	5 MW	23,000	Dominion NC Power

**Total: 405 MW**

Duke Energy Renewables also owns and operates six 1-MW solar power projects located in Murphy, Shelby and Taylorsville, NC.

#### Duke Energy Renewables

Duke Energy Renewables, part of Duke Energy's Commercial Portfolio, is a leader in developing innovative wind and solar energy generation projects for utilities, electric cooperatives, municipalities and other large energy customers.

The company has invested more than \$4 billion to grow its utility-scale wind and solar power businesses since 2007. It owns and operates more than 2,500 megawatts of renewable generation in a dozen states throughout the U.S.

Operation and maintenance of renewables sites are supported by the sophisticated Renewable Energy Monitoring Center in Charlotte, N.C., which uses powerful and secure technology to optimize performance at wind and solar power plants across the country.

#### Distributed Energy Solutions

Duke Energy Renewables invested in a suite of behind-the-meter solar, energy storage and demand management offerings in 2015, creating a complementary platform of onsite energy solutions for commercial customers.

The company acquired a majority interest in California-based REC Solar, a provider of rooftop and ground-mounted solar systems for commercial-scale customers in the retail, manufacturing, agriculture, technology, and government sectors. REC Solar is partnering with Green Charge Networks, also in California, to augment solar energy with energy storage systems, with an initial focus on the California and Hawaii markets.

Duke Energy also owns a majority interest in California's Phoenix Energy Technologies, a company that provides energy management systems and services nationwide for commercial customers, including big box retailers.

**550 South Tryon Street | Charlotte, NC 28202**  
**CommercialSolar@duke-energy.com**



WIND ENERGY >



SOLAR ENERGY >

## Renewable Energy Portfolio

FILTER BY PLANT TYPE



PLANT LIST VIEW ▶



### Midwest

Wind (4)

### Northeast

Wind (2)

### Southeast

Solar (23)

### Southwest

Solar (5)

Wind (9)

### West

Solar (6)



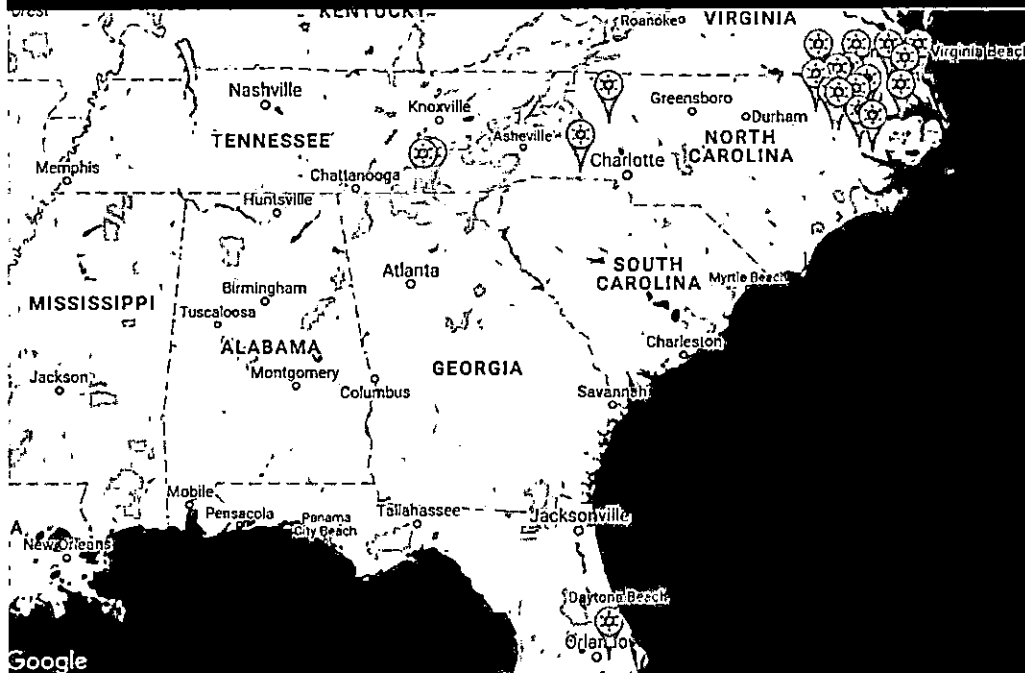
WIND ENERGY >



SOLAR ENERGY >

## Renewable Energy Portfolio

FILTER BY PLANT TYPE



◀ BACK

### Southeast

Battleboro Solar – Edgecombe County, NC

 Solar

Bethel Price Solar – Pitt County, NC

 Solar

Capital Partners, Phase I Solar – Elizabeth City, NC

 Solar

Screenshot of <https://www.duke-energy.com/our-company/about-us/businesses/renewable-energy>

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WIND ENERGY >

SOLAR ENERGY >

## Renewable Energy Portfolio

FILTER BY PLANT TYPE



◀ BACK TO REGIONAL RESULTS

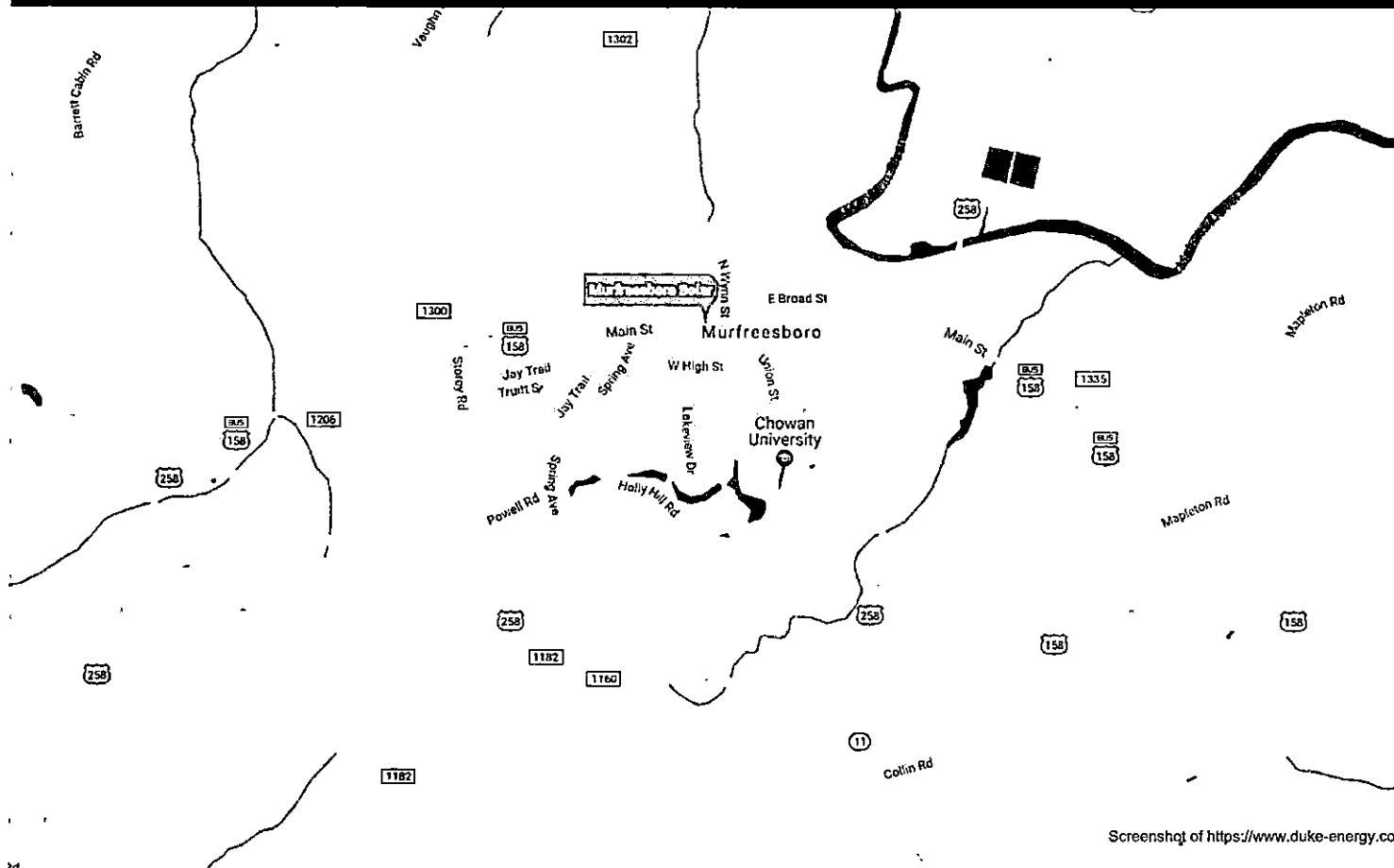
### Murfreesboro Solar

CAPACITY:  
5 MEGAWATTS

LOCATION:  
MURFREESBORO, NC

COMMERCIAL DATE:  
DECEMBER 2011

Located in Murfreesboro, North Carolina. Generates 5 megawatts of electricity, enough to power about 700 homes. Began commercial operation in December 2011. Supplies electricity to North Carolina Electric Membership Corporation under the terms of a 20-year power purchase agreement. GreenCo will purchase all renewable energy certificates (RECs) generated by the facility under the terms of a 20-year purchase agreement. Consists of 19,960 solar photovoltaic (PV) module



WIND ENERGY >

SOLAR ENERGY >


## Renewable Energy Portfolio

FILTER BY PLANT TYPE



◀ BACK TO REGIONAL RESULTS

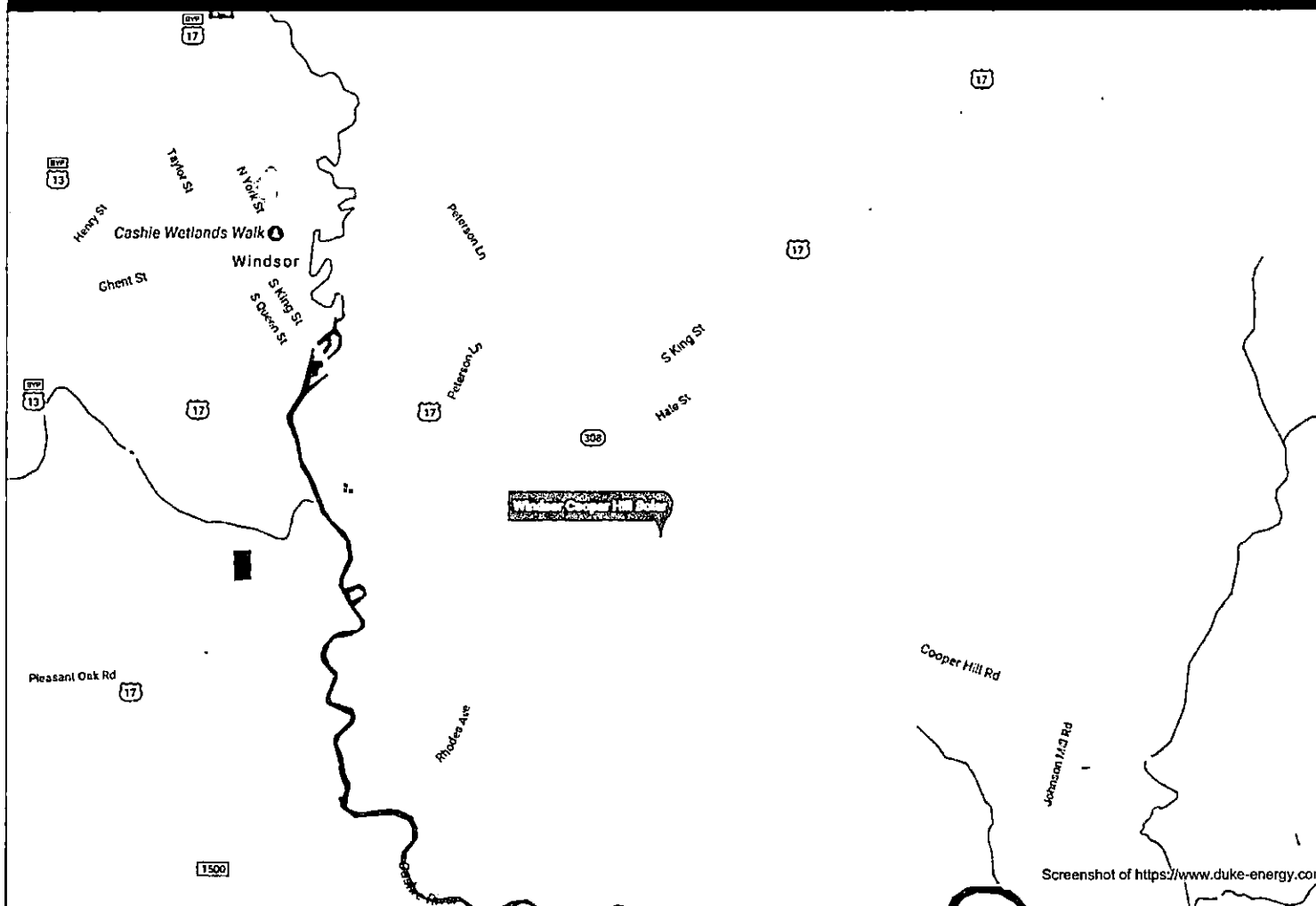
### Windsor Cooper Hill Solar

 CAPACITY:  
5 MEGAWATTS

 LOCATION:  
BERTIE COUNTY, NC

 COMMERCIAL DATE:  
DECEMBER 2013

Located in Bertie County, North Carolina. Generates 5 megawatt of electricity, enough to power about 1,000 homes. Construction completed in 2013. Supplies electricity to Dominion NC Power. Consists of approximately 23,000 solar photovoltaic (PV) modules.



WIND ENERGY >

SOLAR ENERGY >

## Renewable Energy Portfolio

FILTER BY PLANT TYPE



◀ BACK TO REGIONAL RESULTS

### Bethel Price Solar



CAPACITY:  
5 MEGAWATTS

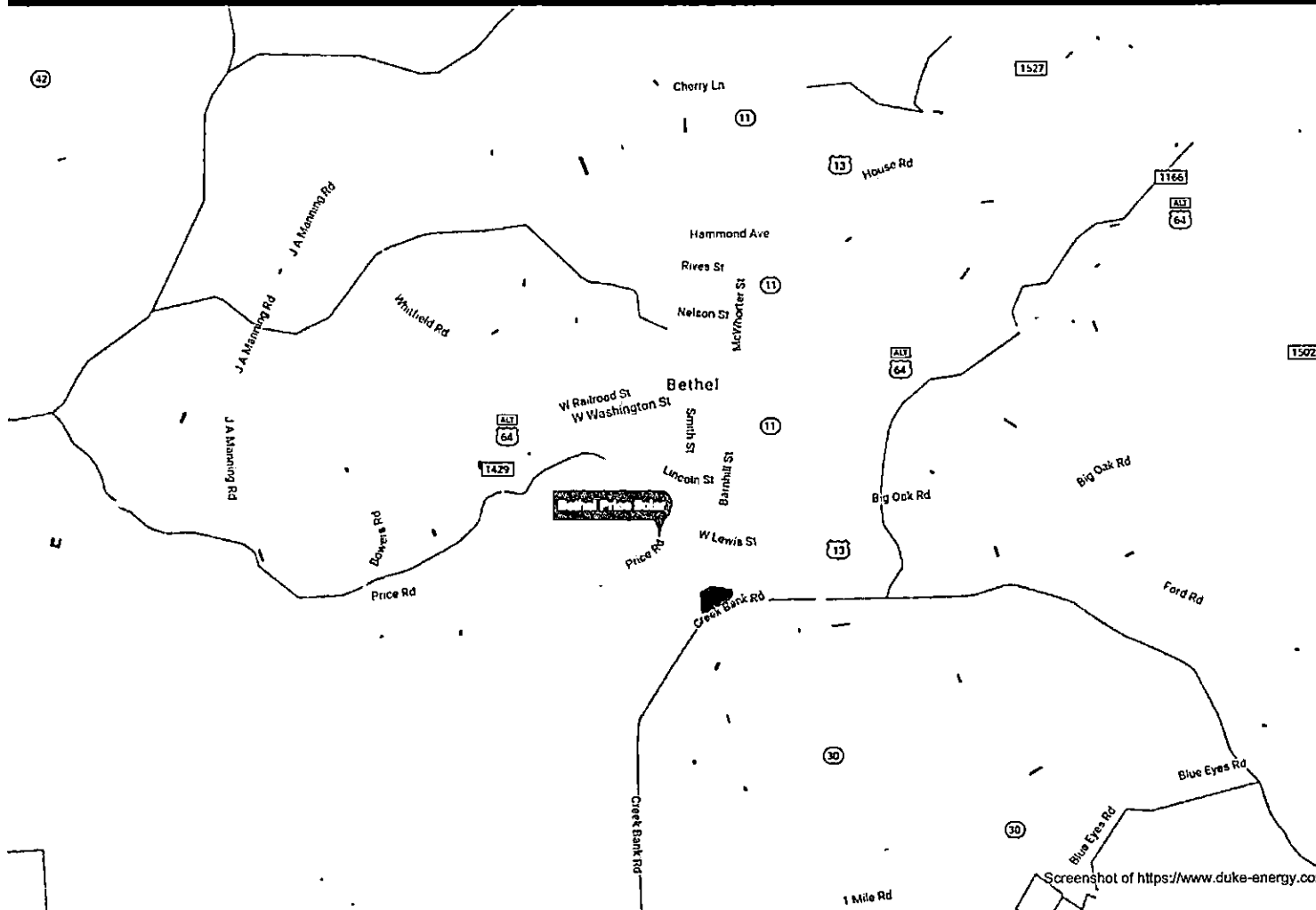


LOCATION:  
PITT COUNTY, NC



COMMERCIAL DATE:  
DECEMBER 2013

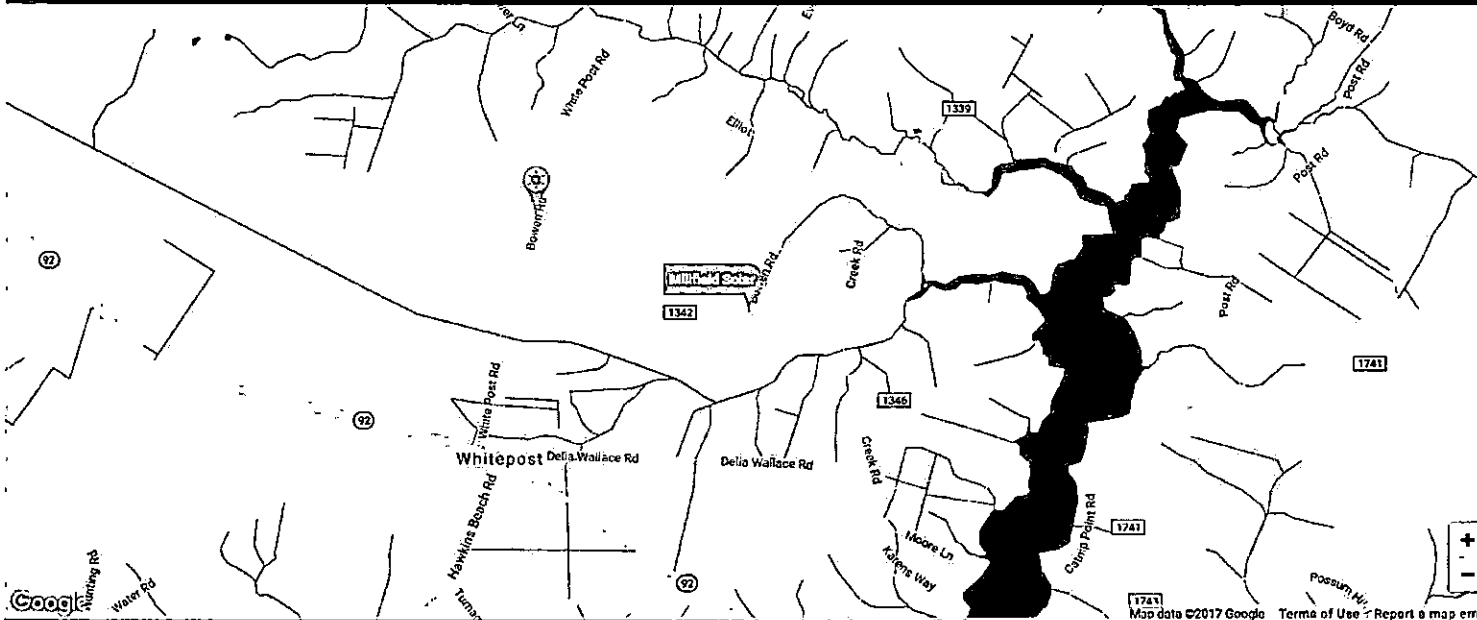
Located in Pitt County, North Carolina. Generates 5 megawatt of electricity, enough to power about 1,000 homes. Construction completed in 2013. Supplies electricity to Dominion NC Power. Consists of approximately 23,000 solar photovoltaic (PV) modules.






## Renewable Energy Portfolio


FILTER BY PLANT TYPE



### Millfield Solar

 **CAPACITY:**  
5 MEGAWATTS

 **LOCATION:**  
BEAUFORT COUNTY, NC

 **COMMERCIAL DATE:**  
NOVEMBER 2013

Located in Beaufort County, North Carolina. Generates 5 megawatt of electricity, enough to power about 1,000 homes. Began commercial operation in November 2013. Supplies electricity to North Carolina Eastern Municipal Power Agency under the terms of a 15-year power purchase agreement. Consists of 27,450 solar photovoltaic (PV) modules.

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Renewables In The News


## Renewable Energy Portfolio


FILTER BY PLANT TYPE




◀ BACK TO REGIONAL RESULTS

### Washington White Post Solar

 CAPACITY:  
12.5 MEGAWATTS

 LOCATION:  
BEAUFORT COUNTY, NC

 COMMERCIAL DATE:  
DECEMBER 2012

Located in Beaufort County, North Carolina. Generates 12.5 megawatts of electricity, enough to power about 3,000 homes. Began commercial operation in December 2012. Supplies electricity to North Carolina Eastern Municipal Power Agency under the terms of a 15-year power purchase agreement. Consists of 53,000 solar photovoltaic (PV) modules.

