

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. M-100, SUB 164

In the Matter of)	INITIAL COMMENTS OF
Consideration of the Federal Funding)	OF THE CAROLINA UTILITY
Available Under the Infrastructure)	CUSTOMERS ASSOCIATION
Investment and Jobs Act)	

The Carolina Utility Customers Association, Inc. (“CUCA”), by and through counsel, respectfully submits these initial comments pursuant to the Commission’s Order Allowing Comments issued on February 1, 2022, regarding federal funding available under the Infrastructure Investment and Jobs Act (the “IIJA”).

INITIAL COMMENTS

The IIJA was signed into law on November 15, 2021. The law contains \$1.2 trillion in total funding (\$550 billion of which is new spending) for various infrastructure purposes, including roads and bridges, broadband, drinking water resources, airports, and electrical vehicles. Of particular interest here, the law appropriates some \$73 billion in funding for power grids and utilities improvements and \$12.5 billion for electric vehicle chargers and buses. Power grid and utility improvements are the third largest funding source in the law.¹

CUCA commends the Commission for proactively seeking comment in this proceeding so that North Carolina might maximize access to federal infrastructure funding in support of ongoing efforts to modernize, upgrade and decarbonize existing utility

¹ See generally The Council of State Governments, “Infrastructure Investment and Jobs Act: Power Grids, Utilities and Electric Vehicles,” (Nov. 22, 2021), available at <https://www.csg.org/2021/11/22/infrastructure-investment-and-jobs-act-power-grids-utilities-and-electric-vehicles/>.

infrastructure for the benefit of North Carolina's citizens and ratepayers consistent with least-cost requirements. While the breadth and scope of IIJA will entail many different infrastructure funding opportunities for various utilities, in these comments, CUCA focuses on opportunities impacting the electric grid and recommends the Commission place particular focus on four programs that may present opportunities for enhancement of North Carolina's electrical grid: the "Preventing Outages and Enhancing the Resilience of the Electric Grid" program, the "Program Upgrading Our Electric Grid Reliability and Resiliency," the "Smart Grid Investment Matching Grant Program," and the "Transmission Facilitation Program." General overviews of these programs are set forth below in Section II. In Section I, CUCA provides observations for the Commission's consideration as it evaluates the potential availability of federal funding.

I. General Observations.

A. The Commission should ensure that federal funding opportunities are fully evaluated and pursued.

Under North Carolina's least cost statutory approach to resource acquisition and utility spending, the state's public utilities are compelled by law to consider the availability of federal funding as an alternative, or supplement, to ratepayer financed expenditures.

It is no secret that the two Duke Energy electric utilities envision perhaps the largest capital spending program in North Carolina history over the next ten years as they retire coal facilities and integrate new carbon-friendly resources into their generation portfolio. For example, Duke Energy's CFO stated in Duke Energy's last earnings call that the company anticipates \$130 billion in capital spending over the next 10 years, "including

\$63 billion in the next five years, of which \$52 billion will be spent on grid modernization and moving the power plant fleet toward low carbon emissions.”²

The exact extent of this spending is still to be determined in the context of the Carbon Plan proceeding and subsequent rate cases, but there is no question that the impact of this spending will be felt by ratepayers who, in the absence of significant and innovative cost control mechanisms, can expect dramatic rate increases in the foreseeable future. In an environment of rising interest rates, inflation,³ international turmoil flowing from Russia’s invasion of Ukraine, spiking energy costs,⁴ and lingering economic disruption from the COVID-19 pandemic, the prospect of significant base rate increases on top of all these other economic challenges will be a substantive burden to all classes of ratepayers—in particular, industrial customers whose business operations fluctuate with the economic tide.

With this backdrop the Commission should take all measures to ensure that public utilities to take advantage of available federal funding opportunities, particularly those that may overlap with this state’s policy goals around carbon reduction. Specifically, any utility

² See John Downey, “Duke Energy execs see strong growth ahead after ending 2021 on a high note,” CHARLOTTE BUSINESS JOURNAL, available at <https://www.bizjournals.com/charlotte/news/2022/02/11/duke-earnings-takeaways.html>.

³ See Nick Timiraos, “The Inflation Hits Just Keep Coming, Raising Stakes for the Fed: Rising oil prices, the Ukraine war and continuing supply-chain issues have complicated the Federal Reserve’s push to tame inflation,” THE WALL STREET JOURNAL (Mar. 14, 2022) (noting that inflation is at its highest rate since 1982 as measured by 12-month change in CPI, coupled with the existence of forces that threaten a further inflationary spiral).

⁴ Duke Energy Carolinas recently filed its annual fuel adjustment petition which, if approved, would result in an average rate increase of **8.16%** for industrial customers. See DEC Application Pursuant to G.S. 62-133.2 and NCUC Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities, Docket No. E-7, Sub 1263 (March 1, 2022). For high load industrial customers, a rate increase of this magnitude can equate to a million dollars or more in annual increased energy charges.

proposing significant capital projects should be required to affirmatively demonstrate with appropriate documentation that they have applied for all current eligible State and federal grants, rebates, tax credits, loan guarantees, or other programs available to offset the cost of the project or provide tax advantages.⁵ Stated another way, any expenditure of funds that could have been defrayed by federal funding should, for purposes of rate recovery, presumptively be deemed imprudently incurred.

B. The Commission should use federal funds to position North Carolina to fully participate in regional and national markets.

The availability of these funds may present opportunities for innovative approaches to help position North Carolina for future reforms which will provide opportunities for costs savings to ratepayers. It is evident that a broad range of stakeholders (excluding Duke Energy) agree that certain market reforms are an essential component of carbon reduction and a future where distributed energy resources are predominant.⁶ While regulatory reform is beyond the scope of this proceeding, the IIJA provides funding for infrastructure investments that can benefit ratepayers today—under the current vertical-monopoly structure of energy delivery—and in the future under a more modern structure of energy delivery.

⁵ To be clear, CUCA anticipates that the state’s utilities are already seeking to ensure access to federal funding sources; these comments should not be interpreted to suggest otherwise. Nonetheless, in its oversight role, this Commission should “police” and guide these efforts to ensure that such efforts are maximized for the benefit of North Carolina’s ratepayers.

⁶ See, e.g., Public Staff Report on Duke Energy Carbon Plan Stakeholder Meeting 2, Docket No. E-100, Sub 179 (Mar. 2, 2022), at 2 (“Stakeholders, excluding Duke Energy, shared broad consensus regarding the need to model Duke Energy’s system as part of an RTO.”); Duke Report on Carbon Plan Stakeholder Meeting 2, Docket No. E-100, Sub 179 (Mar. 2, 2022), at 5 (noting stakeholder request for subgroup on RTO modeling).

In the near term, Duke Energy’s ability to import capacity from neighboring jurisdictions will help smooth the intermittent generation of renewables that will be added because of the Carbon Plan and also provide a “security blanket” against future extreme weather events.⁷ In Duke Energy’s recent IRPs, though, it offered high-level estimates of the enormous transmission investments needed to accommodate a greater shift to importation of capacity and renewable generation. Specifically, to allow Duke Energy to import an additional 5,000 MW of capacity into North Carolina, Duke Energy projects that it would have to invest between \$4 billion and \$5 billion in transmission upgrades; to import twice as much (10,000 MW), Duke Energy would have to invest twice as much (\$8 billion to \$10 billion).⁸ Duke Energy should be required to solicit federal financing to offset the enormous costs of these transmission upgrades.

Securing federal financing for Duke Energy’s investments in such transmission upgrades will not only benefit ratepayers “today,” it will position North Carolina for a future transition to a restructured energy market—a transition necessary to accomplish the Carbon Plan on a least-cost basis. Market structures such as a regional transmission organization (“RTO”) have greater ability to deploy renewables because RTOs automatically dispatch the lowest-cost resources (which are often wind and solar generation) and integrate the variability of renewables over a more diverse load.⁹ In

⁷ See, e.g., The February 2021 Cold Weather Outages in Texas and the South Central United States, FERC, NERC and Regional Entity Staff Report (Nov. 16, 2021), at 14 (noting that ERCOT’s importation capacity limitation exacerbated the effects of the cold weather event, in contrast to the capacity of MISO), available at <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and>.

⁸ Duke Energy Carolinas 2020 IRP, Docket No. E-100, Sub 165 (Sept. 1, 2020), at 58–59.

⁹ Duke Nicholas Institute, *Evaluating Options for Enhancing Wholesale Competition and Implications for the Southeastern United States* (Mar. 2020), at 10, available at [https://nicholasinstitute.duke.edu/sites/default/files/publications/Evaluating%20Options%20for%](https://nicholasinstitute.duke.edu/sites/default/files/publications/Evaluating%20Options%20for%20)

addition, an RTO's ability to balance supply and demand over a larger footprint—and the resulting diversity of capacity and load—reduces the need for participants to curtail the intermittent generation of renewables.¹⁰ RTOs are also proven to produce cost savings for ratepayers.¹¹ But the transition to an RTO will require upgrades to Duke Energy's transmission network—upgrades that can be accomplished today with use of the federal funds available in the IIJA.

The transmission upgrades necessary to allow for greater importation are already being considered by the Federal Energy Regulatory Commission. FERC Commissioner Mark Christie recently asked state regulators “about the idea of the agency requiring regional transmission organizations to work with neighboring grid operators to have a minimum transfer capacity between themselves to boost reliability”¹²—transmission investments that would occur regardless of if and when North Carolina joins an RTO. FERC's focus on transmission lines is also reflected in a recent rule that requires

[20Enhancing-Wholesale-Competition-and-Implications-for-the-Southeastern-United-States-Final.pdf](#); Energy Transition Institute, *An Energy Imbalance Market in the Southeastern United States* (Sept. 2020), at 7.

¹⁰ *Evaluating Options for Enhancing Wholesale Competition*, at 3, 17.

¹¹ Vibrant Clean Energy, *Summary Report: Economic and Clean Energy Benefits of Establishing a Southeast U.S. Competitive Wholesale Electricity Market* (Aug. 2020), at 1 (discussing Southeastern RTO), available at https://energyinnovation.org/wp-content/uploads/2020/08/Economic-And-Clean-Energy-Benefits-Of-Establishing-A-Southeast-U.S.-Competitive-Wholesale-Electricity-Market_FINAL.pdf; The Brattle Group, *Potential Benefits of a Regional Wholesale Power Market to North Carolina's Electricity Customers* (Feb. 2019), at 8 (Table 3 shows NC cost savings), available at https://brattlefiles.blob.core.windows.net/files/16092_nc_wholesale_power_market_whitepaper_april_2019_final.pdf; see also *An Energy Imbalance Market*, at 16; *Evaluating Options for Enhancing Wholesale Competition*, at 9.

¹² Ethan Howland, “FERC, state task force eye benefits of considering transmission project portfolios, ending ‘silos,’” *Utility Dive* (Feb. 17, 2022), available at https://www.utilitydive.com/news/ferc-NARUC-task-force-transmission-benefits-cost-allocation/619005/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202022-02-17%20Utility%20Dive%20Newsletter%20%5Bissue:39864%5D&utm_term=Utility%20Dive.

transmission-line owners, such as Duke Energy, to update their line ratings to eliminate overly conservative assumptions about the amount of power they can carry.¹³ It is clear that the federal government views the states' abilities to transfer energy among each other as a cornerstone of our nation's plan for a carbon-reduced future.

As explained below, the IIJA provides federal funds, through programs such as the Transmission Facilitation Program, for projects such as creating or replacing transmission lines and increasing transmission capacity. With Duke Energy forecasting that it will need to spend billions of dollars to increase its connections with neighboring states, Duke Energy must seek every available penny from the federal government's new programs to reduce the impact on ratepayers.

C. The Commission should assess whether further state agency or legislative action is necessary.

Some of the federal funding opportunities flowing from IIJA will require affirmative action by an appropriate state agency, possibly including the Commission, in order to apply to the federal government for access to funds, as well as securing access to matching funds, which may require legislative action. To the extent that it is determined through this proceeding—or otherwise—that these programs present opportunities for North Carolina, it may be necessary for the Commission to coordinate appropriate state action with other state agencies and/or seek state appropriations from the General

¹³ Ethan Howland, "FERC orders utilities to fine-tune line ratings to boost transmission efficiency," Utility Dive (Dec. 17, 2021), available at https://www.utilitydive.com/news/ferc-line-ratings-transmission-gas-pipelines/611716/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202021-12-17%20Utility%20Dive%20Newsletter%20%5Bissue:38696%5D&utm_term=Utility%20Dive.

Assembly. Any such coordination or requests should be undertaken as soon as possible so that North Carolina will be prepared to compete with other states for funds.

D. The Commission should evaluate existing programs that overlap with newly funded federal programs.

It is clear that some of the federal programs overlap with existing state initiatives. For example, the \$5 billion program to “prevent outages and enhance the resiliency of the electric grid” (Sec. 40101) appears to overlap with Duke Energy’s ongoing Grid Improvement Plan initiative. To the extent that Duke Energy is able to leverage federal funds for the initiative which is already “shovel-ready,” Duke Energy should be required to do so—and the Commission may wish to issue a directive to this effect as soon as possible.

As an example of such a directive, the Commission recently issued an order requiring Duke Energy to “refine and modify” its proposed EV pilot program “in order to take into consideration the IIJA and the possibility of receiving direct funding under the IIJA and/or other recently available sources of federal funds in conjunction with the programs proposed as Phase II Pilots, and to pursue all such funding that is available.”¹⁴ These same reasons should cause Duke Energy to suspend its current GIP spending plan to assess how that plan might be supplemented by access to federal funding. This relief is particularly appropriate in light of Duke’s most recent progress report, filed on March 1, 2022, reporting that spending to date is below that originally forecasted and that inflation could push costs higher as the work lags behind schedule.¹⁵

¹⁴ Order Requiring Further Collaboration and Report on Proposed Phase II Pilot Programs, Docket Nos. E-2, Sub 1197 and E-7, Sub 1195 (Feb. 21, 2022), at 3-4.

¹⁵ See Duke December 2021 NC GIP Biannual Report – Refiled, Docket Nos. E-7, Sub 1214B and E-2, Sub 1219B (March 1, 2022).

There also appears to be no excuse for Duke Energy failing to use federal funds to offset the costs of its Grid Improvement Plan. Duke Energy has demonstrated it is already adept at securing federal funding for grid modernization. For instance, Duke Energy years ago secured \$200 million in federal funds under the The American Recovery and Reinvestment Act to install two-way communications, smart meters, automatic advance distribution applications, and deployment of electric vehicles.¹⁶ Similarly, Progress Energy at the same time received \$200 million in Recovery Act funds for the construction of a Smart Grid virtual power plant.¹⁷

As explained below, Duke Energy is eligible to receive federal funds to offset the costs of its grid modernizations investments. Rather than frantically spend to meet its GIP projections (and budgets), Duke Energy should “hit pause” and reassess whether such spending can be financed, at least in part, by the IIJA. A decision by Duke Energy to persist in spending ratepayer dollars on grid upgrades would not be prudent in light of the availability of possible federal dollars.

II. Summary of Potentially Relevant Federal Programs

A. IIJA Section 40101: Preventing Outages and Enhancing the Resilience of the Electric Grid.

This program appropriates five billion dollars from 2022 through 2026 for a grant program designed to support increased resilience of the electrical grid.¹⁸ Available funds

¹⁶ U.S. Dep’t of Energy, “Recovery Act Selection for Smart Grid Investment Grant Awards – By State,” available at <https://www.energy.gov/sites/default/files/SGIG%20Awards%20%20By%20State%202011%201%2015.pdf>.

¹⁷ *Id.*

¹⁸ IIJA § 40101(j).

are divided in half, with 50% available as matching grants¹⁹ to entities seeking to fund specific projects, and 50% available to states for making their own grants to eligible entities.²⁰ Funds are available through this program for a wide range of grid hardening projects, though priority is to be given to projects that “will generate the greatest community benefit . . . in reducing the likelihood and consequences of disruptive events.”²¹ Duke Energy Carolinas, LLC, Duke Energy Process, LLC and Dominion Energy North Carolina (the “Public Utilities”) qualify as eligible entities²² for the program, meaning they will be permitted to apply for grant funding directly from the Department of Energy (“DOE”). As such, the Commission may seek funding through this program in two ways: by itself applying for State funding (or working with other state agencies to apply for funding) and by directing or otherwise supervising or encouraging the Public Utilities to apply for DOE grants.

Eligible entities are required to match 100% of a grant under this program (40101(h)),²³ which would necessarily entail some level of oversight by the Commission of such expenditures. States are required to match 15% of grant money (40101(d)(8)), which would require exploration of potential sources of funding and, potentially, a state appropriation for this purpose.

¹⁹ Funding must generally be matched 100% by the entity, and cannot exceed the total amount spent by the entity on grid hardening and resilience efforts in the previous three years. *Id.* § 40101 (c)(3), (h).

²⁰ *Id.* § 40101(f). States are required to match 15% of grant funds. *Id.* § 40101(d)(8).

²¹ *Id.* § 40101(c)(1), (c)(4).

²² Eligible entities include electrical grid operators, electricity storage operators, electricity generators, transmission owners or operators, distribution providers, and fuel suppliers. *Id.* § 40101(a)(2).

²³ Smaller utilities that sell 4 million MWh of electricity per year or less must match on a one-third basis.

Application procedures for this program are not yet established, but the DOE has issued a Notice of Intent indicating that further guidance will be forthcoming.²⁴

B. IIJA Section 40103: Program Upgrading Our Electric Grid Reliability and Resiliency.

This program offers another opportunity for the Commission to seek grant funding for efforts to increase the resilience of North Carolina's electrical grid. It appropriates five billion dollars for the purpose of "collaborat[ing] with electric sector owners and operators to demonstrate innovative approaches to transmission, storage, and distribution infrastructure" and "to demonstrate new approaches to enhance regional grid resilience."²⁵ Both States and public utility commissions may apply for funding under this program²⁶ and will generally be required to match federal funds to some extent which would, again, require consideration of state funding sources and potentially a state appropriation of funds.²⁷

For the same reasons cited above, this program again offers the Commission an important opportunity to bolster the resilience of North Carolina's electrical grid. As with the first grant program, the DOE has promised further guidance on applying for these funds.²⁸

²⁴ U.S. Department of Energy, Office of Electricity, *Building a Better Grid Initiative to Upgrade and Expand the Nation's Electric Transmission Grid to Support Resilience, Reliability, and Decarbonization*, (Jan. 11, 2022), at 11, available at https://www.energy.gov/sites/default/files/2022-01/Transmission%20NOI%20final%20for%20web_1.pdf (hereinafter "DOE Notice of Intent").

²⁵ IIJA § 40103(b)(3), (b)(7).

²⁶ *Id.* § 40103 (b)(1)(A)

²⁷ *Id.* § 40103 (b)(6); 42 U.S.C. 16352 (20% match of research and development activity and 50% match of cost of demonstration or commercial application activity, with some exceptions and discretionary reductions permitted).

²⁸ DOE Notice of Intent, at 11.

C. IIJA Section 40107: Smart Grid Investment Matching Grant Program.

This section of the IIJA amends and provides an additional three billion dollars in funding for an existing DOE program established under the Energy Independence and Security Act of 2007 (codified at 42 U.S.C. § 17386).²⁹ North Carolina has benefitted from over four hundred million dollars in funding for projects under similar grant programs in the past.³⁰

As part of the IIJA, the Smart Grid grant program will offer matching grants to deploy advanced grid technologies and to increase flexibility through things like dynamic line rating, flow control devices, advanced conductors, network topology optimization, and more.³¹ North Carolina utilities have already invested heavily in smart grid technology but to the extent this investment is not complete the fund may present opportunities to upgrade current technologies and help prepare the State to meet the increasingly complex transmission requirements created by the diversification of our energy resources. Again, the DOE promises more information to come related to this program.³²

D. IIJA Section 40106: Transmission Facilitation Program.

The Transmission Facilitation Program provides a unique opportunity to partner with the DOE to expand or upgrade North Carolina electrical transmission capacity. Unlike a traditional grant program, this program empowers the DOE to serve as an anchor

²⁹ IIJA § 40107.

³⁰ See U.S. Dep't of Energy, "Recovery Act Selection for Smart Grid Investment Grant Awards – By State," available at <https://www.energy.gov/sites/default/files/SGIG%20Awards%20%20By%20State%202011%201%202015.pdf>.

³¹ See IIJA § 40107(a); DOE Notice of Intent, at 12.

³² DOE Notice of Intent, at 12.

customer for projects to construct new or upgraded transmission lines by entering into capacity contracts to purchase up to half of the planned capacity of the project before the project is completed, and for a term of up to forty years.³³ The DOE is also able to provide loans for the transmission upgrade projects through this program,³⁴ or to enter into public-private partnerships to co-develop projects under certain circumstances.³⁵

Transmission upgrades are an essential part of North Carolina's accomplishment of the Carbon Plan. As the State builds more renewable energy resources, the Commission should encourage a wide range of partners, both public and private, to invest in the associated transmission infrastructure. This program is distinctive because it does more than fund transmission line construction projects, but encourages additional private sector investment by giving projects a substantial and stable core investor: the DOE. The Commission would be well-served by either applying directly, or directing the Public Utilities to apply to work with the DOE to develop and/or invest in an ambitious plan to both increase and upgrade electrical transmission lines across the State.

The availability of the Transmission Facilitation Program is another reason why Duke Energy should provide detailed transmission plans and costs estimates as part of the Carbon Plan. Details about transmission planning will not only allow stakeholders to scrutinize Duke Energy's resource planning, but such detailed planning is necessary to apply for federal funding that can reduce the financial burden of transmission upgrades.

³³ IIA § 40106(a)(1), (e)-(f); DOE Notice of Intent, at 10-11.

³⁴ *Id.* § 40106 (e)(1)(B)

³⁵ *Id.* § 40106 (e)(1)(C), (h); *see* DOE Notice of Intent, at 11 ("DOE is authorized to enter into public-private partnerships to co-develop projects that are located in a National Corridor or that are necessary to accommodate an increase in demand for interstate transmission, among other criteria.").

Failure to maximize the funding available under the Transmission Facilitation Program will result in ratepayers paying more for transmission upgrades than necessary—which would be a *de facto* violation of least-cost-planning principles. The Commission should compel Duke Energy to provide detailed transmission plans associated with the Carbon Plan.

CUCA encourages the Commission to work with stakeholders to identify multiple future transmission projects and prepare to submit applications as soon as a mechanism is available to do so. As with other IJJA-created programs, the DOE has indicated that further guidance will be forthcoming on how to apply and take advantage of the Transmission Facilitation Program.³⁶

CONCLUSION

The IJJA has established numerous funding sources and other avenues for utilities and the Commission to access federal funding to support a wide range of projects designed to bolster and improve North Carolina’s energy infrastructure. In light of the availability of these federal funds, CUCA asks that the Commission direct Duke Energy and Dominion Energy North Carolina to submit detailed plans of their anticipated infrastructure investments that would be eligible for federal funding, including cost estimates, forecasted timelines, and action steps needed to be taken—whether by the utility, by the Commission, or by another state agency—to a maximum amount of funds. In the meantime, CUCA also recommends that the Commission staff confirm the agency’s ability to receive federal funds under Section 143-7-1(a) of the General Statutes, which appears to allow state agencies to apply for federal funding.

³⁶ DOE Notice of Intent, at 11.

Respectfully submitted, this 15th day of March, 2022.

**CAROLINA UTILITY CUSTOMERS
ASSOCIATION, INC.**

By: /s/ Craig D. Schauer
Marcus W. Trathen
Craig Schauer
BROOKS, PIERCE, MCLENDON,
HUMPHREY & LEONARD, LLP
Suite 1700, Wells Fargo Capitol Center
150 Fayetteville Street
P.O. Box 1800 (zip 27602)
Raleigh, NC 27601
(919) 839-0300
mtrathen@brookspierce.com

Attorneys for CUCA

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Certificate of Service

I hereby certify that a copy of the foregoing *Initial Comments of Carolina Utility Customers Association* has been served this day upon all parties of record in this proceeding, or their legal counsel, by electronic mail.

This the 15th day of March, 2022.

BROOKS, PIERCE, McLENDON,
HUMPHREY & LEONARD, LLP

/s/ Craig D. Schauer