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CLEARPATH

ClearPath: Duke Energy's 2020 Climate Report Shows Need for Clean Energy Demonstrations

Blueprint for achieving net-zero requires strong nuclear future, continued use of natural gas, and new technologies like storage and carbon capture

WASHINGTON, DC — Today, Duke Energy released a blueprint for reaching net-zero carbon emissions by 2050, a commitment they made last fall. ClearPath's Executive Director, Rich Powell said the Duke Energy 2020 Climate Report shows a strong commitment to their nuclear fleet and advanced nuclear, innovations in energy storage and carbon capture.

"We applaud Duke's plan which calls for clean energy innovation to create the new technologies needed to achieve their goal," said Rich Powell, ClearPath Executive Director. "Their plan recognizes the need for innovation in the 2020s, allowing for new technologies to emerge in the 2030s to ensure a clean, reliable and affordable path to a net-zero power system by 2050. This bold plan also highlights the need for Congress and the Administration to prioritize demonstrations in the near term for advanced nuclear, energy storage and carbon capture so that Duke and other utilities with net zero commitments will be able to deliver clean energy for their consumers."

A few specifics of Duke's plan that ClearPath is excited about include:

- "No new gas" analysis that assumed the regulated electric utilities are not allowed to build any additional natural gas generation. Under this scenario, the company would only see a modest 5% decrease in cumulative CO2 emissions between 2020 and 2050, but ultimately see supply chain issues with unprecedented additions of energy storage in a short period of time which would lead to greater costs to customers.
    - Specifically the report states that "Duke Energy alone would need to add more than 15,000 MW of energy storage by 2030, more than 17 times the entire battery storage capacity (899 MW) of the entire United States today. Our analysis shows that the incremental cost would be three to four times that of the net-zero scenario that includes gas, and would require the construction and operation of enormous amounts of renewables and energy storage."
- Their Zero – Emitting Load Following Resources (ZELFRs) will be 16% of generation by 2040 and 30% by 2050. This model was based on using small modular reactors which

is a good market signal for developers. ZELFRs are also assumed to be commercially available for deployment in the mid-2030s.

- To achieve this goal, they will need to start building new systems in 2035, which means they need to be demonstrated over the next 10 years in order to reach sustained double of capacity additions — 6 GW in 2040 and 13 GW in 2050 (running with high capacity factors).
- Natural gas remains 6% of their mix 2050. The report highlights getting their emissions down 95% and purchasing offsets for the last 8 million tons of carbon dioxide. Achieving this will involve carbon capture or carbon removal technologies.

In October, Jay Faison and Rich wrote a column on Duke's bold step for clean energy transition.

About ClearPath

ClearPath's vision is that America leads in affordably powering the world with reliable clean energy. ClearPath's mission is to develop and advance conservative policies that accelerate clean energy innovation. To advance that mission, ClearPath develops cutting-edge policy and collaborates with academics and industry. Learn more at clearpath.org. Follow us on Twitter: @JayFaison1, @powellrich, @ClearPathAction