



**BUILDING PEOPLE POWER  
FOR ENERGY & CLIMATE JUSTICE**

June 26, 2023

The Honorable Roy Cooper  
Governor of North Carolina  
20301 Mail Service Center  
Raleigh, North Carolina 27699

The Honorable Josh Stein  
Attorney General of North Carolina  
North Carolina Department of Justice  
9001 Mail Service Center  
Raleigh, NC 27699

**Re: Need for Your Investigation into Duke Energy's Transmission Plans in Order to Avoid Disaster for NC's Climate and Energy Future**

Dear Governor Cooper and Attorney General Stein:

NC WARN and allies are deeply concerned about the transmission construction plans of Duke Energy Progress, LLC and Duke Energy Carolinas, LLC ("Duke Energy"). Specifically, there are substantial grounds to believe that Duke Energy has made inaccurate and misleading filings regarding its plans for hundreds of miles of new and expanded transmission corridors costing at least \$9 billion.

If our concerns prove to be accurate, Duke Energy's customers – North Carolinians – will be forced to foot the bill for this unnecessary transmission buildout based upon inaccurate and skewed information. These plans, quietly included in the 16<sup>th</sup> appendix of Duke Energy's 2022 proposed Carbon Plan (Appendix P), would be disastrous to the people of North Carolina. If carried out, communities already bearing a disproportionate share of climate and energy impacts will face yet another affront by polluters such as Duke Energy.

Remarkably, Duke Energy and state regulators seem resistant to even considering support for a proven, alternative approach based on energy-saving and local solar-plus-storage that would be a far quicker, less expensive and more equitable way to reach the Governor's carbon reduction goals.

Enclosed please find a new and comprehensive description of this approach: *Moving North Carolina Forward: The Case for Local Solar-Plus-Storage*.<sup>1</sup>

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<sup>1</sup> This new report from NC WARN proposes that most new solar be tied into the local distribution system, an approach that will require little or no additional cost to upgrade the grid. The key elements of this proposal are local net metered solar and wholesale projects. North Carolina has a large and virtually untapped potential for local solar power that could be deployed quickly, inexpensively and equitably while benefiting renewable energy companies and speeding realization of the state's zero-carbon mandate for the electricity

Indeed, with the long-running and ongoing controversy over Duke Energy's attempts to further suppress solar net metering by homes, businesses, houses of worship, local governments and others, it is clear that Duke Energy's monopoly business model relies on risking billions of ratepayers' dollars on traditional energy infrastructure while locking out competition from distributed energy resources.

In fact, despite surface-level perceptions of the new North Carolina Carbon Plan as promoting the growth of solar, Duke Energy's long-running suppression of renewables includes significantly reducing and limiting large-scale solar fields for at least six or seven years, as approved by regulators in the NC Carbon Plan. The combined effects of Duke Energy's current actions and future plans could therefore be disastrous for most of the state's once-growing renewable energy industry and for efforts to help slow the climate crisis.

We are writing to request that you both investigate the matters raised herein. Also, that you take sufficient measures to ensure that such monumental decisions regarding North Carolina's energy and climate future be dealt with in an open and transparent manner that fully includes the voices of those from the most impacted areas, which are largely communities of color and low wealth. Such an open approach to decision-making would be a significant departure from business as usual, but we hope you will agree that, with the accelerating damage to the physical and economic wellbeing of so many North Carolinians at stake, now is the time for a new type of leadership.

### **Duke Energy's Aggressive Timeline**

The urgency of your action is evidenced by Duke Energy's referenced need for an "aggressive timeline" to begin its transmission construction and because NC WARN anticipates that Duke Energy is already spending heavily on internal planning that is invisible to the people of North Carolina.<sup>2</sup>

As noted, Duke Energy's projection of a major buildout of transmission was quietly included in its proposed 2022 Carbon Plan.<sup>3</sup> Depending upon the portfolio at issue, Duke Energy proposed to spend between \$1.7 and \$2.6 billion in upgrades alone to its transmission system through 2030. Although Duke's narrative is quite unclear, such upgrades apparently could include expansions to existing corridors. These numbers are substantiated by the following tables taken directly from Appendix P to Duke Energy's proposed Carbon Plan in 2022:<sup>4</sup>

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sector. In this report "local solar" is used to mean solar installations with storage located near the point of use and connected to the electricity grid at the neighborhood level.

<sup>2</sup> See page 25 of Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P.

<sup>3</sup> Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P.

<sup>4</sup> See pages 19-20 of Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P.

**Table P-4: Portfolio P1 Transmission Upgrade Cost Estimate (\$M)**

Year Ending	2030	2035
DEC	\$777 M	\$1,686 M
DEP	\$1,847 M	\$2,743 M

**Table P-5: Portfolio P2 Transmission Upgrade Cost Estimate (\$M)**

Year Ending	2030	2035
DEC	\$626 M	\$1,663 M
DEP	\$1,561 M	\$3,098 M

**Table P-6: Portfolio P3 Transmission Upgrade Cost Estimate (\$M)**

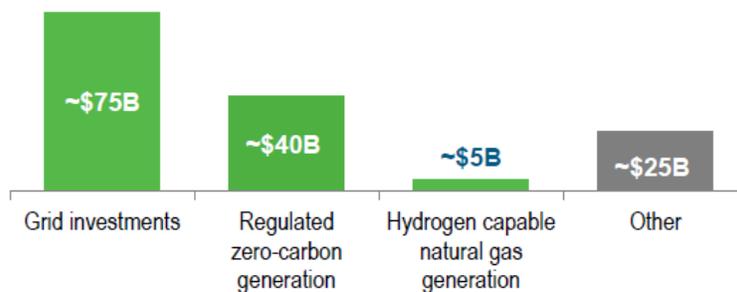
Year Ending	2030	2035
DEC	\$581 M	\$1,630 M
DEP	\$1,115 M	\$2,132 M

**Table P-7: Portfolio P4 Transmission Upgrade Cost Estimate (\$M)**

Year Ending	2030	2035
DEC	\$480 M	\$1,460 M
DEP	\$1,285 M	\$2,403 M

As large as these sums may seem, they pale in comparison to the amounts projected by Duke Energy’s parent company, Duke Energy Corporation, during earnings calls with investors. For instance, during a Third Quarter 2022 Earnings Review and Business Update held on November 4, 2022, Duke Energy Corporation projected to spend about **\$75 billion** over the next 10 years on grid investments by its regulated utilities,<sup>5</sup> which it summarized in this table:

**~\$120 BILLION (~85% OF 10-YR PLAN) COMMITTED TO FLEET TRANSITION AND GRID MODERNIZATION**



<sup>5</sup> Duke Energy Corporation, Third Quarter 2022 Earnings Review and Business Update, p. 18, available at [https://s201.q4cdn.com/583395453/files/doc\\_financials/2022/q3/Q3-2022-Earnings-Presentation-vFINAL-\(with-Reg-G\).pdf](https://s201.q4cdn.com/583395453/files/doc_financials/2022/q3/Q3-2022-Earnings-Presentation-vFINAL-(with-Reg-G).pdf) (accessed on April 6, 2023).

We realize that these numbers are not precisely apples-to-apples.<sup>6</sup> As an example, Duke Energy's projected transmission upgrades apparently do not include new greenfield transmission corridors and associated infrastructure such as new substations; yet, Duke Energy's 2022 proposed Carbon Plan represented that the cost of new greenfield transmission lines would be necessary "as the Companies move **beyond 2030**."<sup>7</sup> Therefore, these greenfield transmission lines overlap very little, or not at all, with the 10-year projection by Duke Energy Corporation during its earnings report.

It is extremely difficult to understand how the transmission cost projections reported to the North Carolina Utilities Commission – especially the \$1.7 to \$2.6 billion in upgrades – can be squared with the \$75 billion estimate provided by Duke Energy Corporation to its investors. Something is just not right. A proportional allocation of this \$75 billion to Duke Energy North Carolina would be more than ten times the forecast of \$1.7 to \$2.6 billion in transmission upgrades in the Duke Energy Carbon Plan.

### **Duke Understates Transmission Costs**

Additionally, Duke Energy appears to have used an understated and deflated transmission upgrade cost adder for solar energy as a means of incentivizing the approval of new greenfield transmission lines. For example, Duke Energy has projected a need to spend at least \$7 billion on new 230 kV and 500 kV transmission lines over the next 10 to 15 years in order to interconnect new resources, especially solar resources, that are projected to come online after 2030.<sup>8</sup>

Although quietly tucked into the late pages of Appendix P in the voluminous filing, Duke Energy's proposed 2022 Carbon Plan supplied sufficient information to calculate the future transmission solar cost adder for new transmission capacity. A cost of \$225 million is identified for the proposed new Erwin-Richmond 230 kV transmission line to enable interconnection of 375 MW of capacity within certain rural areas of North Carolina that Duke Energy calls the "red zone."

Using Duke Energy's own numbers, the transmission cost adder for the solar capacity to be interconnected would be \$225 million (375 MW x 1,000,000 watt/MW) = \$0.60/watt. This new adder, \$0.60/watt, is three times higher than the average solar transmission cost adder assumed by Duke

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<sup>6</sup> For instance, Duke Energy Corporation owns several operating companies which would be lumped into the \$75 billion estimate. Based on NC WARN's review of EIA's state-by-state electricity profiles where Duke Energy Corporation operates investor-owned utilities, Duke Energy North Carolina accounts for about one-half of Duke Energy Corporation's total retail electricity sales.

<sup>7</sup> The full quotation states: "Figure P-3 below represents a hypothetical example of significant greenfield transmission (represented by the dashed lines) that will be needed as the Companies **move beyond 2030** toward carbon-neutral CO2 emissions. The highlighted transmission on this map **likely represents over \$7 billion of greenfield transmission** and system impact study identified [sic] common transmission upgrades needed for interconnecting Carbon Plan resources. Also, it should be noted that greenfield transmission requiring **new rights of way** can **require 10 to 15 years from project start date to in-service date**." See Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P, at p. 21 (emphasis added).

<sup>8</sup> Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P, at p. 21 & Figure P-3.

Energy in its proposed 2022 Carbon Plan, which ranges from \$0.17/watt (2026) to \$0.24/watt (2038+).<sup>9</sup>

Therefore, the evidence shows that Duke Energy's solar cost adders are under-estimated by a substantial margin for purposes of incentivizing new transmission projects to be paid for by ratepayers.

Even ignoring Duke Energy's new greenfield transmission plans (e.g., the proposed Erwin-Richmond 230 kV transmission line), its transmission modifications/upgrades are drastic and unduly expensive. Indeed, Duke's 2022 Carbon Plan proposed \$560 million just in modifications and upgrades merely to incorporate solar farms within the "red zone."<sup>10</sup> Duke Energy provided extremely little detail. It is unclear whether and to what extent Duke Energy will require the use of eminent domain to expand existing transmission corridors in this first round of red zone transmission expansion. The people of North Carolina deserve to know – and be heard – before the bulldozers arrive.

### **Duke's Proposal Targets Vulnerable Rural Communities**

In fact, given the seeming breadth of Duke Energy's transmission plans – both greenfield and upgrades/modifications – the use of eminent domain will be necessary and extensive. In Appendix P, Duke even cites challenges acquiring "right-of-way" as a potential obstacle to its transmission construction timeline.<sup>11</sup>

Self-evidently, Duke Energy has plans for hundreds of miles of new transmission lines, mostly through rural communities of both Carolinas. While Duke Energy's shareholders may benefit from these projects, regular North Carolinians, especially the most underrepresented residents in those rural areas targeted for new transmission corridors, would suffer in a variety of ways, not to mention detrimental impacts to farms, forests and natural areas. Many vulnerable communities will also be targets of Duke's proposal to build many thousands of megawatts of new gas-fired generation units across the state that will drive costs and climate impacts even higher.

The following map illustrates the extent of Duke Energy's new and expanded transmission plans in North Carolina.<sup>12</sup> Please note that transmission corridors range up to 200 feet in width.

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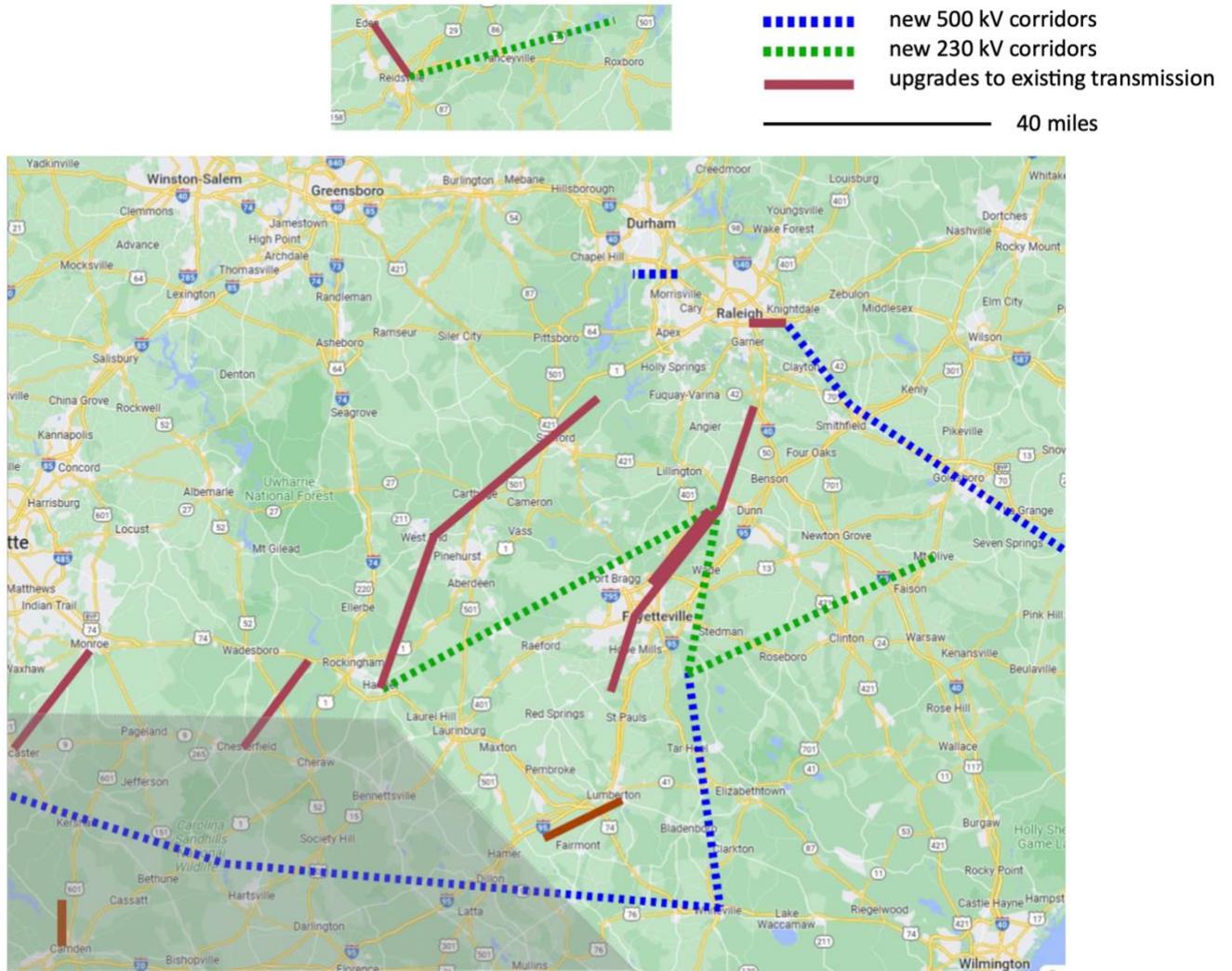
<sup>9</sup> Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, Ch. 2, at p. 19, Table 2-9.

<sup>10</sup> Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P, at pp. 14-15.

<sup>11</sup> Duke Energy's Proposed Carbon Plan, NCUC Docket No. E-100 Sub 179, App. P, at pp. 25.

<sup>12</sup> The present map originated with Duke but was modified by NC WARN to reflect the towns, cities and communities through which the new transmission lines would be installed.

### New (Greenfield) Transmission Lines and Transmission Upgrades Proposed by Duke Energy in NC



Notes: Base map from Google Maps. Location of new transmission lines from Duke Energy Carbon Plan, App. P, Figure P-3, p. 21. Overlay of new transmission lines by B. Powers.

It is essential that you investigate Duke Energy’s plans and make clear to all involved – at this extremely important time – where, exactly, eminent domain would be necessary.

### Duke Neglected to Investigate Alternatives

Finally, and perhaps most troubling, Duke Energy has not actually analyzed any alternative to the expensive and damaging transmission buildout it proposes, which is largely intended to accommodate solar projects of unprecedented scale in the so-called red zone. This analytical defect was acknowledged by Public Staff witness Dustin Metz: “. . . I am not aware of the existence of any other alternate analysis that was completed to compare or contrast the line upgrades Duke selected.

This does not imply that Duke’s solution is not least cost; it is not clear whether there were other alternatives that could have achieved the same mitigation, such as alternate line analysis, non-wires alternatives, etc.”<sup>13</sup>

Furthermore, the Utilities Commission has recognized new transmission is not always a panacea: “. . . there will be times when the most cost-effective solution to a constraint on the transmission system is not more transmission, but rather generation assets located near load.”<sup>14</sup>

We appreciate the Commission’s recognition and note that now is the time to move that brief reference beyond words and into action, which is precisely why we are calling on you to ensure an open public debate about how North Carolina should proceed.

The above-described evidence suggests that Duke Energy has understated the cost of new transmission projects in an effort to implement an expensive transmission buildout which benefits investors at the expense of ratepayers and North Carolina communities.

In light of these facts, we ask that your respective offices investigate Duke’s true intentions – and particularly its activities to date – with respect to its proposed transmission buildout. For example, the following issues require close examination:

1. What are Duke Energy’s true plans for transmission upgrades, expansions and new greenfield transmission corridors over the next 10-15 years?
2. How much does Duke Energy actually estimate that it will spend on new transmission lines, towers, expansions and upgrades in North Carolina over the next 10-15 years?
3. Has Duke Energy analyzed alternatives to this massive transmission buildout? If so, why has such an analysis not been presented publicly?
4. What are the impacts on electricity rates posed by adding \$9 billion or more to the system?
5. Where exactly does Duke Energy intend to build new greenfield transmission lines over the next 10-15 years? The map above is imprecise at the level of land ownership.
6. Has Duke Energy started the process of eminent domain to construct new transmission lines, and if so, where? And precisely where is Duke planning to use eminent domain?
7. Has Duke Energy contacted local elected or community officials in the targeted areas to solicit support when its controversial plan becomes public?
8. Has Duke Energy performed any analysis of potential negative impacts on the public or the environment for its proposed new or expanded transmission corridors?

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<sup>13</sup> Public Staff (Metz) Direct Testimony, NCUC Docket No. E-100 Sub 179, Sept. 2, 2022, at p. 39 n.22.

<sup>14</sup> Carbon Plan Order, Docket No. E-100 Sub 179, at p. 121 (December 30, 2022).

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As mentioned earlier, NC WARN and allies urge in the strongest possible terms that you implement a new type of process which will allow stakeholders, particularly those communities directly impacted by Duke Energy's plan, to have timely and meaningful input into decisions over North Carolina's energy path moving forward. We hope you will agree that Duke Energy, as a state-sanctioned monopoly, should be required to fully cooperate at an entirely new level and manner than it has over the years – particularly in a time of such unprecedented concern about our energy and climate challenges.

We sincerely appreciate your taking the time to closely review this letter, and we trust that you will study and evaluate the serious matters discussed herein. Furthermore, we ask that your offices provide responses to this letter which set forth your positions on these very important issues. The citizens of North Carolina, including Duke Energy's customers, deserve answers to the questions we have raised, and an investigation is therefore essential.

A handwritten signature in black ink that reads "Jim Warren". The signature is written in a cursive, slightly slanted style.

Jim Warren  
Executive Director

cc: Charlotte A. Mitchell, Chair of North Carolina Utilities Commission

Enclosed: *Moving North Carolina Forward: The Case for Local Solar-Plus-Storage*