BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-100, SUB 165

In the Matter of:	)	**CITY OF ASHEVILLE AND**
2020 Biennial Integrated Resource Plan	)	**COUNTY OF BUNCOMBE**
	)	**INTIAL COMMENTS ON**
	)	**INTEGRATED RESOURCE**
		PLAN

CITY OF ASHEVILLE AND BUNCOMBE COUNTY INTIAL COMMENTS ON DUKE ENERGY CAROLINAS, LLC AND DUKE ENERGY PROGRESS, LLC'S INTEGRATED RESOURCE PLAN

Pursuant to North Carolina Utilities Commission ("Commission") Rule R8-60(k), and the Commission's January 8, 2021 *Order Granting Extension of Time* the City of Asheville and Buncombe County, through the undersigned attorneys, respectfully submit the following comments on the Duke Energy Progress and Duke Energy Carolinas 2020 Biennial Integrated Resource Plan (IRP) filed on September 1, 2020. These comments were drafted by City of Asheville Sustainability Officer, Amber Weaver and Energy Program Manager, Bridget Herring, and Buncombe County Sustainability Officer, Jeremiah LeRoy, in partnership with other North Carolina local governments as a collective effort to advance our renewable energy and greenhouse gas (GHG) reduction goals.

I. INTRODUCTION

In 2017, a community-driven effort resulted in Buncombe County and the City of Asheville setting ambitious renewable energy goals (listed below). These goals are intended to transform the region's energy supply, reflect the community's dedication to environmental and social good, and demonstrate climate leadership within North Carolina. Through the County's and City's shared goals, we embarked on a Renewable Energy Roadmap outlining options to achieve 100% renewable energy for both community and government operations.

Local Government Renewable Energy and GHG Reduction Goals

- The City of Asheville adopted Resolution 18-279 on October 23, 2018 to transition municipal operations to 100% renewable energy by December 31, 2030.
- Buncombe County adopted resolution 17-12-06 on December 5, 2017 as a roadmap to transition County operations to 100% renewable energy by December 31, 2030 and transition all of Buncombe County to 100% renewable energy by December 31, 2042.
- The City of Asheville adopted Resolution 07-90 on April 24, 2007 to reduce municipal GHG emissions by 80% by 2050.
- The City of Asheville adopted Resolution 20-20 on January 28, 2020 declaring a climate emergency and committing to end citywide GHG emissions by 2030 and to phase out fossil fuel power generation and use within the City.

Key findings of the Renewable Energy Roadmap[1] concluded that state and utility-level actions to increase renewable energy in the utility power mix and support renewable energy market development will have the greatest impacts on progress towards the local government and community-wide goals.

The decisions made in this 2020 Biennial IRP process will critically impact our ability to meet our renewable energy and GHG reduction goals; thus, we see the 2020 Biennial IRP as a pivotal opportunity to expand our partnership with Duke Energy to create a reliable, affordable, resilient, and equitable system.

In April 2016, Buncombe County and the City of Asheville adopted a joint resolution establishing the Energy Innovation Task Force with Duke Energy Progress. As a result of this partnership, Duke Energy Progress helped our community 1) delay construction of a peaker plant, 2) approve two microgrids — the first utility-scale microgrids in the state, 3) add 19 megawatts (MW) of battery storage — more than anywhere else in North Carolina, 4) create pilot programs for Buncombe County including fee for service upgrades for low-income families and a cold climate heat pump pilot, 5) execute advanced metering infrastructure in Buncombe County ahead of schedule, and 6) launch the Blue Horizons Project which informs and empowers residents to invest in energy efficiency and renewable energy through existing Duke Energy and local community programs. These are examples of how we have successfully partnered with Duke Energy to advance renewable energy and GHG reduction goals in our region. We look forward to continuing this partnership through this IRP and the recommendations listed below.

[1] Renewable Energy Roadmap, available at: https://drive.google.com/file/d/0BzZzONRPV-VAQTNxU2pVSEJPZTBPZ053Vk52dzk2S2tIWFNz/view

We appreciate Duke Energy's efforts to model six unique IRP scenarios with various pathways to a clean energy future. The IRP begins to address our renewable energy and GHG reduction goals as Duke Energy aims to meet their goal of net-zero carbon by 2050, and we applaud this climate leadership. However, both Duke Energy and the Commission, in its review of the IRP, have the opportunity to assess how the IRP's long-term goals can align further with our renewable energy and GHG reduction goals to achieve more together, and underscore the urgency of climate change and the wellbeing of all. Additional actions should be considered to advance equity goals beyond what is currently outlined.

Given this, we ask that the Commission direct Duke Energy and/or take action to implement the recommendations below.

II. COMMENTS/RECOMMENDATIONS

1. APPLY A COMPETITIVE, ALL-SOURCE PRODUCUREMENT PROCESS TO ADDRESS FUTURE ENERGY AND CAPACITY NEEDS WITH CLEAN ENERGY PORTFOLIOS TO HELP REDUCE SYSTEM-WIDE GHG EMISSIONS.

We commend Duke Energy's plans under the accelerated coal retirement scenario — the "Earliest Practicable" scenario; however, Buncombe County and the City of Asheville have concern with Duke Energy's plans to replace capacity primarily with natural gas power plants, which are heavy emitters and could eventually become stranded assets[2] due to the dramatic decline in the cost of renewable energy and maturation of storage.

We also question the assumptions in the "No New Gas Generation" scenario including: 1) The assumption that this resource portfolio is "completely dependent" on the "development of diverse, new carbon-free resources;" 2) High customer costs "due to the magnitude of early adoption of emerging carbon-free technologies." These costs are inconsistent with utilities in Indiana[3], Arizona[4], Michigan[5], Minnesota[6], and Oregon[7], which are replacing carbon-intensive resources with clean energy portfolios and saving customers money. Rocky Mountain Institute's independent analysis of the economics of clean energy portfolios found a decline in overall cost by 80% since 2010. These clean energy portfolios

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[2] Rocky Mountain Institute webpage, available at: https://rmi.org/insight/clean-energy-portfolios-pipelines-and-plants/

[3] Indiana example, available at: https://www.nipsco.com/our-company/news-room/news-article/nipsco-announces-new-indiana-based-solar-projects-to-power-270-000-homes-by-2023

[4] Arizona example, available at: https://www.wri.org/blog/2019/07/natural-gas-beat-coal-us-will-renewables-and-storage-soon-beat-natural-gas

[5] Michigan example, available at: https://rmi.org/michigan-is-the-latest-state-to-embrace-the-value-of-clean-energy-portfolios/

[6] Minnesota example, available at: https://www.eenews.net/energywire/2019/07/01/stories/1060677945

[7] Oregon example, available at: https://portlandgeneral.com/about/integrated-resource-planning

cost less than 90% of proposed gas-fired generation and are projected to undercut operating costs of existing gas plants within 10-20 years[8].

Buncombe County and the City of Asheville see an opportunity for Duke Energy to meet emerging energy and capacity needs not with new gas plants, but with clean energy portfolios that provide a broad range of benefits for customers, including lower customer costs, reduced emissions, and enhanced reliability. We therefore **encourage Duke Energy to explore — and the Commission to require — a competitive, all-source procurement process**. All-source procurement is a type of request for proposals (RFP) that is technology agnostic, allowing a full range of potential resources to compete on equal footing, and can create a fair process for renewable energy, energy efficiency, demand-side management, and storage to play a more critical role in addressing future energy and capacity needs.

Several recent precedents support this assertion. In 2018, after Northern Indiana Public Service Company (NIPSCO) announced the launch of an all-source procurement RFP, they received 96 proposals with variations on technology, pricing structure, term length, and price. As a result, NIPSCO selected three solar projects with associated battery storage in support of their "Your Energy, Your Future" generation transition plan, which is expected to save customers an estimated $4 billion over 30 years.[9]

Buncombe County and the City of Asheville strive to protect economic freedom and opportunity, along with energy equity, by promoting free and fair competition in the marketplace. All-source procurement can help ensure that Duke Energy's customers are receiving the best solutions the market can offer and benefiting from increased competition among suppliers that can lead to lower prices. All-source procurement — because it typically delivers a suite of technologies and solutions — can also increase the grid's resilience in the face of unexpected natural disasters and reduce probabilities of outages.

Thus, **we recommend the North Carolina Utilities Commission (NCUC) adopt the following best practices**, drawing from recommendations developed by Energy Innovation, to run an all-source procurement process.[10] Xcel Colorado recently adopted an approach consistent with these recommendations, which motivated both the utility as well as potential bidders to engage in a serious, vigorous competitive market process.

- NCUC should use the resource planning process to determine the technology-neutral procurement need, explicitly linking the IRP process with Duke Energy's procurement processes.

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[8] RMI publication, available at: https://rmi.org/insight/clean-energy-portfolios-pipelines-and-plants/

[9] NIPSCO all-source example, available at: https://www.nipsco.com/our-company/news-room/news-article/nipsco-announces-new-indiana-based-solar-projects-to-power-270-000-homes-by-2023

[10] Energy Innovation webpage, available at: https://energyinnovation.org/wp-content/uploads/2020/04/All-Source-Utility-Electricity-Generation-Procurement-Best-Practices.pdf

- NCUC should require utilities, including Duke Energy, to conduct a competitive, all-source procurement process, with robust bid evaluation.
- NCUC should require that Duke Energy run candidate resources through a portfolio model in order to understand their capacity value (otherwise utilities may simply disqualify wind and solar, based on a binary view).
- Ideally, NCUC should rule out the possibility of build-transfer contracts (which would eliminate the incentive for Duke Energy to opt for more expensive gas assets they could later add to their rate-base). At very least, NCUC should renew procedures to ensure that utility ownership of generation is not at odds with competitive bidding.
- NCUC should conduct advance review and approval of procurement assumptions and terms.
- NCUC should revisit rules for fairness, objectivity, and efficiency.

Knowing that Duke Energy shares our goals for a cleaner, resilient, and equitable energy system, we would be encouraged to see these recommendations take effect both at the Commission and within Duke Energy's processes.

2. EXPAND ENERGY EFFICIENCY PROGRAMS TO ASSIST LOCAL GOVERNMENTS AND OUR RESIDENTS TO ADDRESS BILL AFFORDABILITY, HEALTH, AND CLIMATE CONCERNS.

Buncombe County and the City of Asheville are glad to see the inclusion of energy efficiency in each of the IRP scenarios. We work with Duke Energy on energy efficiency programs in our own facilities as well as promoting them in our community with particular focus on reducing peak demand. In 2019, the Rocky Mountain Institute performed an analysis for Buncombe County and the City of Asheville that concluded that Duke Energy Progress West region's winter demand spikes were, on average, 30% higher than summer demand spikes. It also showed that this peak demand was driven predominately by residential heating. Alleviating the peak demand, and the need for additional capacity, is challenged by residents ability to invest in energy efficiency upgrades. Many households throughout North Carolina face persistent poverty and high energy burdens. Energy burden is defined as the proportion of household income that goes toward paying electricity and/or natural gas bills. High energy burdens are those with energy burdens at or greater than 6%, which most often affect low-income, Black, Latino, low-income multifamily, and renter households. These customers are more likely to live in older, less-efficient housing.[11] Recognizing that efficiency not only reduces emissions but also saves customers money, we see it as a very important component of meeting our climate and equity goals.

[11] Bednar, D., T. Reames, and G. Keoleian. 2017. "The Intersection of Energy Justice: Modeling the Spatial, Racial/Ethnic and Socioeconomic Patterns of Urban Residential Heating Consumption and Efficiency in Detroit, Michigan." Energy and Buildings 143: 25–34. doi.org/10.1016/j.enbuild.2017.03.028.

In its IRP, Duke Energy uses an energy efficiency and demand side management Market Potential Study (MPS) to analyze how much energy efficiency is available as a resource in Duke's service territory. The MPS uses the 'total resource cost test' (TRC), which includes costs to participants, but not their attendant benefits, eliminating valuable energy efficiency that could provide value to the system as a whole. As part of that study, we recommend using the Utility Cost Test (UCT), which the Commission directed be used as the primary test. The TRC study also relies on historic program participation data from Duke's current suite of program delivery and marketing methods to determine customer participation levels. This limits potential by missing critical tools like on-bill financing, which Duke does not currently offer.

Although the IRP mentions its income-qualified program offerings and the company describes its stakeholder engagement approach on the Duke website, it is not clear how or whether historically marginalized communities participated in decision making about those programs, which may have led to underutilized or misrepresented assumptions about program use. Successful and durable low-income programs engage these communities so that programs benefit all. Going forward, **we encourage Duke Energy to articulate how the IRP incorporates recommendations from historically marginalized communities, and how it increases access to energy efficiency for low-moderate income (LMI) customers.**

Buncombe County and the City of Asheville **encourage the Commission to review Duke Energy's assumptions in the MPS and request that Duke Energy submit updated scenarios that use a UCT and customer adoption models that include the full range of potential methods (including a variety of financing tools).** These changes would enable Duke Energy to prioritize energy efficiency as a least cost resource for the system that delivers health, comfort, and affordability benefits to our communities.

3. EXPAND THE DISTRIBUTED GENERATION AND UTILITY-SCALE RENEWABLE ENERGY SOLUTIONS OFFERED THAT ADVANCE LOCAL GOVERNMENTS' RENEWABLE ENERGY AND EQUITY GOALS.

In addition to the opportunity to utilize renewable energy as an alternative energy, access to distributed and utility-scale renewable energy is essential to achieving our renewable energy and GHG reduction goals. Buncombe County and the City of Asheville are glad to see the inclusion of renewable energy in each of the IRP scenarios. We applaud scenarios C-F where both solar and wind play a more substantial role. Depending on the scenario selected, additional renewable energy may be required because 2,300 MW of renewable energy will be required to meet our municipal and community-wide renewable energy

goals for building energy consumption alone. We will need even more renewable energy to meet additional demand as electric transportation grows. We recognize that our renewable energy goals can be achieved through the base-grid service mix and participation in customer programs. **We request the Commission consider our collective goals when reviewing the proposed scenarios and that Duke Energy utilizes additional renewable energy resources, or develops subsequent customer solutions, that allow Buncombe County and the City of Asheville to reach our stated goals.**

While we understand that this IRP is not reviewing renewable energy programs, we do think it is important to discuss the consideration of increasing overall renewable energy procurements. The development of locally based resources and programs, such as residential solar or community solar, are a high priority for us and provide an opportunity for equitable access and distribution of renewable energy benefits. For example, local programs can contribute to resilience, savings, and wealth-building by lowering energy bills, especially for LMI customers facing disproportionate heavy energy burden. LMI customers are at risk of being left behind in the clean energy transition. In fact, while nationwide LMI households represent 40% of the population, they account for less than 5% of solar installations.[12]

In 2018, 43% of households in Buncombe County had an energy burden at or greater than 6%. Of particular relevance, 24% of households had an *electricity* burden at or greater than 6%. However, minorities represent 12% of the population, but are 31% of households experiencing high energy burden. Given a large portion of our community is confronted with energy burden, we feel it is important to increase renewable energy procurements and collaborate on removing barriers to LMI customer participation.

In pursuit of equitable access to the economic and social benefit of renewable energy, Buncombe County and the City of Asheville support the expansion of community solar offerings and on-site solar incentives to reduce the energy burden of our most vulnerable populations. We recognize that renewable energy policy is limited by statute. For example, Duke Energy's Solar Rebate Program has a carve-out for nonprofits, yet there is not a carve-out for LMI customers due to legislative restrictions regarding subsidies. Statute requires that Duke Energy's community solar program caps projects at 5 MWs and charges customers a premium instead of savings. These challenges discourage program participation and makes solar inaccessible for LMI customers. Given these external barriers, we continue to work with Duke Energy and relevant stakeholders to advocate for regulatory changes that make renewable energy accessible and affordable.

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[12] Bridging the Solar Income Gap, GW Solar Institute: https://solar.gwu.edu/bridging-solar-income-gap

We look forward to collaborating with Duke Energy on the design and implementation of affordable, locally generated renewable energy programs available to all customers.

4. CONDUCT A ROBUST ANALYSIS OF THE TRANSMISSION INVESTMENTS REQUIRED TO ENABLE LARGE-SCALE WIND IN FUTURE PORTFOLIOS.

Buncombe County and the City of Asheville support a reliable and cost-effective distribution and transmission infrastructure that is critical for scaling renewable energy generation. Duke Energy's analysis suggests significant investments in transmission are needed to enable higher penetration of renewable energy, but the analysis does not account for modern strategies and costs for grid upgrades. **We recommend that Duke Energy conduct a comprehensive analysis including the investigation of potential transmission alternatives, the repurposing of existing transmission corridors, and economies of scale gained through large utility-scale renewable projects or joint balancing area planning.**

As mentioned in the IRP, evaluating electric grid upgrades that look significantly different from today's is complex and uncertain. However, we question Duke Energy's assessment that the transmission infrastructure associated with high-renewable and/or low-carbon scenarios may be prohibitively expensive. Similarly, there is little mention of the potential transmission benefits of operating DEC and DEP as a single balancing authority, as noted in some sensitivity analyses. A more detailed economic and technical analysis should be conducted to determine whether existing transmission infrastructure from retiring coal assets can be better utilized, or whether certain advanced transmission technologies can better utilize the existing transmission network.

Additionally, the State of North Carolina recently joined the SMART-POWER memorandum, which requires signatories to "cooperatively promote, develop, and expand offshore wind energy generation and the accompanying industry and supply chain workforce." Paramount is a significant commitment to develop an offshore transmission network and integrate it into the existing Duke Energy system. It is unclear whether this new commitment has been reflected in the IRP; thus, we encourage Duke Energy to assess how this may impact their immediate and near-term transmission planning processes.

5. REASSESS EV PENETRATION RATE AND TAKE A PROACTIVE APPROACH TO GROWING ELECTRICAL LOAD THROUGH TRANSPORTATION ELECTRIFICATION OFFERINGS.

Transportation electrification paired with clean energy portfolios supports Buncombe County and the City of Asheville's goals and is in the public interest. Research shows that

electric vehicles reduce air pollution and benefit health.[13] Moreover, customers could benefit financially from owning an EV, as outlined by Synapse Energy Economics.[14] Electrification will provide value to Duke Energy through new revenue streams to increase profit, as noted in the IRP.

In the IRP, the assumed electric vehicle penetration rate is 7.3% by 2035, likely conservative, given major automakers' ambitious EV efforts. For example, in November 2020, General Motors revealed that 40% of the company's U.S. vehicles will be battery electric by the end of 2025.[15] **We encourage Duke Energy to consider automakers' EV rollouts to better forecast EV penetration and improve utility planning.**

We recommend that Duke Energy proactively promote EV adoption. We commend Duke Energy's efforts through the Electric Transportation Pilot Program, approved by the Commission in December 2020. However, installing only 310 chargers in North Carolina may not meet real demands. Buncombe County and the City of Asheville plan to transition our own fleets and Governor Cooper's Executive Order No.80 mandates adding 80,000 zero-emission vehicles in North Carolina by 2025[16].

Duke Energy could offer incentives, like Austin Energy's rebates and tax credits[17], and redesign rates to shift residential charging from peak periods to off-peak hours. This would help customers avoid costly on-peak charges, as demonstrated in the Austin Energy EV360 pilot program.[18] **We recommend that Duke Energy plan a robust suite of EV programs and analyze how a more ambitious, proactive approach to increasing EV penetration in the state will impact future load growth.**

Buncombe County and the City of Asheville are committed to the health, economic well being, and resiliency of our community. The long-range plans proposed by Duke Energy will have a significant impact on our ability to meet our clean energy goals. Continuing to rely on fossil fuel-based electricity generation runs counter to our goals, is economically

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[13] Choma, E. F., Evans, J. S., Hammitt, J. K., Gómez-Ibáñez, J. A., & Spengler, J. D. (2020). Assessing the health impacts of electric vehicles through air pollution in the United States. *Environment International, 144.* doi:10.1016/j.envint.2020.106015

[14] Synapse Energy Economics, Inc. web page, available at: https://www.synapse-energy.com/sites/default/files/Making-Electric-Vehicles-Work-for-Utility-Customers.pdf

[15] General Motors Co. web page, available at: https://media.gm.com/media/us/en/gm/news.detail.html/content/Pages/news/us/en/2020/nov/1119-electric-portfolio.html

[16] Executive Order 80, available at: https://files.nc.gov/governor/documents/files/EO80-%20NC%27s%20Commitment%20to%20Address%20Climate%20Change%20%26%20Transition%20to%20a%20Clean%20Energy%20Economy.pdf

[17] Austin Energy website, available at: https://ev.austinenergy.com/incentives/

[18] Austin Energy website, available at: https://austinenergy.com/wcm/connect/b216f45c-0dea-4184-9e3a-6f5178dd5112/ResourcePlanningStudies-EV-Whitepaper.pdf?MOD=AJPERES&CVID=mQosOPJ

risky, and has adverse health impacts, especially for historically disadvantaged communities.

III. CONCLUSION

In summary, Buncombe County and the City of Asheville make the following requests:

- We encourage Duke Energy to explore — and the Commission to require — a competitive, all-source procurement process to meet future energy and capacity needs with clean energy portfolios — in doing so, we recommend the North Carolina Utilities Commission to adopt the all-source procurement best practices outlined by Energy Innovation.
- We encourage Duke Energy to articulate how the IRP incorporates recommendations from historically marginalized communities and how it increases access to energy efficiency for LMI customers.
- We encourage the Commission to review Duke Energy's assumptions in the market potential study and request that Duke Energy submit updated scenarios that use a utility cost test and use customer adoption models that include a full range of potential methods (including a variety of financing tools) at the program and portfolio level.
- We encourage Duke Energy to expand energy efficiency programs offered to local governments and our residents to address bill affordability, health, and climate concerns.
- We request that the Commission consider our collective goals when reviewing the proposed IRP scenarios and that Duke Energy utilizes additional renewable energy resources, or develops subsequent customer solutions, that allow local governments to reach renewable energy, equity, and GHG reduction goals.
- We recommend that Duke Energy conduct a comprehensive analysis including the investigation of potential transmission alternatives, the repurposing of existing transmission corridors, and economies of scale gained through large utility-scale renewable projects or joint balancing area planning.
- We encourage Duke Energy to consider automakers' EV rollouts to better forecast EV penetration and improve utility planning.
- We recommend that Duke Energy plan a robust suite of EV programs and analyze how a more ambitious, proactive approach to increasing EV penetration in the state will impact future load growth.

Buncombe County and the City of Asheville value our partnership with Duke Energy and are committed to working with Duke Energy to enable the above solutions. We recognize the IRP and the related renewable energy, energy efficiency, and beneficial electrification programs are regulated by statute. Yet we recognize these same opportunities will benefit both Duke Energy and our communities. In addition to partnering on this IRP, we will

continue to advocate alongside Duke Energy to remove statutory restrictions on renewable energy and energy efficiency programs to provide reliable, affordable, resilient, and equitable access to clean energy. Through continued partnership, we can demonstrate to both North Carolina and the nation what collaborative clean energy leadership looks like.

Thank you for the opportunity to provide comments.

Respectfully submitted, this the 9th day of February, 2021.

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CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing Petition to Intervene by hand delivery, first class mail deposited in the U.S. mail, postage pre-paid, or by email transmission with the party's consent.

This the 9TH day of February, 2021.

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