Is Renewable Energy in Duke Energy’s Future?

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Melody Birmingham-Byrd, SVP Midwest Delivery Ops
Agenda

- Company Overview
- Terminology
- Our commitment to renewables
- Drivers of solar energy’s growth
- Impacts to Duke Energy
- State-specific approaches
- How you can help
Duke Energy is committed to delivering safe, reliable, affordable and increasingly clean electricity to the jurisdictions we serve.
Commitment

Solar

2013 Utility Solar Leaders
Annual MW
- 5th Duke Energy Progress
- 10th Duke Energy Carolinas
Total MW by State
- 4th North Carolina
- 10th Florida

2012 Utility Solar Leaders
Annual MW
- 8th Progress Carolinas
Total MW by Holding Company
- 8th Duke Energy

Sustainability

- 8th consecutive year, named to the 2013 Dow Jones Sustainability Index for North America
- 5th consecutive year, named to Corporate Responsibility Magazine’s ‘100 Best Corporate Citizens List’ with a rank of No. 26
- ‘2013 Top Ranked Energy Company’ by Southeastern Corporate Sustainability Rankings
Duke Energy Overview: Scale, Diversity and Flexibility

Largest utility in the United States
- Total assets: ~$115 billion
- Market capitalization: ~ $50 billion
- U.S. generation capacity: ~ 58 GW diversified portfolio
- Electric customers: 7.2 million
- Gas customers: 0.5 million

Highly-regulated business with earnings diversity

Geographic diversity
- Carolinas
- Florida
- Midwest

Fuel diversity (MWh output)
- 2005
  - 36% Coal
  - 3% Nuclear
  - 5% Natural Gas
  - 2% Oil
  - 55% Hydro/Renewables

- 2015
  - 38% Coal
  - 3% Nuclear
  - 35% Natural Gas
  - 1% Oil
  - 24% Hydro/Renewables

Region | Electric Customers
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Carolinas | 3.9 million
Florida | 1.7 million
Midwest | 1.6 million
Duke Energy Regulated Fleet – Balanced Generation Portfolio

2005

- Coal: 36%
- Nuclear: 5%
- Natural Gas: 3%
- Oil: 1%
- Hydro: 1%

SO₂: 1,058,000
NOₓ: 227,000
CO₂: 145,000,000

2010

- Coal: 35%
- Nuclear: 3%
- Natural Gas: 11%
- Oil: 1%
- Hydro: 50%

SO₂: 277,000
NOₓ: 98,000
CO₂: 140,000,000

2015

- Coal: 38%
- Nuclear: 0%
- Natural Gas: 35%
- Oil: 3%
- Hydro: 24%

SO₂: 83,000
NOₓ: 47,000
CO₂: 105,500,000

Emission Reductions

- 92%
- 79%
- 27%
Common solar terms

- Distributed Generation
- Photovoltaic (PV) solar
- Net Energy Metering (NEM)
- Qualifying Facilities (QF)
- Third-party sales / third-party leasing
Duke Energy – Commercial Power

Duke Energy Renewables U.S. Portfolio

Renewable Generation

- Wind
- Solar

150 MW
1,600 MW
- Third in the nation for solar capacity installed in 2013
- 350 MW purchased power
- 300 MW request for additional solar
- 1,700 customers using rooftop solar
- More than 3,000 MW of utility-scale projects proposed by developers
100 MW Benton Co. wind farm
10 MW Purdue Wind Farm
5 MW solar RFP
250 net metering customers
Drivers:
State policies, technology costs, electric prices, customer desires

Source: SNL Energy
October 9, 2013
Map credit: Jesse Beliavance
Duke Energy’s regulated utilities are experiencing significant growth in solar.

As of March 31, 2014:

**Solar Farms Installations (Mwac)**

**Rooftop Solar Installations (Mwac)**
Operational effects

Residential Customer Summer Profile

Residential Customer Winter Profile
Current net metering impacts

- **Cost to serve: Non-solar customer**
  - Basic Facilities Charge: Metering, billing
  - Fixed costs: Gen., T&D
  - Variable costs: Fuel, O&M
  - $400

- **Cost to serve: Solar customer**
  - Basic Facilities Charge: Metering, billing
  - Fixed costs: Gen., T&D
  - Variable costs: Fuel, O&M
  - $1,200

- **Billed amount: Solar customer**
  - Basic Facilities Charge: Metering, billing
  - Fixed costs: Gen., T&D
  - Variable costs: Fuel, O&M
  - Unrecovered fixed costs
  - $1,300/yr.
South Carolina Senate Bill 1189

Status
- The bill was signed into law on June 2, 2014.

Description
- The bill is referred to as the Distributed Energy Resource Program Act.
- Senate Bill 1189 (S.1189) represents a comprehensive approach to policies related to renewable, distributed generation in South Carolina.
- A final version of the bill can be found at this link

Major elements of the bill include
1. Fuel statute amendment
2. Distributed Energy Resource Program
3. Net Energy Metering Revision
4. Leasing of Renewable Generation
5. Interconnection Standards Revision
6. Ratemaking Study
Summary

- We support **cost-effective solar energy** and recognize it as an evolution of electric generation.
  - **$3 billion** already invested by Duke Energy in wind and solar
  - An additional **$6 billion** commitment in renewable energy power purchase agreements

- Small-scale solar and other distributed generation are **challenging us to rethink how we provide electricity** and to **consider how costs and benefits are fairly allocated**.

- We look forward to working with leaders in each of our jurisdictions to:
  - Make solar policies fair for all customers
  - Encourage the use of solar energy
  - Help spur the economy

Together, we have an opportunity to build a progressive energy policy that will be an important part of each state’s energy future.
Questions?

For more information, please email: solarenergy@duke-energy.com

or

visit duke-energy.com/solar