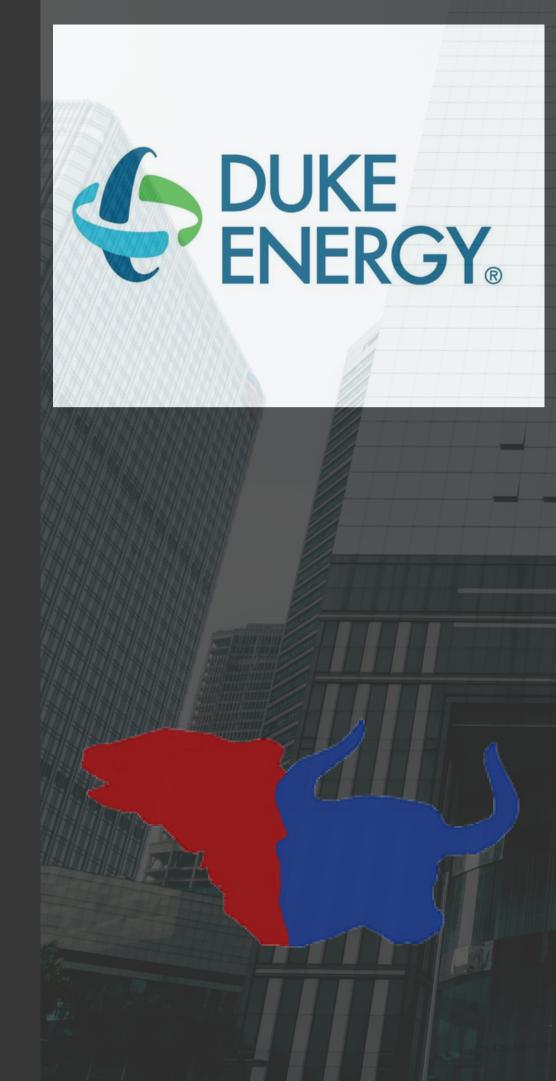
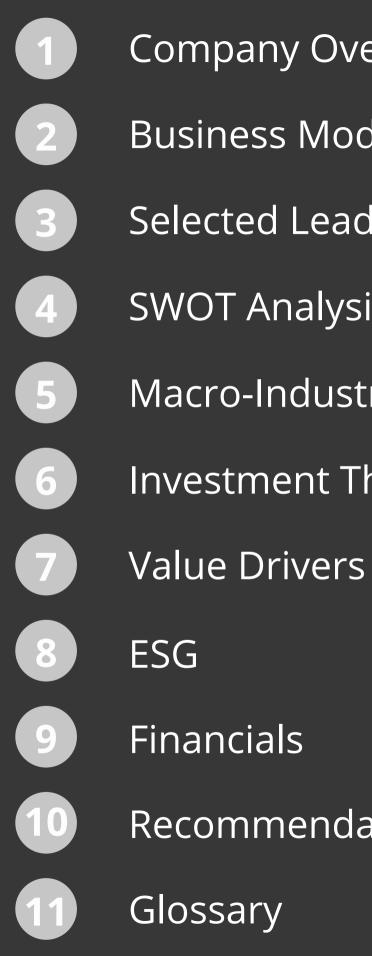
# **UTMCAP Investment Pitch**

# Duke Energy

Presented by: UTMCAP '23-'24 PU&I team Zaryab, Vito, Jim & Chris



# Table of Contents

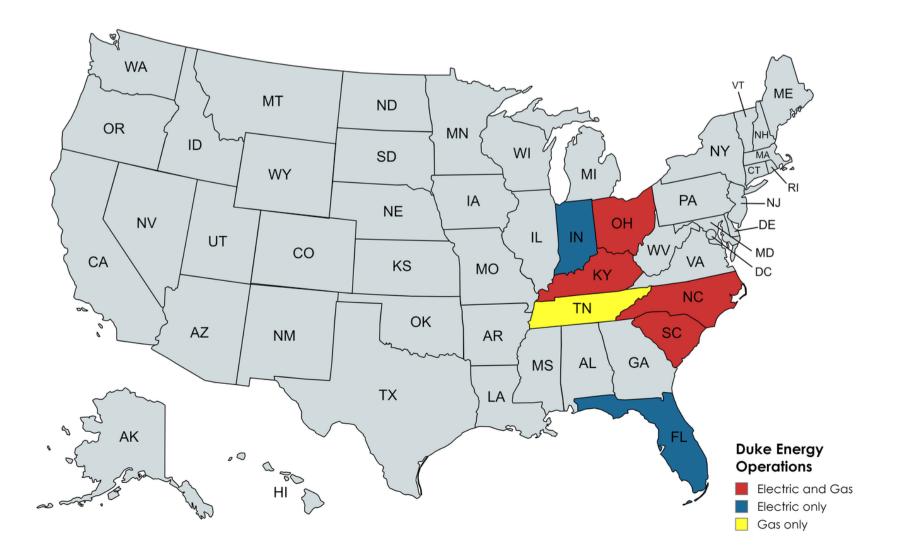


- **Company Overview**
- **Business Model**
- Selected Leadership & Recent News
- SWOT Analysis
- Macro-Industry Analysis
- Investment Thesis

- Recommendation

# **Company overview**

- Fortune 150 company / one of America's largest energy-holding companies
- headquartered in Charlotte N.C.
- Electric utilities serve 8.2 million customers in 6 states
- Owns 50.000 megawatts of energy capacity
- Natural gas serves 1.6 million customers in 5 states
- 28,000 employees
- Company strategy:
  - achieve net zero methane emissions from natural gas business by 2030
  - achieve net zero carbon emissions from electricity generation by 2050



Duke Energy is one of the largest regulated utilities in the United States. Florida is Duke's most constructive and attractive jurisdiction, with higher-than-average load growth and best-in-class regulation that allows for higher-than-average returns on equity, forward-looking rates, and automatic base rate adjustments. In North Carolina, Duke's largest service territory, the outlook has improved significantly. Legislation allows for multiyear rate plans, including rate increases for projected capital investments. Indiana remains constructive, allowing recovery for investments for renewable energy and future recovery on and of investments for coal ash remediation, with a forward-looking test year. Duke's \$73 billion capital investment plan for 2024-28 is focused on clean energy as the company works toward net zero carbon emissions by 2050 and net zero methane emissions by 2030. Management sees growth opportunities beyond its five-year forecast.

MAJOR PLAYER
Duke Energy
Major player in 3 industries:
22 <u>Utilities</u>
22111a Coal & Natural Gas Power
22111d Wind Power

## The Business Model

- Duke Energy Corp. engages in distribution of natural gas and energy related services. It operates through the following segments: Electric Utilities and Infrastructure, Gas Utilities and Infrastructure, and Commercial Renewables.
- Regulated utility business model. Rates charged are determined by state utility commissions and are designed to allow them to recover the cost of their operations and earn a reasonable return on their investments.
- The company's electric utilities serve 8.2 million customers and collectively own 50,000 megawatts of energy capacity. Its natural gas unit serves 1.6 million customers.
- Aggressive clean energy transition in progress to achieve its goals of net-zero methane emissions from its natural gas business by 2030 and net-zero carbon emissions from electricity generation by 2050

### **Sources of Electricity**

EU&I relies principally on natural gas, nuclear fuel and coal for its generation of electricity. The following table lists sources of electricity and fuel costs for the three years ended December 31, 2023.

	Gener	Generation by Source			Cost of Delivered Fuel per N Kilowatt-hour Generated (Cer			
	2023	2022	2021	2023	2022	2021		
Natural gas and fuel oil <sup>(a)</sup>	33.3%	34.2%	31.8%	3.81	6.35	3.89		
Nuclear <sup>(a)</sup>	28.4%	26.6%	29.8%	0.58	0.58	0.58		
Coal <sup>(a)</sup>	12.8%	13.5%	18.2%	4.07	3.43	2.84		
All fuels (cost based on weighted average)(a)	74.5%	74.3%	79.8%	2.63	3.75	2.42		
Hydroelectric and solar <sup>(b)</sup>	1.8%	1.5%	1.5%					
Total generation	76.3%	75.8%	81.3%					
Purchased power and net interchange	23.7%	24.2%	18.7%					
Total sources of energy	100.0%	100.0%	100.0%					

### ★ REVENUE STREAMS

Sales of energy and gas **Regular** payments Contracts Projects Asset Recovery auctions Real state sales Real state leasing

### COST STRUCTURE

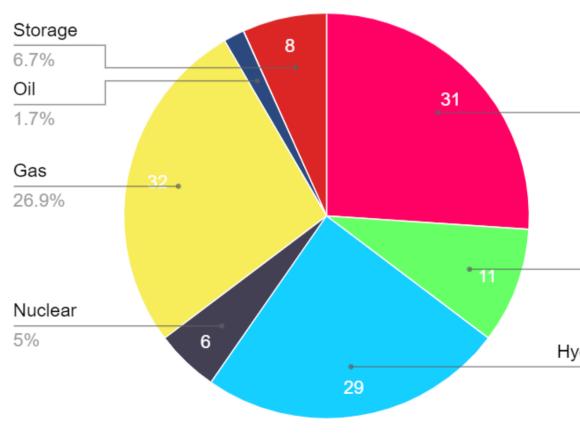
Power generation assets R&D cost Infrastructure maintenance Safety Generation and transmission costs Cost of gas Staff Environmental impact relief Taxes

# Production facility distribution

Dukes operations are split into: 26.1% Solar, 9.2% Coal, 24.4% Hydroelectric, 5% Nuclear, 26.9% Gas

Unit	Year of Expiration
Duke Energy Carolinas	_
Catawba Units 1 and 2	2043
McGuire Unit 1	2041
McGuire Unit 2	2043
Oconee Units 1 and 2	2033
Oconee Unit 3	2034
Duke Energy Progress	
Brunswick Unit 1	2036
Brunswick Unit 2	2034
Harris	2046
Robinson	2030





Solar

26.1%

Coal 9.2%

Hydroel...

24.4%

Totals by Type	Owned MW Capacity
Total Electric Utilities	54,772
Totals by Plant Type	
Nuclear	9,322
Fossil	40,107
Hydro	3,722
Renewable	1,621
Total Electric Utilities	54,772

# Selected Senior Leadership



Brian Savoy: Executive Vice President and Chief Financial Officer,

Lynn J. Good: Chair, President, and CEO of Duke Energy,



Harry K. Sideris: Executive Vice President of Customer Experience, Solutions, and Services.

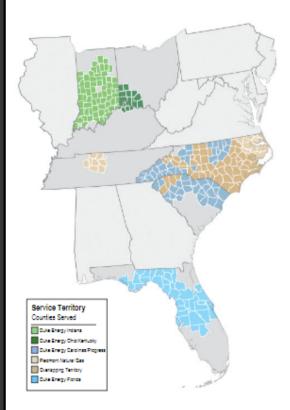
	Name	Position	Age	Company Tenure (Yrs)	Insider Holdings (%)	Salary	Total Comp.
~	Lynn J. Good, CPA	Chairman, President & Chief Executive Officer	64	15	0.069 🕇	\$1,481,750 🕇	\$21,354,759 🕇
~	Brian D. Savoy, CPA	Chief Financial Officer & Executive Vice President	48	23	0.004 🕇	\$587,931	\$3,340,682
~	Bonnie Titone	Chief Information Officer & Senior Vice President	-	5	-	-	-
~	Melissa Feldmeier	Chief Ethics & Compliance Officer, Vice President	-	23	-	-	-
~	T. Preston Gillespie, Jr.	Chief Generation Officer & Executive VP	-	4	0.005 🕇	-	-
~	Steven K. Young, CPA	Chief Commercial Officer & Executive VP	65	18	0.018 🕇	\$798,299 🕇	\$4,794,344 🕇
~	Julie S. Janson	Executive VP & CEO-Duke Energy Carolinas	59	18	0.011 🕇	\$772,647 🕇	\$4,420,284 🖊
~	Kodwo Ghartey-Tagoe	Secretary, Chief Legal Officer & Executive VP	60	22	0.004 🕇	\$651,867 🕇	\$3,439,563 🕇
~	R. Alexander Glenn	Executive VP & CEO-Duke Energy Florida & Mid	58	28	0.004 🕇	-	-
~	Kelvin Henderson	Chief Nuclear Officer & Senior Vice President	-	7	-	-	-
~	George T. Hamrick	Chief Transmission Officer & Senior Vice President	-	10	-	-	-
~	Scott Batson	Chief Distribution Officer & Senior Vice President	-	39	-	-	-
~	Cameron D. McDonald	Chief Human Resources Officer & Senior VP	-	-	-	-	-
~	Cynthia S. Lee, MBA	Chief Accounting Officer, VP & Controller	57	5	0.001 🕇	-	-
~	Kendal Bowman	President-North Carolina Region	51	1	-	-	-
$\sim$	Harry K. Sideris	EVP-Customer Experience, Solutions & Service	53	6	0.007 🕇	-	-
~	Sasha Weintraub	Senior Vice President-Natural Gas Business Unit	-	12	-	-	-
~	Dwight L. Jacobs, CPA	Chief Procurement Officer & SVP-Supply Chain	59	14	-	-	-
~	Swati V. Daji, MBA	Senior Vice President-Customer Solutions	59	15	-	-	-
~	Michael Callahan	President-South Carolina Region	48	22	-	-	-
~	Sharene Pierce, MBA	Chief Diversity & Inclusion Officer	-	24	-	-	-
~	Katherine Neebe, MBA	Chief Sustainability & Philanthropy Officer	-	-	-	-	-
~	Joseph P. Crapster	Manager-Shareholder Communications	-	-	-	-	_
$\sim$	Karl W. Newlin, CFA, MBA	Treasurer & Senior VP-Corporate Development	55	6	-	-	-
~	Ryan Mosier	Head-Investor Relations	-	-	-	-	-
~	William Sauer	Managing Director-Federal Regulatory Affairs	-	5	-	-	-
~	David S. Maltz	Chief Governance Officer & Vice President-Legal	-	23	-	-	-

## **Recent News**

### Energy

## **Duke Energy enters era as fully** regulated utility with eye on opportunities

### 2023 accomplishments provide clarity and momentum



### \$45 BILLION OF HISTORIC AND FUTURE RATE BASE INVESTMENTS APPROVED<sup>(1)</sup>

- Implemented multi-year plans for first time ever in North Carolina
- DE Progress-NC approved in August
- DE Carolinas-NC approved in December
- DE Progress-SC approved in March
- DE Ohio-gas approved in November
- DE Kentucky-electric approved in October

### OPERATIONAL EXCELLENCE

- Finished 2023 with best safety record in company history
- During Hurricane Idalia, self-healing grid technologies saved more than 7 million customer outage minutes in Florida
- J.D. Power ranked Piedmont Natural Gas No. 1 for residential customer satisfaction in south region for the second year in a row

### AND MORE

- Completed sale of Commercial Renewables business
- Helped our communities attract economic development projects resulting in 15,000 jobs and \$22 billion in capital investments
- Received approval to recover ~\$4 billion of deferred 2022 fuel balances, with no disallowances

Brian Savoy, Duke's executive vice president and chief financial officer, said the Charlotte company has significant momentum after completing five rate cases in 2023.

## Duke Energy hikes five-year capital plan to \$65 billion, focus on low carbon energy

### Reuters

June 7, 2023 5:00 PM EDT · Updated 9 months ago

Rate case effficiency

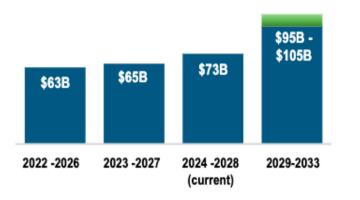
Long-term, sustainable capital investments

Аа

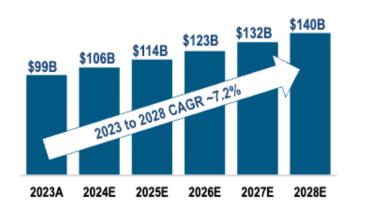
### Strong market base, aggressively growing CapEx:

### Reflected in high market value vs. comps

### GROWING 5-YEAR CAPEX PROFILE...



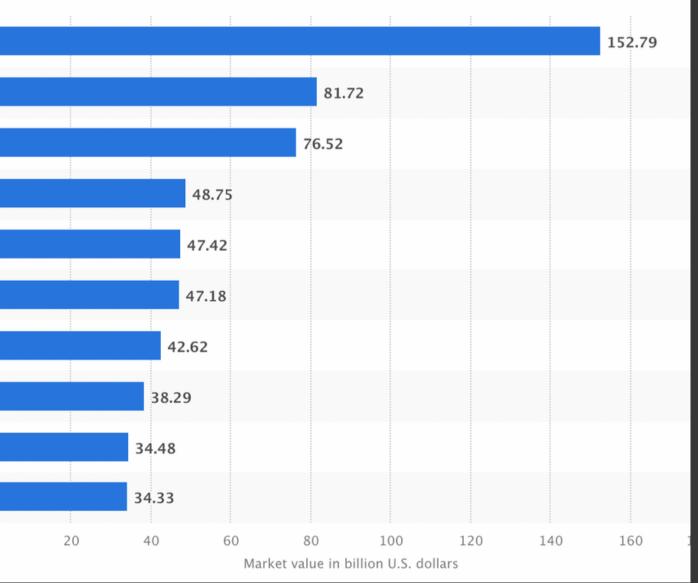
### ....SUPPORTS STRONG EARNINGS BASE GROWTH<sup>(1)</sup>



### LONG-TERM GROWTH SUPPORTED BY ROBUST CAPITAL PLAN

- Capital plan reflects early estimate of the supplemental Carolinas Resource Plan filing and approved North Carolina multi-year rate plans
- Resilient capital plan underpinned by regulated investments reflected in integrated resource plans and multi-year grid programs
- 50% of capital plan focused on grid investment; increases the reliability and resiliency of our growing system
- ~90% of electric capital investments are eligible for efficient recovery mechanisms; riders and annual rate mechanisms mitigate lag in gas utilities

	NextEra Energy
	Southern Company
	Duke Energy
	Sempra
	American Electric
	Dominion Energy
	Exelon
	Xcel Energy
	Consolidated Edison
	PG&E
0	



# Macro-Industry Analsysis

## Industry Financials Comparison

Company	Symbol	Туре	Sales (\$m)	Employees	MV (\$m)	EV (\$m)	Price (loc)	Target Price (local)	Rec	P/E (LTM)	EV/EBITDA (LTM)	EBIT Margin (LTM)
Duke Energy Corporation	DUK-US	Public	29,060	27,037	72,510	155,863	94.07	<u>102.69</u>	<u>Overweight</u>	<u>16.7</u>	<u>11.3</u>	<u>26.9</u>
NRG Energy, Inc.	NRG-US	Public	28,592	18,131	12,785	23,841	61.46	<u>59.75</u>	<u>Overweight</u>	<u>10.2</u>	<u>7</u>	<u>8</u>
Southern Company	SO-US	Public	25,253	28,100	74,822	141,345	68.58	<u>74.45</u>	<u>Overweight</u>	<u>18.5</u>	<u>12.7</u>	<u>24.6</u>
Exelon Corporation	EXC-US	Public	21,727	19,962	36,653	79,734	36.67	<u>38.27</u>	<u>Hold</u>	<u>15.3</u>	<u>10.2</u>	<u>18.9</u>
PG&E Corporation	PCG-US	Public	21,680	26,010	35,183	90,433	16.49	<u>19.45</u>	<u>Overweight</u>	<u>13.2</u>	<u>11.6</u>	<u>14.8</u>
Constellation Energy Corporation	CEG-US	Public	21,137	13,833	56,994	66,162	179.98	<u>161.55</u>	<u>Overweight</u>	<u>30.5</u>	<u>15.2</u>	<u>9.8</u>
NextEra Energy, Inc.	NEE-US	Public	19,845	16,800	113,971	196,445	55.53	<u>70.09</u>	<u>Overweight</u>	<u>17.3</u>	<u>12.4</u>	<u>35.8</u>
American Electric Power Company, Inc.	AEP-US	Public	19,000	-	44,157	86,431	83.92	<u>86.53</u>	<u>Overweight</u>	<u>15.8</u>	<u>11.2</u>	<u>22.6</u>
Edison International	EIX-US	Public	16,338	14,375	26,244	65,291	68.25	<u>72.67</u>	<u>Overweight</u>	<u>14.2</u>	<u>9.5</u>	<u>22.7</u>
Sempra	SRE-US	Public	15,802	16,835	44,655	<mark>81,983</mark>	70.64	<u>82.67</u>	<u>Overweight</u>	<u>15.2</u>	<u>12.9</u>	<u>21.5</u>

## US electricity generation: optimism.

	12/29/2023	12/30/2022	12/31/2021	12/31/2020	12/31/2019	12/31/2018	12/29/2017	12/30/2016	12/31/2015	12/31/2014
Total Utility Scale Generation	4,176.00	4,230.70	4,109.70	4,009.80	4,130.60	4,181.00	4,035.40	4,077.60	4,078.70	4,093.60
Coal	675	831.5	898	773.4	965	1,149.50	1,205.80	1,239.10	1,352.40	1,581.70
Petroleum Liquids/Coke	-	22.9	19.2	17.3	18.3	25.2	21.4	24.2	28.2	30.2
Natural Gas	1,800.90	1,687.10	1,579.20	1,626.80	1,588.50	1,471.80	1,297.70	1,379.30	1,334.70	1,126.60
Other Gas	11.5	11.7	11.4	11.8	12.6	13.5	12.5	12.8	13.1	12
Nuclear	775.3	771.5	779.6	789.9	809.4	807.1	804.9	805.7	797.2	2 797.2
Hydro Conventional	240	254.8	251.6	285.3	287.9	292.5	300.3	267.8	249.1	259.4
Solar	164.2	143.8	115.3	89.2	71.9	63.8	53.3	36.1	24.9	17.7
Renewables ex. Hydro and Solar	489.2	502.2	448.4	408.5	368.9	350.5	333	305.6	270.3	3 261.5
Hydro Pumped Storage	-5.9	-6	-5.1	-5.3	-5.3	-5.9	-6.5	-6.7	-5.1	-6.2
Other	10	11.1	12.1	12.9	13.3	13	13.1	13.8	14	13.5
Estimated Solar Photovoltaic (Small Scale)	73.6	61.3	49.2	41.5	35	29.5	24	18.8	14.1	11.2
Estimated Total Solar Photovoltaic (Utility and Small Scale)	235.3	202.1	161.5	127.6	103.7	89.8	74	51.5	35.8	3 26.5
Estimated Total Solar	238.1	205.1	164.4	130.7	106.9	93.4	77.3	54.9	39	28.9

# Selected Industry Ratios

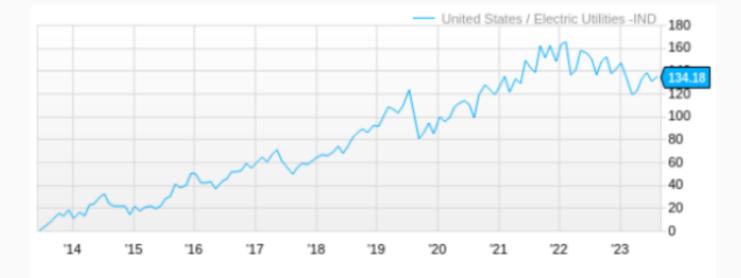
Performance - FG_TOTAL_RETUR	N_IDX												
	Dec '13	Dec '14	Dec '15	Dec '16	Dec '17	Dec '18	Dec '19	Dec '20	Dec '21	Dec '22	Dec '23	Jan '24	Feb '24
United States / Electric Utilities -IND	0	28.12	21.42	42.52	60.01	66.87	108.81	113.02	148.72	154.8	137.66	130.46	134.18
Valuation - FMA_EVAL_EBITDA													
	Dec '13	Dec '14	Dec '15	Dec '16	Dec '17	Dec '18	Dec '19	Dec '20	Dec '21	Dec '22	Dec '23	Jan '24	Feb '24
United States / Electric Utilities -IND	9.13	9.63	9.44	10.47	10.62	10.79	12.64	12.65	13.53	13.25	12.65	12.44	12.43
Growth - EBITDA													
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
United States / Electric Utilities -IND	5.4	2.36	6.89	3.55	-0.18	6.93	1.68	0.27	8.78	13.09	6.28	7.83	
Profitability - FMA_ROE													
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
United States / Electric Utilities -IND	10.13	9.98	10.44	9.84	9.87	10.79	10.57	10.43	10.12	10.28	11.08	11.37	

## Value visualization (profitability stable, and growing)

United States / Electric Utilities YTD Return: 0.4% Source: FactSet

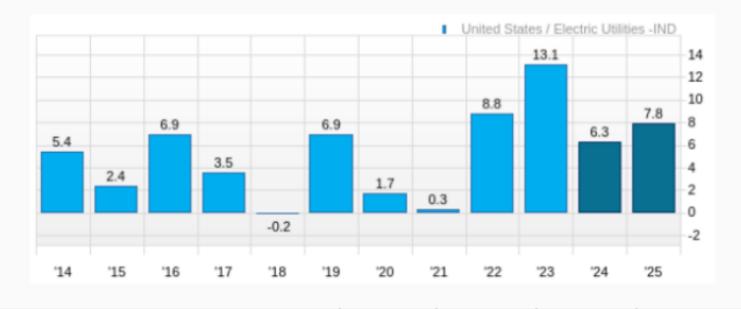
Report as of 07 Mar '24

### Performance - Total Return





### Growth - EBITDA





## SWOT Analysis:

### Strengths:

- Robust Market Presence and Customer Base
  - expansive service territory and customer base: serving in six states, a combined population 27 million residents
- Monopoly in Operating States
  - Concentration in select markets: 8 states, vs 49 for NextEra, a main competitor.
  - Fewer rate cases capture (refresh) more revenue.
  - Developed regional expertise: control over climate effects, strong partnership with regulators.
- Regulatory Support and Modernized Constructs:
  - Successfully secured modernized contracts
  - Implementation of grid investment riders and Multi-Year Rate Plans contribute to earnings growth and cost recovery

### Weaknesses:

- Operational and Environmental Performance Standards pose difficult challenges • requires meticulous planning and execution
- Duke Energy Corp faces construction and development risks
  - Risks include the need to meet construction budgets, schedules, and regulatory compliance
- High Dependence on Economic and Industrial Factors
- High vulnerability to external economic shifts and supply chain constraints • For Example: Decrease in residential and general service sales because of energy efficiency adoption and rooftop solar

## SWOT Analysis (cont'd):

### **Opportunities:**

- Investments in Clean Energy and Infrastructure
  - Opportunities for growth and innovation
  - Favorable position due to Investments in electric transmission projects and renewable natural gas joint ventures
- Inflation Reduction Act further enhances opportunities
- Technological improvements in energy efficiency and customer data analytics enhance customer experience and operational efficiency
  - Customer data allows for more impactful investments towards customer satisfaction => stronger customer relationships and potential market expansion

### **Threats:**

- Favorable financing based on various risks such as credit ratings, interest rate fluctuations and general market conditions
- Changes in regulatory rules create uncertainties that may affect the company's financial stability and operational flexibility

## So where does the value lie?

# Investment Thesis

- Value as-is: DUK promises guaranteed revenues, strong and consistent dividend yield, and well experienced management to execute CAPEX plans.
- Value-per-scenario: Valuable hedge against economic risk:
  - Business model and low beta (<0.5 5YTD) guarantees return in a higher-for-longer, constrained liquidity environment.
  - Falling interest rates in a hard landing scenario would boost bottom line profits, EPS metrics further, albeit current effective interest rate is 3.9%. Debt is ~60% of capital structure historically.

## Main Investment Value Driver: Economic Uncertainty

# Inflation threatens to remain sticky:

Rates possibly stay higher for longer.

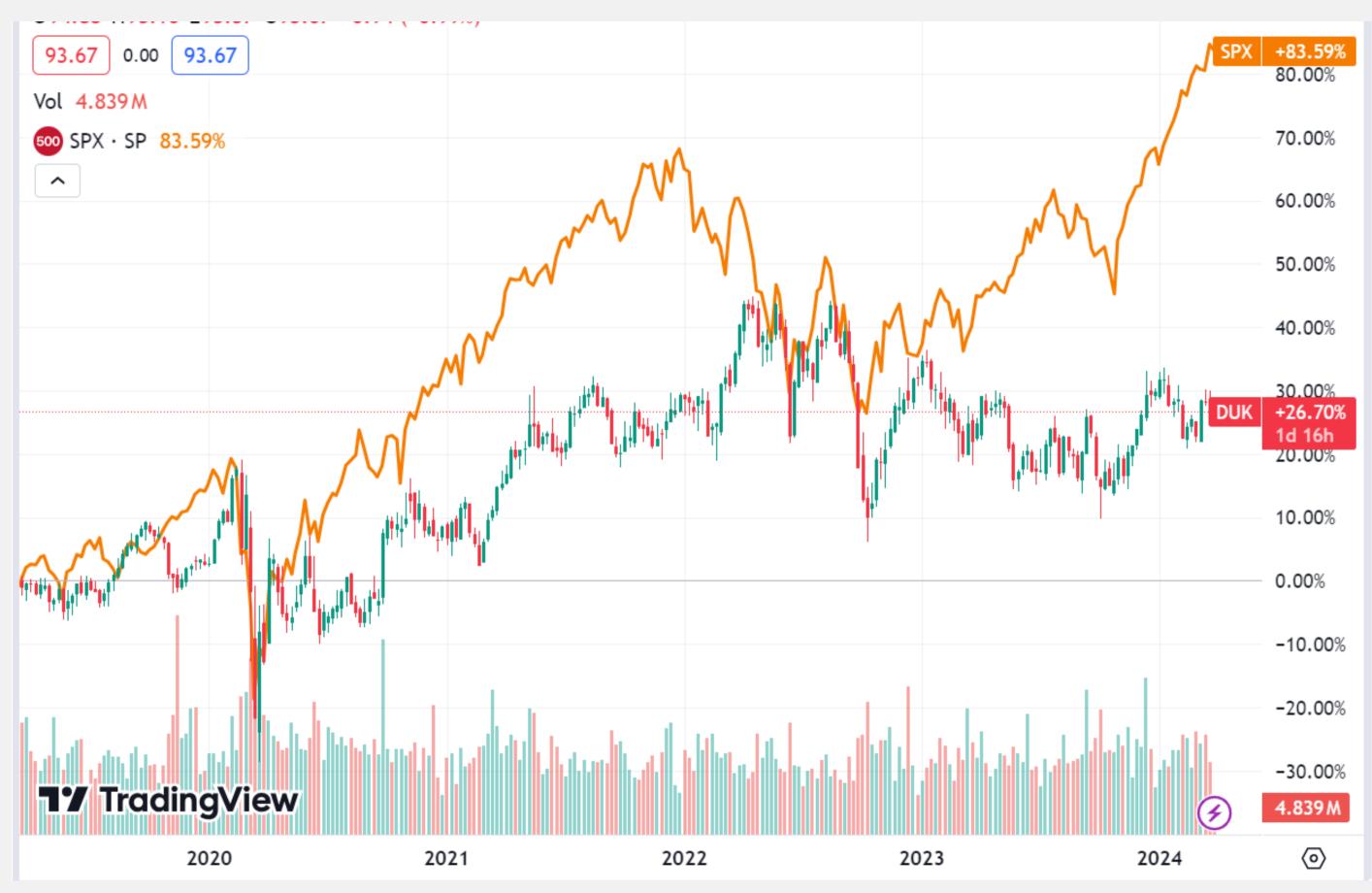
### Utilities: a proven hedge against equity market shocks.

Throughout the past recession cycles, Duke has shown strong resilience and opportunities to provide protection and additional value. Beta of 0.48 with high, continually-growing dividend yield – FIXED INCOME PROXY

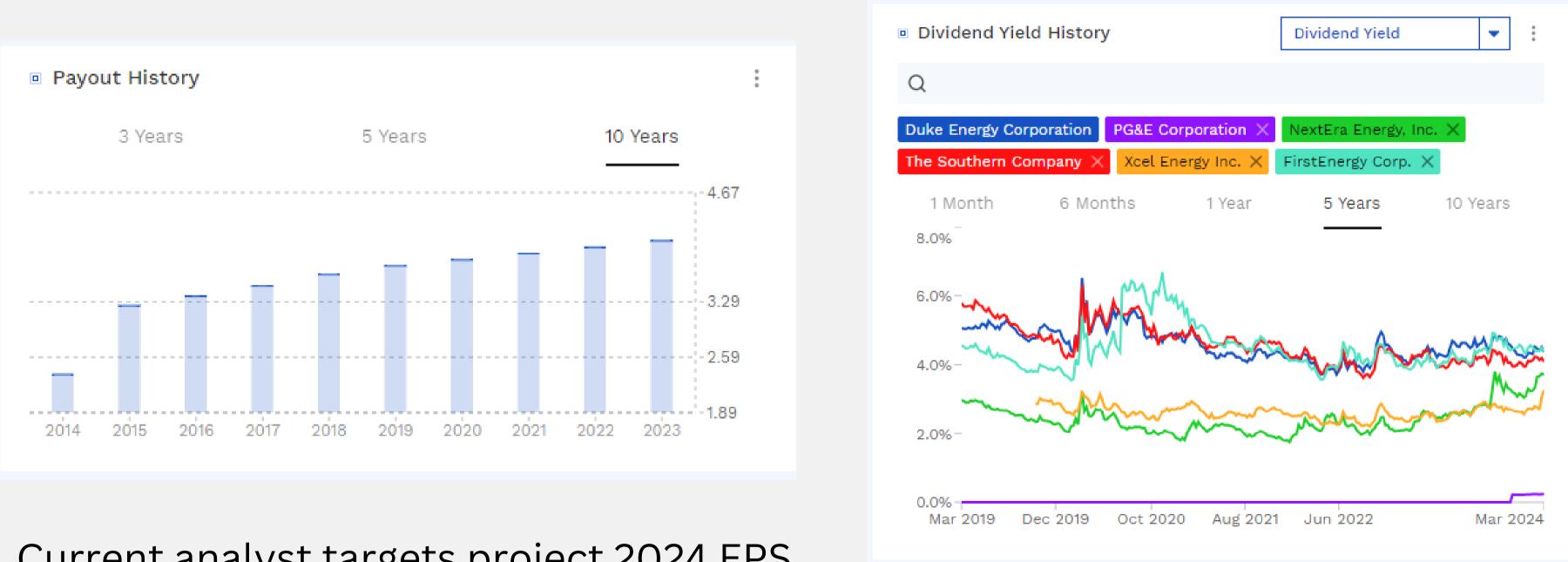
### Difficult for competitors such as NextEra to continue competing in such a case.

Debt comparisons shows Duke is far better positioned to face cash flow constraints, and stay protected from inflation due to regulatory laws in operational regions.

# Stability under uncertainty: Covid 19 pandemic



## Consistent dividend yield and constant growth for payouts:



### Current analyst targets project 2024 EPS @ ~ \$5.75

### Outperforms peers

# Dividends

- Impressive dividend distribution record.
- Strong financial foundation and commitment to shareholders.
- Consistent quarterly dividends.
- Increasing dividends from \$0.9275 to \$1.025 per share.
- Robust cash flow management.
- Positive financial outlook.
- Growing dividend income for investors.

Ex/EFF Date	Туре	Cash Amount	Declaration Date	Record Date	Payment Date
02/15/2024	Cash	\$1.025	01/11/2024	02/16/2024	03/18/2024
11/16/2023	Cash	\$1.025	10/23/2023	11/17/2023	12/18/2023
08/17/2023	Cash	\$1.025	07/13/2023	08/18/2023	09/18/2023
05/11/2023	Cash	\$1.005	05/04/2023	05/12/2023	06/16/2023
02/16/2023	Cash	\$1.005	01/04/2023	02/17/2023	03/16/2023
11/17/2022	Cash	\$1.005	10/26/2022	11/18/2022	12/16/2022
08/11/2022	Cash	\$1.005	07/13/2022	08/12/2022	09/16/2022
05/12/2022	Cash	\$0.985	05/05/2022	05/13/2022	06/16/2022
02/17/2022	Cash	\$0.985	01/04/2022	02/18/2022	03/16/2022
11/10/2021	Cash	\$0.985	10/25/2021	11/12/2021	12/16/2021
08/12/2021	Cash	\$0.985	07/12/2021	08/13/2021	09/16/2021
05/13/2021	Cash	\$0.965	05/06/2021	05/14/2021	06/16/2021
02/11/2021	Cash	\$0.965	01/04/2021	02/12/2021	03/16/2021
11/12/2020	Cash	\$0.965	10/23/2020	11/13/2020	12/16/2020
08/13/2020	Cash	\$0.965	07/06/2020	08/14/2020	09/16/2020
05/14/2020	Cash	\$0.945	05/07/2020	05/15/2020	06/16/2020
02/13/2020	Cash	\$0.945	01/03/2020	02/14/2020	03/16/2020
11/14/2019	Cash	\$0.945	10/28/2019	11/15/2019	12/16/2019
08/15/2019	Cash	\$0.945	07/09/2019	08/16/2019	09/16/2019
05/16/2019	Cash	\$0.9275	05/03/2019	05/17/2019	06/17/2019
02/14/2019	Cash	\$0.9275	01/05/2019	02/15/2019	03/18/2019

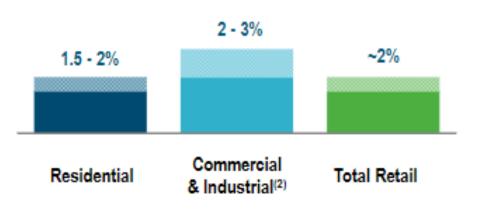
# Main Investment Value Driver: Operational Region

### **Retail electric volumes**

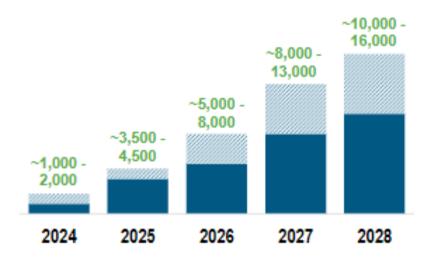
### EXPECT 2023 - 2028 LOAD GROWTH OF 1.5 - 2%

- Continued residential customer growth from population migration
  - 2.1% customer growth in the Carolinas and 2% in Florida from 2022 to 2023
  - Residential decoupling effective for both North Carolina utilities in 2024
- Economic development continues to be robust

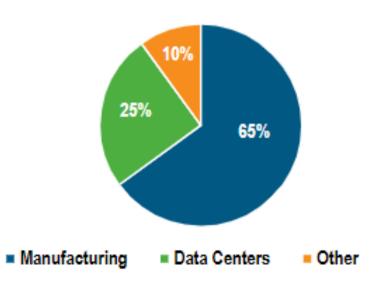
### FORECASTED 2024 RETAIL ELECTRIC VOLUMES<sup>(1)</sup>







### 2028 ECONOMIC DEVELOPMENT FORECAST BY INDUSTRY



(1) Compared to 2023 actuals

Enropast contemplates commercial prowth of ~0 - 190 and industrial prowth of ~3 - 690

## Concentration in select markets plays to advantage.

Ease of rate negotiations, strong customer base, knowledge of local risks such as climate disasters, and ways to mitigate.

# Main Investment Value Driver: Transition to fully regulated portfolio

### Pure play regulated utility operating in constructive and growing jurisdictions

### COMPLETED PORTFOLIO TRANSITION TO FULLY REGULATED COMPANY...



### ... WITH A CLEAR STRATEGY AND LONG-TERM ORGANIC GROWTH OPPORTUNITIES

### Serving vibrant Investing in regulated utilities jurisdictions Expect 2023-2028 load Growing capital plan growth of 1.5 - 2% \$73 billion, 2024-2028 Added 195,000 new Transforming the largest T&D system in the U.S. customers in 2023 Building generation and Significant economic transmission to support development across growth and fleet transition multiple industries drives long-term C&I growth Modernizing gas LDCs

### Efficient recovery mechanisms

- ~90% of electric capital investments<sup>(2)</sup> are eligible for efficient recovery mechanisms
- Riders and annual rate mechanisms mitigate lag in gas utilities

### Advancing Carolinas energy transition

### SUPPLEMENTAL CAROLINAS RESOURCE PLAN FILED IN NORTH CAROLINA AND SOUTH CAROLINA ON JANUARY 31

- technology costs
  - Peak load has increased by ~2 GW in 2030
  - Continues to retire coal by 2035
  - Preserves optionality for long lead-time resources, including offshore wind
- Single, unified integrated resource plan filed with both North Carolina and South Carolina
- Maintains "all of the above" strategy calling for a diverse deployment of new technologies
- Expect to file CPCNs in 2024 in North Carolina for over 2 GWs of natural gas

Next Steps	Hea
North Carolina	
South Carolina	Se

DUKE ENERGY,

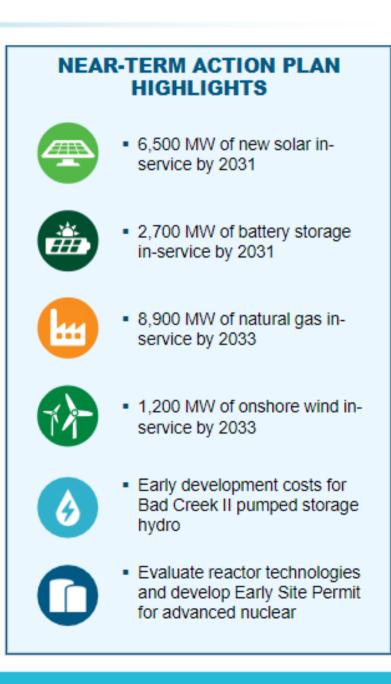
Reculated business excludes International Energy and Commercial Power

FOURTH QUARTER 2023 EARNINGS REVIEW AND BUSINESS UPDATE



Reflects significant growth in economic development opportunities since August IRP filings and changes to

earing Scheduled to Begin	Order Expected
July 22, 2024	Q4 2024
eptember 16, 2024	Q4 2024



# Shift to completely regulated supply portfolio:

- Sale of 3.4 GW unregulated, utility-scale commercial renewables business for \$2.8 billion. • Sale included 3,400 MW of utility-scale solar, wind, and battery storage, non-controlling tax equity interests, and assumption of debt – netting Duke approx, \$1.1 billion
- Proceeds from the sale were used to strengthen Duke Energy's balance sheet and avoid additional holding company debt issuances.
- Duke Energy to focus on the growth of its regulated businesses, particularly investments into enhancing grid reliability and incorporating 30 GW of regulated renewable energy by 2035.
- Updated capital investment plan for seven regulated utilities to \$145 billion over the next decade (\$10 billion increase) • around 85% is allocated to grid modernization and companies transition toward decarbonized generation
- Proposal for major expansion to Green Source Advantage (GSA) program (launched in 2017)
  - Expansion allows customers to supplement power usage with 100% renewable power and pair renewable projects with energy storage.

## Rate Cases: Guaranteeing Increasing Revenue

The table below reflects significant electric rate case applications approved and effective in the past three years and applications currently pending approval.

	Regulatory Body	Annual Increase (Decrease) (in millions)	Return on Equity	Equity Component of Capital Structure	Effective Date
Approved Rate Cases:	Douy	(11 1111010)	Equity	ouplai ou uotalo	
Duke Energy Carolinas 2023 North Carolina Rate Case <sup>(a)</sup>	NCUC	\$ 768	10.1%	53%	January 2024
Duke Energy Kentucky 2022 Kentucky Electric Rate Case <sup>(b)</sup>	KPSC	48	9.75%	52.145%	October 2023
Duke Energy Progress 2022 North Carolina Rate Case(c)	NCUC	494	9.8%	53%	October 2023
Duke Energy Progress 2022 South Carolina Rate Case	PSCSC	52	9.6%	52.43%	April 2023
Duke Energy Ohio 2021 Ohio Electric Rate Case	PUCO	23	9.5%	50.5%	January 2023
Duke Energy Progress 2019 North Carolina Rate Case	NCUC	178	9.6%	52%	June 2021
Duke Energy Carolinas 2019 North Carolina Rate Case	NCUC	33	9.6%	52%	June 2021
Pending Rate Cases:					
Duke Energy Carolinas 2024 South Carolina Rate Case	PSCSC	239	10.5%	53%	August 2024

The following table summarizes certain components underlying significant recently approved and effective base rates or ARM filings in the last three years.

	Regulatory	Annual Increase (Decrease)	Return on	Equity Component of	Effective Date
American Data Casas	Body	(in millions)	Equity	Capital Structure	Effective Date
Approved Rate Cases:					
Duke Energy Ohio 2022 Natural Gas Base Rate Case	PUCO	\$ 32	9.6%	52.32%	November 2023
Piedmont 2023 Tennessee Annual Review Mechanism	TPUC	40	9.8%	48.67%	October 2023
Duke Energy Kentucky 2021 Natural Gas Base Rate Case(a)	KPSC	9	9.375%	51.344%	January 2022
Piedmont 2021 North Carolina Natural Gas Base Rate Case	NCUC	67	9.6%	51.60%	November 2021
Piedmont 2020 Tennessee Natural Gas Base Rate Case	TPUC	16	9.8%	50.50%	January 2021

(a) An ROE of 9.3% for natural gas riders was approved

### Ongoing regulatory activity:

### **Regulatory activity details**

	FILING TYPE	DOCKET NO.	STATUS	
DUKE ENERGY CAROLINAS	South Carolina Base Rate Case <sup>(1)</sup>	2023-388-E	<ul> <li>Application filed Jan. 4, 2024</li> <li>Evidentiary hearings scheduled to begin May 20, 2024</li> <li>Requested rates effective by Aug. 1, 2024</li> </ul>	
DUKE ENERGY FLORIDA	Florida Base Rate Case	20240025	<ul> <li>On Jan. 31, 2024, DEF notified the Florida Public Service Commission that it expects to file a formal request for new base rates on April 2, 2024</li> </ul>	•

### KEY DRIVERS

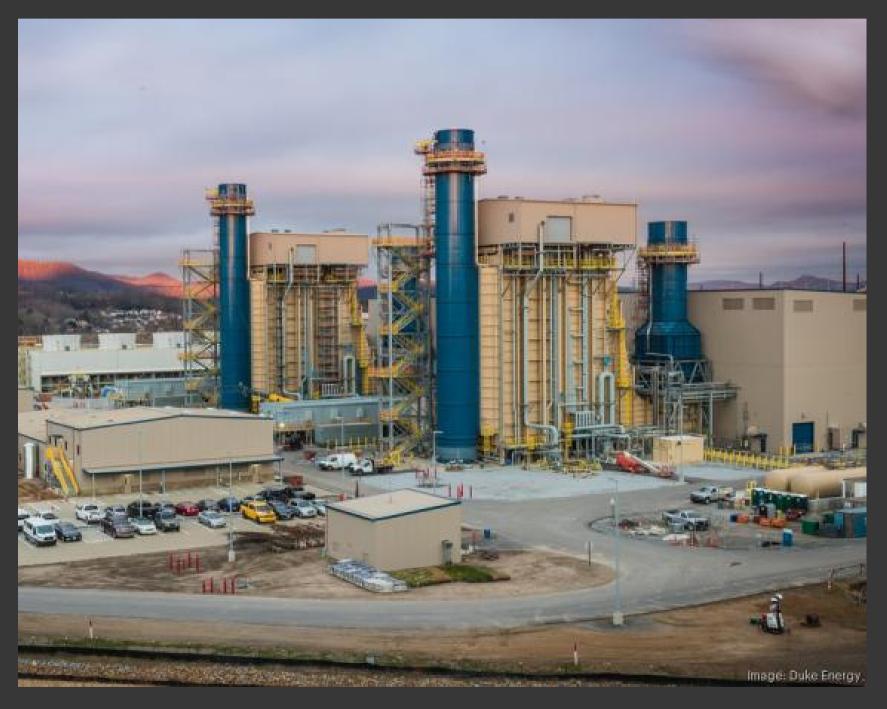
- Filing is based on a retail rate base of \$7.3 billion as of Dec. 31, 2022, adjusted for known and measurable changes through Dec. 31, 2023
- Major capital investments include ~\$1.5 billion in transmission and distribution since the last case
- Requested: 10.5% ROE, 53% equity cap. structure
- Proposes to accelerate the return of remaining federal unprotected Excess Deferred Income Taxes (EDIT) balances to customers over two vs. 15 years
- Requests deferral treatment for actual, future nuclear PTCs, net of costs. No estimated nuclear PTCs have been included in this case
- Intends to propose a three-year rate plan beginning in January 2025
- Major capital investments from 2025 to 2027 include \$3.3 billion in transmission and distribution and \$1.5 billion of new solar generation
- Requesting: 11.15% ROE midpoint, 53% equity cap. structure

# Stress on ESG:



# Investing in critical energy infrastructure

- Capital Investment Increase: Duke Energy boosts its 10-year budget to \$145 billion, up \$10 billion from previous plans.
- Clean Energy Focus: 85% of the budget is dedicated to transitioning to cleaner energy and grid enhancement.
- Grid Upgrades: About \$75 billion allocated for upgrading and strengthening transmission and distribution systems.
- Zero-Carbon Sources: \$40 billion earmarked for investments in solar, wind, and battery storage, as well as extending the life of nuclear plants.
- Natural Gas Innovation: Approximately \$5 billion planned for natural gas technologies adaptable to hydrogen use.



### **Economic impact**

Successful implementation of the company's strategy will provide economic benefits to our customers and communities over the next 10 years, stemming from job creation, infrastructure growth and economic development, according to an economic impact study conducted by EY.

The study found that the company's 10-year capital investment plan will support more than 20,000 additional direct, indirect and induced jobs annually during that period. This includes workers who directly build clean energy infrastructure and indirect jobs in other sectors of the economy. Additionally, the study found that the company's activities will support \$250 billion in economic output throughout the U.S. economy due to jobs, income paid to workers and payments made to suppliers.

# Geopolitics

1. Benefiting from the Shift to Electric Vehicles (EVs):

- EV Charging Infrastructure: EV charging stations directly capitalizes on increasing electric vehicles
- Energy Demand Increase: Rise in EV usage increases demand for electricity
- Renewable Energy Integration: Positioning to be a sustainable choice for EV owners
- 2. Diversification in Electric Utility:
  - Wide Range of Renewable Sources: Duke Energy's expansion beyond hydroelectric power into other renewable sources
- 3. Advancing in the Green Movement:
  - Sustainable Energy Transition: Duke Energy's commitment to renewable energy aligns with the global green movement, enhancing its public image and market appeal
  - Government Subsidies and Incentives: The green energy focus opens avenues for government subsidies and incentives, financially benefiting Duke Energy.

# Government Policy

SUBSIDY SUMMARY	SU
State/Local	
Federal (grants and allocated tax credits)	
TOTAL	

- Producing power form multiple types of renewable enrgy qualifies Duke Energy Corp. for multiple types of government subsidy
  - Tax credits/rebates
  - federal grants (inflation Reduction Act 2022)

NUMBER OF AWARDS
56
27
83

## Financial Analysis

# Industry Comparisons:

Name	Beta (5 Year)	Cash / Total Capital	Total Debt / Total Capital	Current Ratio	Altman Z-Score	Debt / Common Equity	Financial Leverage	Interest Coverage	Cash Ratio	Quick Ratio	Payout Ratio	FCF / Net Income
Search Values	> #	> #	> #	> #	> #	> #	> #	> #	> #	> #	> #	> #
PCG PG&E Corporation	1.33	0.7%	62.1%	0.8x	0.4	230.6%	5.0x	1.2x	0.0x	0.6x	-	-221.5%
<b>NEE</b> NextEra Energy, Inc.	0.50	1.3%	37.2%	0.5x	1.1	156.0%	3.7x	3.0x	0.1x	0.3x	51.7%	-188.9%
<b>FE</b> FirstEnergy Corp.	0.47	0.3%	53.6%	0.5x	0.7	240.8%	4.7x	2.0x	0.0x	0.3x	82.2%	-121.9%
AEP American Electric Power Compa	0.51	0.6%	49.8%	0.5x	0.8	173.5%	3.8x	2.2x	0.0x	0.3x	79.4%	-120.0%
DUK Duke Energy Corporation	0.46	0.2%	52.0%	0.7x	0.7	171.0%	3.8x	2.4x	0.0x	0.3x	114.2%	-65.2%
<b>SO</b> The Southern Company	0.49	0.5%	45.0%	0.8x	0.9	202.5%	4.4x	2.6x	0.1x	0.3x	76.3%	-38.8%
XEL Xcel Energy Inc.	0.37	0.3%	50.5%	0.7x	0.8	156.6%	3.6x	2.5x	0.0x	0.4x	61.7%	-29.8%

### per comps valuation: **DUK undervalued:**

Using conservative analyst forward estimates, DUK is undervalued compared to peers, extremely rare for large scale basic necessity provider.

Benchmark Companies										
	SO	AEP	NEE	FE	PCG	DUK				
Projected Net Income Growth										
5 Year Forward CAGR	7.6%	10.1%	6.0%	16.8%	12.9%	7.6%				
10 Year Forward CAGR	4.9%	5.4%	4.0%	9.1%	7.3%	3.7%				
Next Fiscal Year	11.1%	18.5%	-4.5%	38.1%	28.9%	10.6%				
Fiscal Year after Next	7.6%	8.5%	9.2%	7.8%	9.5%	6.6%				
Projected Net Income Profit Margin										
5 Year Forward Average	17.0%	15.2%	25.6%	12.8%	13.3%	16.7%				
10 Year Forward Average	17.2%	15.2%	26.2%	14.0%	14.0%	17.8%				
Next Fiscal Year	16.1%	14.1%	25.3%	11.5%	11.9%	15.3%				
Two Fiscal Years Forward	16.8%	14.9%	25.4%	11.9%	12.5%	15.7%				
Three Fiscal Years Forward	17.4%	15.0%	25.1%	12.4%	13.3%	16.6%				
Current Trading Multiples										
Price / Fwd Sales, FY+1	2.70x	2.27x	4.13x	1.57x	1.44x	2.4x				
Price / Fwd Sales, FY+2	2.62x	2.22x	3.79x	1.52x	1.39x	2.3x				
Fwd P/E Ratio, FY+1	16.8x	16.2x	16.3x	13.7x	12.1x	15.4x				
Fwd P/E Ratio, FY+2	15.6x	14.9x	14.9x	12.7x	11.1x	14.5x				
Fwd P/E Ratio, FY+3	14.6x	13.8x	13.7x	11.8x	10.2x	13.6x				

Benchma Historica

Selected

(x) Fwd

(=) Equit

(/) Share

Implied

FX Rate:

Implied

Upside /

### Multiples Valuation: Price / EPS

94.58 USD	108.16 USD	16.7%
Stock Price	Fair Value	Upside

	Low	Mid	High	
nark Fwd P/E Ratio	11.1x	14.9x	15.6x	
al LTM P/E Ratio	17.3x	19.8x	33.5x	
d Fwd P/E	15.4x	16.2x	17.0x	
Net Income	4,934	4,934	4,934	
ity Value	75,807	79,796	83,786	
es Outstanding	770.8	770.8	770.8	
Value Range	98.35	103.52	108.70	
: USD/USD	1.0	1.0	1.0	
Value Range (Trading Cur)	98.35	103.52	108.70	
/ (Downside)	6.1%	11.7%	17.3%	

### Thus, our true value estimate agrees with that of morningstar below:

Our fair value estimate is \$112 per share. Our annual earnings growth forecast is at the top end of management's 5%-7% guidance. Duke's pipeline of growth opportunities, continued management of operating expenses, and constructive regulatory outcomes support our forecast. We don't expect a material change in companywide average allowed returns. We expect Duke will continue to benefit from constructive regulatory rate increases to support its investment. In our discounted cash flow valuation, we use a 5.9% cost of capital based on a 7.5% cost of equity. This is lower than the 9% rate of return we expect investors will demand from a diversified equity portfolio, reflecting Duke's lower sensitivity to the economic cycle and lower degree of operating leverage.

Per morningstar.com

# DCF and WACC summary

### NYSE:DUK Model Summary

	R	Conclusion	
	Low	High	
Cost of Capital	7.3%	4.8%	6.0%
Terminal EBITDA Mult	11.1x	13.1	< 12.1x
Fair Value	127.64	230.93	3 174.99
Upside	36.3%	146.5%	6 86.8%
1 Revenue 10Y CAGR	50.7%		
EBITDA 10Y CAGR	_	EBITDA Margin Unlevered FCF Margii	
(Normalized) Unlevered FCF 10Y CAGR	23.8%		

NYSE:DUK Model Sun Cost of Equi Selected Bet Market Risk Risk-free Ra Additional R

Cost of Debi Pre-tax Cosi Tax Rate Debt % of Ca Implied Cos

mmary	
<u>ity</u>	
ta	0.46
(Premium	4.6%
ate	4.0%
Risk Adjustments	0.13%
st of Equity	6.25%
ot Inputs	
st of Debt	3.5%
	9.0%
apital	60.0%
st of Debt	3.19%
	4.50%

## Value beyond intrinsic value: Hedge Potential

DUK promises to be a valuable hedge against economic risks:

- Higher for longer scenario: would significantly impact general business growth, eroding returns for S&P, specially on high beta stocks.
- Duke unaffected: 100% regulated portfolio, consistent rate increases, unaffected demand, compensation for borrowing to meet demand prior to rate increase. Dividend yield 4-5%, last 5 years
- Fixed income proxy:

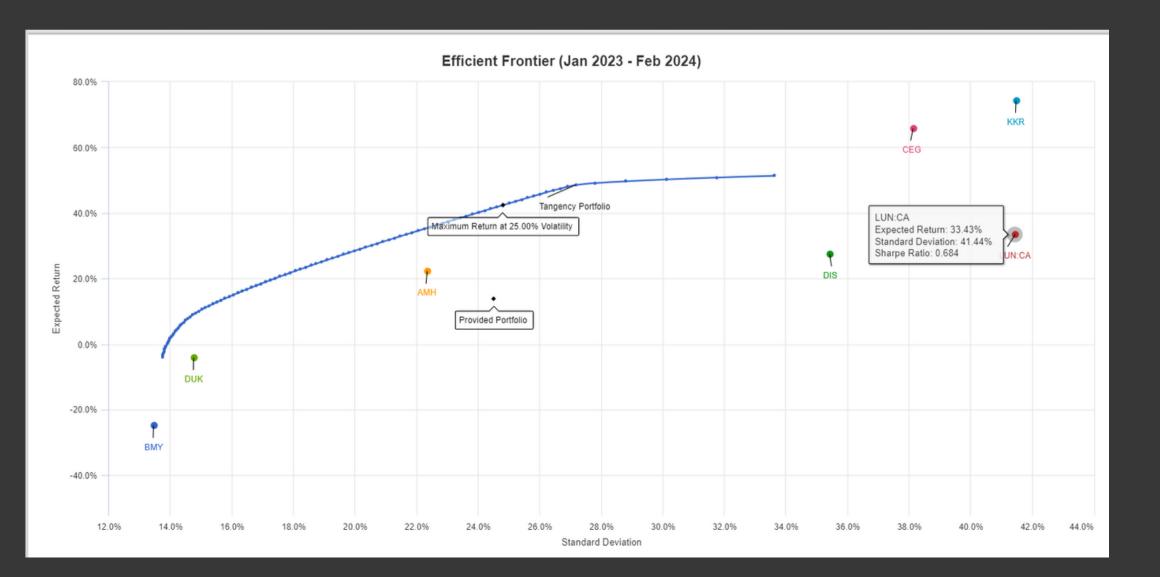
Scenario valuation to be done to demonstrate possible upside potential.

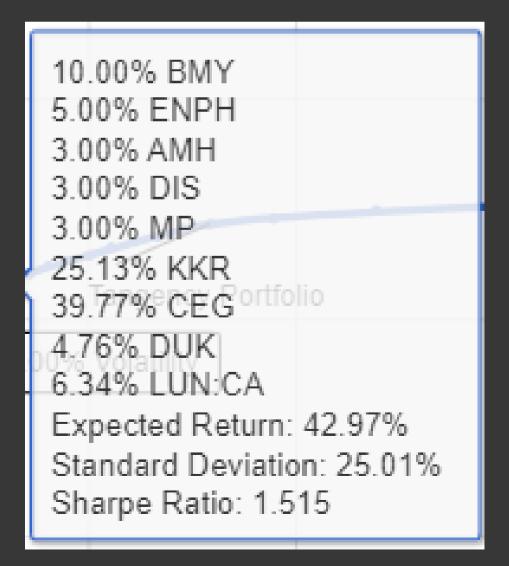
*Current portfolio dynamics, incld. beta, to be considered to present recommended portfolio reallocation.* 

# Recommendation: Strong buy

In line with previous risk appetite of the porfolio, maximizing @ 25% standard deviation levels, we recommend allocating ~ 5% of the non-cash portfolio to Duke Energy.

For our current equity portfolio of ~\$7,800, this is about \$370, or ~4 shares of DUK.







### **Key Projections**

(USD in millions)	Dec-23	Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30	Dec-31	Dec-32	Dec-33
		FY+1	FY+2	FY+3	FY+4	FY+5	FY+6	FY+7	FY+8	FY+9	FY+10
				1							
Revenue	28,602	30,600	32,600	34,800	37,100	39,600	41,700	44,000	46,500	49,000	51,500
EBITDA	13,289	14,700	16,000	17,300	18,600	19,900	21,200	22,500	23,800	25,800	27,800
D&A	6,084	6,300	6,800	7,046	7,250	7,550	7,800	8,000	8,250	8,550	8,950
Other Income / (Exp)	0	0	0	0	0	0	0	0	0	0	0
EBIT	7,205	8,400	9,200	10,254	11,350	12,350	13,400	14,500	15,550	17,250	18,850
Capital Expenditures	12,604	12,750	13,725	14,650	15,500	16,400	16,400	16,400	16,400	16,400	16,400
% YoY Revenue Growth	1.0%	7.0%	6.5%	6.7%	6.6%	6.7%	5.3%	5.5%	5.7%	5.4%	5.1%
% EBITDA Margin	46.5%	48.0%	49.1%	49.7%	50.1%	50.3%	50.8%	51.1%	51.2%	52.7%	54.0%
% DA Margin	21.3%	20.6%	20.9%	20.2%	19.5%	19.1%	18.7%	18.2%	17.7%	17.4%	17.4%
% CapEx Margin	44.1%	41.7%	42.1%	42.1%	41.8%	41.4%	39.3%	37.3%	35.3%	33.5%	31.8%

### Calculation of Enterprise Value

(USD in millions)	FCF	Low	Mid	High
(050 In Inicions)	1 61	2011	mid	ingii
Dec-24	1,121	1,101	1,104	1,107
Dec-25	1,257	1,151	1,168	1,186
Dec-26	1,518	1,296	1,331	1,367
Dec-27	2,046	1,628	1,692	1,758
Dec-28	2,164	1,606	1,688	1,776
Dec-29	3,405	2,357	2,506	2,668
Dec-30	4,588	2,961	3,186	3,432
Dec-31	5,915	3,559	3,875	4,223
Dec-32	7,630	4,280	4,716	5,201
Dec-33	9,486	4,962	5,531	6,173
(A) PV of Discrete	Cash Flows	24,901	26,797	28,891
Selected EBITDA Ex	it Multiple	11.1x	12.1x	13.1x
Terminal EBITDA		27,800	27,800	27,800
Terminal Discount A	Factor	50.5%	56.6%	63.6%
(B) PV of Termina	l Value	155,862	190,497	231,551
(A + B) Enterprise	Value	180,763	217,294	260,442

### (A) PV of Discrete Cash Flows

Selected EBITDA Exit Multiple Terminal EBITDA Terminal Discount Factor

(B) PV of Terminal Value

(A + B) Enterprise Value

24,901	26,797	28,891
11.1x	12.1x	13.1x
27,800	27,800	27,800
50.5%	56.6%	63.6%
155,862	190,497	231,551
180,763	217,294	260,442

### **Revenue and EBITDA Forecast**

(USD in millions)	Input Projections											
Fiscal Years Ending	Dec-23	Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30	Dec-31	Dec-32	Dec-33	
<b>Revenue</b>	<b>28,602</b>	<b>30,600</b>	<b>32,600</b>	<b>34,800</b>	<b>37,100</b>	<b>39,600</b>	<b>41,700</b>	<b>44,000</b>	<b>46,500</b>	<b>49,000</b>	<b>51,500</b>	
% Growth	1.0%	7. <i>0</i> %	6.5%	6.7%	6.6%	6.7%	5.3%	5.5%	5.7%	5.4%	5. <i>1%</i>	
<b>EBITDA</b>	<b>13,289</b>	<b>14,700</b>	<b>16,000</b>	<b>17,300</b>	<b>18,600</b>	<b>19,900</b>	<b>21,200</b>	<b>22,500</b>	<b>23,800</b>	<b>25,800</b>	<b>27,800</b>	
% of Revenue	46.5%	48.0%	49.1%	49.7%	50.1%	50.3%	50.8%	51.1%	51.2%	52.7%	54.0%	

### Select Capital Expenditures Forecast

(USD in millions)	Input Projections										
Fiscal Years Ending	Dec-23	Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30	Dec-31	Dec-32	Dec-33
Capital Expenditure	12,604	12,750	13,725	14,650	15,500	16,400	16,400	16,400	16,400	16,400	16,400
% of Revenue	44.1%	41.7%	42.1%	42.1%	41.8%	41.4%	39.3%	37.3%	35.3%	33.5%	31.8%

Fiscal Years Ending							
Historical Spending	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-23	
Capital Expenditures	11,122	9,907	9,715	11,367	12,604	12,604	
% of Revenue	45.1%	43.2%	40.1%	40.1%	44.1%		
5-Year Average	42.5%						

### Select Depreciation & Amortization Forecast

(USD in millions)	Input Projections									
Fiscal Years Ending	Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30	Dec-31	Dec-32	Dec-33
Depreciation & Amortization	6,300	6,800	7,046	7,250	7,550	7,800	8,000	8,250	8,550	8,950
% of Revenue	20.6%	20.9%	20.2%	19.5%	19.1%	18.7%	18.2%	17.7%	17.4%	17.4%

			YTD			
Historical Spending	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-23
Depreciation & Amor	5,176	5,486	5,663	5,843	6,084	6,084
% of Revenue	21.0%	23.9%	23.4%	20.6%	21.3%	
Average	22.0%					

Discount Rate Range		
	Low	

	Low	Mid	High	Company L Benchmark
				Historical L
Selected Discount Rate	7.25%	6.0%	4.75%	Selected E
Implied Fair Value	127.64	174.99	230.93	Terminal V
Implied Upside / (Downside)	36.3%	86.8%	146.5%	Implied Fa

### Terminal Value Range

	Low	Mid	High
Company LTM EBITDA Multiple	11.8x	11.8x	11.8x
Benchmark LTM EBITDA Multiple	10.9x	12.2x	13.5x
Historical LTM EBITDA Multiple	11.8x	12.4x	13.3x
Selected EBITDA Ex 27,800	11.1x	12.1x	13.1x
Terminal Value	308,580	336,380	364,180
Implied Fair Value	127.64	174.99	230.93
Implied Exit Revenue 51,500	6.0x	6.5x	7.1x
Implied Perpetuity Gr 9,486	4.1%	3.1%	2.1%

Equity Waterfall				
(USD in millions)				
	Low	Mid	High	Market
Enterprise Value	180,763	217,294	260,442	154,555
(+) Cash & Short Term Investments	253	253	253	253
(+) Investments & Other	492	492	492	492
(-) Debt	(80,000)	(80,000)	(80,000)	(80,000)
(-) Other Liabilities	(1,075)	(1,075)	(1,075)	(1,075)
(-) Preferred Stock	(1,962)	(1,962)	(1,962)	(1,962)
(-) Other	0	0	0	0
Value of Common Equity	98,471	135,002	178,150	72,263
(/) Shares Outstanding	771	771	771	771
Implied Stock Price (USD)	127.64	174.99	230.93	93.67
FX Rate: USD/USD	1.00	1.00	1.00	1.00
Implied Stock Price (USD)	127.64	174.99	230.93	93.67
Upside / (Downside)	36.3%	86.8%	146.5%	

### Calculation of Free Cash Flow

### Projected Unlevered Cash Flow

(USD in millions)		Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30	Dec-31	Dec-32	Dec-33
		14 700		17.000		40.000		00 500		05 000	07 000
EBITDA		14,700	16,000	17,300	18,600	19,900	21,200	22,500	23,800	25,800	27,800
Other Income / (Exp)		0	0	0	0	0	0	0	0	0	0
D&A		(6,300)	(6,800)	(7,046)	(7,250)	(7,550)	(7,800)	(8,000)	(8,250)	(8,550)	(8,950)
EBIT		8,400	9,200	10,254	11,350	12,350	13,400	14,500	15,550	17,250	18,850
						-				-	-
Pro forma Taxes		(756)	(828)	(923)	(1,022)	(1,112)	(1,206)	(1,305)	(1,400)	(1,553)	(1,697)
NOPAT	6,557	7,644	8,372	9,331	10,329	11,239	12, 194	13, 195	14,151	15,698	17,154
Capital Expenditures	(12,604)	(12,750)	(13,725)	(14,650)	(15,500)	(16, 400)	(16, 400)	(16, 400)	(16,400)	(16,400)	(16,400)
NWC Investment	(28)	(73)	(190)	(209)	(33)	(225)	(189)	(207)	(86)	(218)	(218)
(+) D&A	6,084	6,300	6,800	7,046	7,250	7,550	7,800	8,000	8,250	8,550	8,950
Free Cash Flow	9	1,121	1,257	1,518	2,046	2,164	3,405	4, 588	5,915	7,630	9,486
% Growth		N/A	12%	21%	35%	6%	57%	35%	29%	29%	24%

