



# ADVANCING

TOWARD A **CLEAN, AFFORDABLE AND RELIABLE** ENERGY FUTURE

## Executive Summary

Duke Energy is pleased to present our 2022 climate report. In the two years since our last report, we have focused on: (1) building a more reliable and resilient grid that can help mitigate the impacts of more severe weather, provide customers with more solutions tailored to their unique needs and accommodate significantly greater amounts of renewable energy, distributed energy resources, and demand response; and (2) investing in a cleaner energy supply. These strategic priorities are founded on the fundamental customer and community needs for affordable prices, reliability, and a lower carbon dioxide (CO<sub>2</sub> or “carbon”) footprint. The transition to clean energy and grid modernization will provide reliability and affordability through (1) taking advantage of decreasing prices and incentives for cleaner sources of energy, (2) replacing aging generating capacity that has increasing operation and maintenance costs, (3) mitigating the impacts of volatile fuel prices and less reliable fuel supplies, and (4) providing greater resilience to weather events.

To this end, 85% of our capital plan over the next 10 years will be invested in our clean energy transition and grid modernization, with a keen focus on affordability and reliability. These capital investments will not only reduce greenhouse gas (GHG) emissions but will also provide substantial economic benefits in the regions we serve while also providing for the cleaner, stronger, more affordable and more resilient energy system our customers expect.

The \$145 billion in capital we plan to invest to support our clean energy transition and grid modernization over the next 10 years will contribute, on average, over 20,000 additional direct, indirect

and induced jobs each year from 2023-2032. It will also support \$250 billion in economic output across the U.S. economy, including \$1.5 billion in additional annual labor income, and \$5 billion in associated property taxes over the next 10 years to support schools, emergency services, roads, infrastructure, and for other public purposes.<sup>1</sup>

Our plans to affordably make this clean energy transition are developed through collaboration with stakeholders – and prudent actions we believe are necessary to maintain the affordability and reliability on which our customers depend. This clean energy transition not only provides emissions reductions for Duke Energy but also provides an energy mix that helps our customers achieve their clean energy goals and provides a brighter, more prosperous future for all we serve.

We have already made major strides toward reducing carbon emissions from our electric generating fleet, with reductions of 44% through 2021 while keeping energy affordable and reliable and are on track to well exceed our goal of at least a 50% reduction in carbon emissions from 2005 levels by 2030. We will revisit this interim target in the future once state-level reviews of our plans have advanced.

The clean energy projects and projected adoption of new clean energy technologies we include in our capital plan, coupled with the analysis in this report and evaluation of future potential sensitivities, give us confidence to establish an additional interim target of an 80% reduction from 2005 levels by 2040. This report provides detailed analysis and information supporting an updated path toward our net-zero 2050 carbon emissions goal for electricity generation, inclusive of both our 2030 and 2040 interim targets.

In February 2022, we stated that we are targeting coal to represent less than 5% of total enterprisewide generation by 2030 and planning to fully exit coal by 2035 as part of the largest planned coal fleet retirement in the industry.<sup>2</sup> Implementation of this goal will help meet our obligation to supply affordable and reliable power by reducing the financial and operational risks associated with reliance on coal generation and the inherent risks of the coal supply chain, while helping mitigate fuel price volatility that can impact our customers.

The recently passed Inflation Reduction Act (IRA) provides a tangible federal carbon policy and reduces customer costs.<sup>3</sup> It will improve price stability by mitigating the risk of increased costs to customers due to current inflationary pressures and higher fuel costs. It also drives advancements in hydrogen and storage technologies and strengthens the supply chain for critical dispatchable clean energy resources such as hydrogen, new nuclear, and advanced energy storage.

Modeling for this report did not include impacts of the recent IRA but did look at impacts of the proposed carbon plan in North Carolina and other potential carbon policies on the Midwest, Florida and South Carolina. Our preliminary modeling indicates that the IRA will reduce the cost of our energy transition through the 2030s, bringing down costs to customers with the IRA tax credits instead of an assumed price on carbon. We also expect the IRA will bring down costs of advanced technologies, such as green hydrogen, and make them cost competitive earlier than expected. The pace of investment still depends on things like scalable supply chains; proactive grid planning processes; federal, state and local permitting; and state regulatory approvals.

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1 EY, “Economic and tax contributions of Duke Energy’s clean energy (2023-2032),” prepared for Duke Energy Corporation, October 4, 2022.

2 Achieving these goals depends on necessary regulatory approvals (which will require demonstration of no adverse effect on grid reliability and reasonable and prudent cost), the ability to site and construct new generation and transmission facilities, available supply chains for new generation and transmission equipment and natural gas availability. Contemplates retiring Edwardsport coal gasifiers by 2035 or adding carbon capture technology to reduce emissions.

3 The Inflation Reduction Act was enacted on August 16, 2022. It extends certain and adds new tax incentives for clean energy.



*Our Scope 1, 2 and 3 net-zero by 2050 goals cover 95% of our calculated 2021 greenhouse gas emissions.*

For our natural gas business, we adopted a goal in 2020 to achieve net-zero methane emissions for our operations by 2030 and have taken significant steps toward that goal, replacing all remaining cast iron and bare steel pipe, and adopting advanced leak detection programs and other technologies to reduce methane emissions.

This year, we expanded our net-zero by 2050 goal to include Scope 2 and certain Scope 3 GHG emissions.<sup>4</sup>

Those are:

- In the electric business, our net-zero goal by 2050 includes Scope 2 emissions from the electricity purchased for our own use, as well as Scope 3 emissions from the power we purchase for resale and from the procurement of fossil fuels for generation.
- For the natural gas business, our net-zero by 2050 goal now includes Scope 3 upstream methane and CO<sub>2</sub> emissions related to purchased natural gas, as well as downstream CO<sub>2</sub> emissions from customers' consumption of gas sold.

As we developed these new goals, we have also analyzed our overall greenhouse gas emissions in more detail. Given this analysis, we have established an interim target for our Scope 2 and certain Scope 3 emissions of a 50% reduction from 2021 levels by 2035.

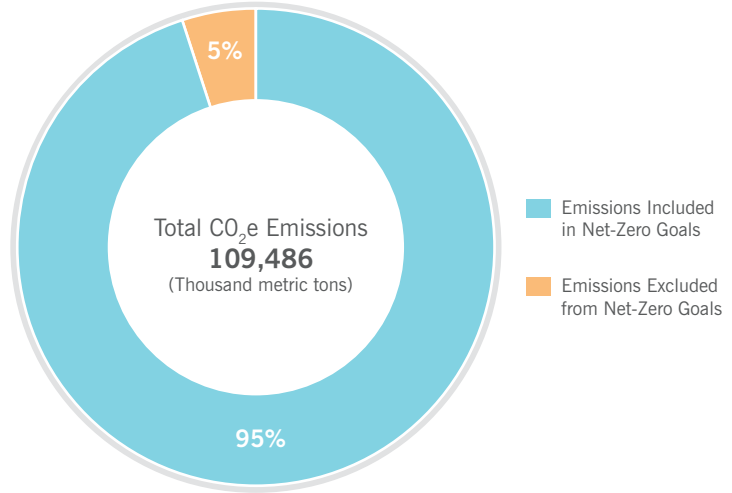
We can now report that our goals cover 95% of our calculated 2021 greenhouse gas emissions. Additional details on these emissions can be found in the section below entitled "Metrics and Targets."

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<sup>4</sup> Under the Greenhouse Gas Protocol developed by the World Business Council for Sustainable Development and the World Resources Institute, Scope 1 GHG emissions occur from sources that are owned or controlled by the company, Scope 2 GHG emissions are from the generation of purchased electricity consumed by the company, and Scope 3 GHG emissions are indirect emissions that occur as a consequence of the company's actions, but are from sources not owned or controlled by the company. Examples of Scope 3 emissions are those from the extraction, production and transportation of fuels purchased by the company for its and its customers' use, and from the use of products sold by the company.



Over 95% of Duke Energy's calculated 2021 emissions fall into currently stated net-zero goals.



All our Scope 1, 2 and 3 goals are contingent on enabling policies; cost-effective technology advancements and scalable supply chains; the need to minimize the impact on customer costs; the continuing clean energy transition of the energy markets in which we operate; as well as federal, state, and local permitting and state regulatory approvals.

This report also includes an analysis of a path we can take to achieve net-zero emissions from customer use of natural gas, and a third-party analysis of the International Energy Agency's global net-zero by 2050 road map (a 1.5°C scenario) and its potential impact on our electric and gas businesses.