



**Memorandum of Understanding between the
City of Charlotte and Duke Energy Carolinas
to Establish a Low Carbon, Smart City
Collaboration**



THIS MEMORANDUM OF UNDERSTANDING (MOU) is dated as of January 16, 2019 between the City of Charlotte (“Charlotte” or “the City”) and Duke Energy Carolinas, LLC (“Duke Energy”) and (1) outlines various overarching values, goals and shared principles to foster a Low Carbon, Smart City Collaboration for all Charlotteans, and (2) provides a strategy for cooperation and achievement of a shared vision through broad collaboration, focusing on innovation, low carbon energy, economic development opportunities, customer choice programs and technology. Charlotte and Duke Energy may be referred to in this document individually as a “Party” and collectively as the “Parties”.

RECITALS

WHEREAS, Charlotte is a North Carolina municipal corporation that endeavors to protect the public health and safety of its residents.

WHEREAS, as a result of community collaborations, Charlotte has various low carbon energy, economic development, community engagement and innovation goals and desires, including a City Council resolution to: 1) strive to source 100% of the City’s energy use in its buildings and fleet from zero carbon sources by 2030; and 2) bring city-wide greenhouse gas emissions to below 2 tons CO₂e per person annually by 2050.

WHEREAS, Duke Energy is a statewide, integrated, public utility energy provider regulated by the North Carolina Utilities Commission (“NCUC”). Duke Energy provides electric, natural gas, and other services to Charlotte and the City’s residents.

WHEREAS, for more than 100 years, Charlotte and Duke Energy have enjoyed a strong tradition of working together, fostering Charlotte’s growth, development, planning and energy needs and objectives.

WHEREAS, over the past decade, Charlotte has been a leader in energy innovation, greenhouse gas emissions reductions, and sustainable growth.

WHEREAS, Charlotte and Duke Energy have many aligned interests at local, state and federal levels and desire to advance those interests in a way that capitalizes on each entity’s strengths and expertise via collaboration.

WHEREAS, to advance their common interests, Charlotte and Duke Energy are creating a holistic, collaborative and mutually beneficial relationship that supports the community.

WHEREAS, Charlotte and Duke Energy desire to memorialize, in this document, their shared vision, guiding principles, values and goals regarding their Low Carbon, Smart City Collaboration.

NOW, THEREFORE, the Parties hereby agree as follows:

I. COLLABORATION

A. VISION

Aspirations and goals, which drive a desired future, represent an organization's vision. Charlotte and Duke Energy have their own visions and, as part of the Low Carbon, Smart City Collaboration, the Parties also have identified a shared vision.

- 11 *Shared Vision:* Through the Low Carbon, Smart City Collaboration, Charlotte and Duke Energy will work to support and achieve a shared vision in areas of mutual alignment, for the benefit of residents, businesses and the broader community. The Parties will, where possible, seek to collaborate to make Charlotte a global leader in utilizing low carbon, local, renewable energies, while using data, technology and collaboration to create a more sustainable and efficient city for all Charlotteans. Duke Energy will be the provider of the energy its customers need, delivering safe, reliable, and affordable energy, including adding cost effective renewable energy to its system. Charlotte and Duke Energy will separately, and also collaboratively, pursue innovations in technology and consumer communications that accelerate achievement of this vision. Both Parties acknowledge that Duke Energy's ability to implement innovations rapidly may be constrained by regulatory requirements. The Parties will work toward minimizing both external and internal barriers to the rapid implementation of innovations.

B. VALUES

The Parties seek to lead with their values, which are the standards that define what the community, Charlotte and Duke Energy determine are important. In essence, values help shape the "why" of what we do on a daily basis. Overall, the community has a large impact on determining the Parties' values. Charlotte and Duke Energy desire to make Charlotte a Low Carbon, Smart City that achieves:

- 21 *Emission Reductions:* Reducing greenhouse gas emissions will benefit City residents, visitors, and businesses through improved public health, additional economic opportunities, and long-term energy price stability.
- 22 *Economic Development:* Innovation and technology, as well as investment in low carbon energy resources, will provide opportunities to boost the local and state economy and support the retention, growth and attraction of businesses and employees.
- 23 *Community and Stakeholder Engagement:* Charlotte and Duke Energy value equitable community and stakeholder feedback and engagement and will strive to bring all voices into the implementation of the Low Carbon, Smart City Collaboration.

Achievement of these three values will lead to:

- 24 *Thriving Energy Provider:* A healthy and thriving energy provider (*i.e.*, Duke Energy) is conducive to Charlotte achieving its goals and objectives – ranging from Charlotte advancing its environmental goals to advancing economic development efforts – as well as to the success of

the Low Carbon, Smart City Collaboration.

- 25 *Thriving City:* A healthy and thriving community (*i.e.*, Charlotte) is conducive to Duke Energy achieving its goals and objectives as well as to the success of the Low Carbon, Smart City Collaboration.
- 26 *Regional Collaboration:* Low Carbon, Smart City Collaboration solutions should be sought through regional collaboration whenever feasible.

II. GUIDING PRINCIPLES

As Charlotte and Duke Energy, in conjunction with the community, seek to achieve shared goals, the Parties will follow certain tenets. These guiding principles listed below will supply the “how” of implementing the Parties’ shared vision and executing the Low Carbon, Smart City Collaboration:

- 31 *Collaboration:* Charlotte and Duke Energy will work collaboratively to achieve the shared vision with respect, transparency and innovative thinking, as well as by establishing open and effective channels of communication.
- 32 *Prioritization:* The Parties will make the Low Carbon, Smart City Collaboration and its successful implementation a priority. Accordingly, the Parties will prioritize their goals and objectives.
- 33 *Scalability:* The Parties will seek to develop a Low Carbon, Smart City Collaboration that will be replicable, scalable and available to other communities in North Carolina.
- 34 *Costs and the North Carolina Regulatory Model:* Pursuit and execution of the Low Carbon, Smart City Collaboration, including any renewable energy and sustainability targets, will be cost effective to City residents in light of anticipated costs and benefits. As costs are determined, the Parties will work together in good faith to determine how to allocate the costs and whether to incur them. The state regulatory model will be fully utilized to support the Low Carbon, Smart City Collaboration, and the Parties support using this model to achieve their shared vision.
- 35 *Public Policy Support:* Charlotte and Duke Energy will, where possible, seek to collaborate to advance public policy matters at the state and local levels where they share common interests in furtherance of this MOU.
- 36 *Leveraging Parties’ Efforts:* The Low Carbon, Smart City Collaboration will leverage each Party’s unique efforts and opportunities, such as collaboration on federal and private grants and funding opportunities that align with this MOU.

III. PLANNING, PROGRESS AND EXECUTION FOR THE LOW CARBON, SMART CITY COLLABORATION

- 41 *Work Plan and Deliverables:* After execution of this MOU, the Parties will develop a plan to advance the Low Carbon, Smart City Collaboration; the plan will be updated on a biennial basis (the “Work Plan”). The Work Plan will detail the deliverables to be presented, as well as a timeline, and will follow the intent of this MOU. The Parties will use their best efforts to achieve such

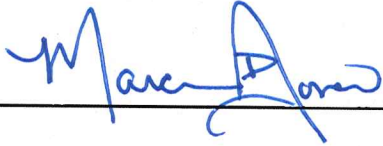
deliverables in the prescribed timeframe. An overview of the work performed and the results achieved will be prepared by the Parties on an annual basis. Initial ideas for the Parties to consider for the Work Plan are outlined in Attachment 1. These ideas are not exhaustive or controlling, but illustrative. The Parties will prioritize the items to be performed in the Work Plan; in doing so, the Parties will consider the intent of the MOU as well as regulatory requirements in North Carolina.

- 42 *North Carolina Utilities Commission:* The Parties recognize that future action taken by Duke Energy to support the Low Carbon, Smart City Collaboration may be subject to North Carolina regulatory utility requirements. If the Parties agree on certain actions in support of the Low Carbon, Smart City Collaboration that require state regulatory approval, they agree to cooperatively work together to facilitate such regulatory approvals. Costs and incentives related to implementing the Low Carbon, Smart City Collaboration, above and beyond what is then offered by Duke Energy, will be negotiated by the Parties and may require Charlotte City Council approval.
- 43 *Legal Applicability and Waiver:* The Parties agree that this document memorializes the intent of the Parties regarding the Low Carbon, Smart City Collaboration, but does not create a legally enforceable agreement, or any rights, duties, obligations or liabilities whatsoever. This MOU constitutes only a non-binding statement of the Parties' intentions and neither constitutes nor should be construed as evidence of any form of offer, acceptance or binding contract or the basis for agreement by estoppel or otherwise. It is agreed by the Parties that nothing in this document will be deemed or construed as creating a joint venture, trust, partnership, or any other legal relationship between the Parties. This document is for the benefit of the Parties and does not create third party rights. Nothing in this document constitutes a waiver of Charlotte's ordinances, Charlotte's regulatory jurisdiction or North Carolina's utility regulatory jurisdiction. This document is terminable at will at any time, by either Party, by delivery of written notice to the other of such termination.
- 44 *No Impact on Other Agreements:* The execution, delivery and performance by the parties of this document does not, in any way, amend, modify or otherwise alter any such party's respective rights and obligations under any other agreement, instrument or other understanding by which it is bound.
- 45 *Duration:* The Low Carbon, Smart City Collaboration is a new endeavor and therefore the Parties want to provide adequate time to develop the collaboration and successfully implement its goals and Work Plans. It is anticipated that the duration will coincide with the term of the Franchise Agreement, but either Party may terminate the Low Carbon, Smart City Collaboration at any time in the event it elects to do so by providing written notice to the other Party.

Signed on the date first above written.

CITY OF CHARLOTTE

By: _____

A handwritten signature in blue ink, appearing to read "Marc A. [unclear]", written over a horizontal line.

DUKE ENERGY CAROLINAS, LLC

By: _____

A handwritten signature in blue ink, appearing to read "Stephen De May", written over a horizontal line.

Stephen De May

North Carolina President

ATTACHMENT 1

- **Smart technology:** Emerging cutting-edge technology provides significant opportunities to change the way the Parties address energy options. The Low Carbon, Smart City Collaboration will pursue opportunities to test, pilot and utilize smart technology to achieve the shared vision. Projects may include multi-use poles and lighting, battery storage, smart grid solutions and the like. The Low Carbon, Smart City Collaboration may also explore various options regarding providers of smart technology appurtenances.
- **Energy efficiency:** Lowering energy consumption reduces operating costs for Charlotte businesses and residents while lowering air pollution and greenhouse gas emissions. Energy efficiency can be a low cost energy resource and could be utilized across all sectors to achieve the shared vision. For example, LED street lights provide a significant opportunity to reduce energy consumption across Charlotte while increasing safety, piloting smart technologies, and enhancing resident experiences and the natural environment.
- **Fuel Switching-Mobile Sector:** Accelerated electrification of the transportation sector is critical to reducing the City's carbon footprint. As part of this, an aggressive transition plan toward such a carbon-free transportation system is essential. Investments by the appropriate parties in electric vehicle ready infrastructure, charging stations, fleet applications and charging depots could be a focus area of the Clean Energy Future Collaborative.
- **Fuel Switching-Stationary Sector:** Electrification of space and water heating, along with waste heat capture, can be another way to reduce the City's carbon footprint. In this regard, the Low Carbon, Smart City Collaboration may conduct assessments to understand the feasibility, impact, and costs of potential space and water heating electrification opportunities.
- **Resilience:** Microgrids, understanding emergency islanding options, district energy and battery storage all help boost resilience, especially for critical infrastructure. Priority projects should be identified and piloted to align emergency preparedness, climate, health, economic and social goals.
- **Transparency and Data Access:** The success of this relationship will depend, in part, on cooperative sharing of information and data in a timely manner (but subject to applicable restrictions on information sharing such as regulatory constraints, non-disclosure agreements and proprietary interests). Sharing should be in alignment with Low Carbon, Smart City Collaboration activities and be to the full extent permitted by law and data sharing capabilities.

- **Reliability and Operations:** A priority should be placed on identifying ways to boost reliability. Initial ideas include undergrounding of electric distribution facilities consistent with Duke Energy's grid improvement plan, improved coordination on construction projects, annual development of a rolling three-year program to discuss critical needs and system upgrades, and natural disaster preparedness planning that addresses resilient infrastructure, as appropriate.