Duke Energy – a large-scale, highly regulated energy infrastructure company

**Headquartered in Charlotte, NC**

- **DUK**
- **LISTED**
- **NYSE**

**A Fortune 150 Company**

- **$72 B**
  - Market Cap
  - (As of 9/30/2022)

- **$172 B**
  - Total Assets
  - (As of 6/30/2022)

- **28 K**
  - Employees
  - (As of 12/31/2021)

- **54 GWs**
  - Total Generating Capacity
  - (As of 12/31/2021)

**Electric Utilities & Infrastructure**

- Operating in six constructive jurisdictions, with attractive allowed ROEs, serving 8.2 million retail customers
- Customer rates below the national average(1)
- Balanced generation portfolio that has reduced its Scope 1 carbon emissions by 44% since 2005(2)
- Industry-leading safety performance, as recognized by EEI

**Gas Utilities & Infrastructure**

- Five state LDCs serving 1.6 million customers
- Strong earnings trajectory driven by customer growth, system integrity improvements, and continued expansion of natural gas infrastructure
- Efficient recovery mechanisms allow for timely recovery of investments

**Commercial Renewables**

- Currently under strategic review
- Approximately 5 GWs of wind and solar in operation
- Long-term Power Purchase Agreements with creditworthy counterparties

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(2) Year to year reductions will be influenced by customer demand for electricity, weather, fuel, purchased power costs and other factors
Road to Net Zero

Where we’ve been
(2005 – 2021)

- 7,500 MW coal retired
- 6,000 MW regulated renewables
- 44% CO₂ reduction by 2021
- Net-zero methane for LDC

Where we’re going
(2022 & beyond)

- 2030: On track to exceed 50% Scope 1 reduction target
- 2035: New interim target 50% Scope 2 & 3 reduction
- 2040: New interim target 80% Scope 1 reduction
- 2050: Affirming net-zero Scope 1,2,3 target

Notes:
1. Off 2005 levels
2. Off 2021 levels. Certain Scope 3 emissions include: upstream fossil fuel procurement, production of power purchased for resale, and downstream use of solid products in our natural gas LDCs.
3. Includes utility-owned and purchase power agreements.
4. Subject to regulatory approvals. Contemplates retiring Edwardsport coal gasifiers by 2035 or adding carbon capture utilization and storage to reduce carbon emissions.

Generation & Transmission Strategy
Carolinas Carbon Plan

**PORTFOLIOS**
- Grid Edge
- Coal Retirements
- New Solar
- Battery
- Onshore Wind
- Offshore Wind
- New Nuclear
- New Pumped Storage
- New CC
- New CT

**Resources by 2035**
- **P1** 70% by 2030
  - EE 1% of eligible retail sales
  - (-6.2 GW)
  - 11.9 GW
  - 4.2 GW
  - 0.8 GW
  - 2.5%
- **P2** 70% 2032 OSW
  - IVVC growing to 96% (DEC) and 97% (DEP) circuits
  - 8.6 GW
  - 2.3 GW
  - 1.6 GW
  - 1.1 GW
  - 2.4%
- **P3** 70% 2034 SMR
  - Winter DR & CPP
  - 7.6 GW
  - 2.4 GW
  - 0.6 GW
  - 1.9%
- **P4** 70% 2034 OSW + SMR
  - 7.6 GW
  - 2.0 GW
  - 0.8 GW
  - 0.8 GW
  - 2.0%

**Average Annual Retail Bill Impact Through 2035**
- 2.5%
- 2.4%
- 1.9%
- 2.0%

**Note:**
1. Gray blocks denote coal retirements, which are dependent on addition of resources shown.
2. Remaining coal planned to be retired by year end 2035.
3. New Solar includes solar + storage, excludes projects related to pre-existing programs such as HB 589 and Green Source Advantage.
4. Capacities as of beginning of 2035.
5. IVVC = Integrated Volt/Var Control.
6. CPP = Critical Peak Pricing.
7. Battery includes batteries paired with solar.
8. Average bill impact with Appalachian fuel availability; estimated bill impact with alternative fuel supply is 2.1% to 2.7% annually.
Diverse generation mix key to reliability and rate stability for customers

- **Renewables**: Builds to ~35% of total generation by 2040
- **ZELFRs**: Dispatchable zero-carbon resources; enables transition from natural gas
- **Existing nuclear**: Reliable zero-carbon baseload generation throughout
- **Natural gas**: Bridge fuel, enabling coal retirements over the next decade
- **Coal**: Represented ~60% of generation in 2005; declining to ~5% by 2030

(1) Zero-emission load following resources (ZELFRs) include small modular reactors and turbines run off hydrogen or biofuels.
Duke Energy PMU overview

- Approximately 400 PMUs installed and sending data to Pi
- PMUs are used for Post Event Analysis regularly by both Operations Engineering and Asset Management.
  - Solar performance during system disturbances
  - Time correlation and evidence of disturbances for fault analysis
  - After-the-fact analysis for longer duration faults
  - Occasionally request to see if PMUs detected an event
- PMUs use in real time applications is limited
  - Used in the EMS State Estimator to supplement SCADA data.
  - A PMU summary display of data in the EMS
  - Evaluating the results of Electric Power Group (EPG) analysis of PMU data for events to determine if Duke should consider real time notifications