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January 23, 2023

VIA ELECTRONIC FILING

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**Re: Duke Energy Progress, LLC's Application for Certificate of Public
Convenience and Necessity
Docket No. E-2, Sub 1311**

Dear Ms. Dunston:

Enclosed for filing is Duke Energy Progress, LLC's ("DEP") Application for a Certificate of Public Convenience and Necessity authorizing the construction and completion of a solar photovoltaic electric generator in Buncombe County, North Carolina ("Asheville Plant Solar Facility"), which includes the pre-filed written direct testimony of Justin LaRoche in support of DEP's Application and the Exhibits required by North Carolina Utilities Commission Rule R8-61.

Portions of the Application and Testimony are being filed under seal and should be treated confidentially pursuant to N.C. Gen. Stat. § 132-1.2. Public disclosure of the information marked confidential would harm DEP's ability to negotiate favorable contracts because potential vendors would know the amounts DEP is willing to pay for products and services as well as the facility's forecasted operating costs.

Additionally, portions of Exhibit 3 are being filed under seal and should be treated as confidential. Confidential Exhibit 3 contains projected costs to construct, operate and maintain the Asheville Plant Solar Facility. Public disclosure of this confidential information would harm DEP's ability to negotiate favorable contracts at the lowest reasonable cost for the benefit of its customers and provide commercially sensitive information that could be used to DEP and its customers' disadvantage by other parties.

DEP will make the confidential information available to parties to this proceeding upon the execution of an appropriate confidentiality agreement.

OFFICIAL COPY

Jan 23 2023

Thank you for your attention to this matter. Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Jason Higginbotham". The signature is written in a cursive style with a large initial "J".

Jason A. Higginbotham

Enclosures

cc: Parties of Record

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, LLC's Application for Certificate of Public Convenience and Necessity, in Docket No. E-2, Sub 1311, has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties of record.

This is the 23rd day of January, 2023.



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**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1311

In the Matter of)	
Application of Duke Energy Progress, LLC for a Certificate of Public Convenience and Necessity to Construct a Solar Generating Facility in Buncombe County, North Carolina)	APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT THE ASHEVILLE PLANT SOLAR GENERATING FACILITY

Duke Energy Progress, LLC (“DEP” or “the Company”) hereby applies to the North Carolina Utilities Commission (“Commission”) pursuant to North Carolina General Statutes (“N.C. Gen. Stat.”) § 62-110.1 and Commission Rule R8-61 for a Certificate of Public Convenience and Necessity (“CPCN”) authorizing the construction and completion of a solar photovoltaic electric generator on DEP-owned land in Buncombe County, North Carolina (“Asheville Plant Solar Facility” or “Project”). The Asheville Plant Solar Facility is consistent with the Company’s commitment to construct at least 15 MW of solar in the Asheville region and the Commission’s March 28, 2016, *Order Granting Application, in Part, with Conditions, and Denying Application in Part* in Docket No. E-2, Sub 1089 (“the WCMP CPCN Order”) directing DEP to follow through on that commitment. The Application is supported by the pre-filed direct testimony of Justin LaRoche, Director of Renewable Development, and the Exhibits required by Commission Rule R8-61. In accordance with Commission Rule R8-61(b)(1), Exhibit 1A contains portions of the 2020 DEP Integrated Resource Plan (“IRP”) and the Commission’s December 30, 2022 Order Adopting Initial Carbon Plan and Providing Direction for Future Planning (“Carbon Plan

Order”), the as-filed 2022 joint DEP and Duke Energy Carolinas, LLC’s (“DEC” and together with DEP, “Duke Energy”) Carbon Plan (“Duke Energy Carbon Plan”) as well as Appendix E (Solar) to the 2022 Carbon Plan. Exhibit 1B contains the additional resource planning information required by Rule R8-6(b)(1). Exhibit 2 (Siting and Permitting Information), Confidential Exhibit 3 (Equipment and Cost Information), and Exhibit 4 (Construction Schedule and Other Facility Information) contain the additional information required by Commission Rules R8-61(b)(2) – (4). All exhibits are incorporated as part of the Application. The Asheville Plant Solar Facility is also included in DEP’s Application to Adjust Retail Base Rates and for Performance-Based Regulation, and Request for an Accounting Order (“PBR Application”) filed in Docket No. E-2, Sub 1300. In further support of the Application, the Company respectfully submits the following:

GENERAL INFORMATION

1. The Applicant’s general offices are located at 410 S. Wilmington Street, Raleigh, North Carolina, and its mailing address is:

Duke Energy Progress, LLC
410 S. Wilmington Street, NCRH 20
Raleigh, North Carolina 27601

2. DEP is a public utility operating in North Carolina and South Carolina where it is engaged in the generation, transmission, distribution, and sale of electricity for compensation and is regulated by this Commission.

3. The names and addresses of Applicant’s attorneys are:

Jason A. Higginbotham
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Copies of all pleadings, testimony, orders, and correspondence in this proceeding should be served upon the attorneys listed above.

THE WESTERN CAROLINAS MODERNIZATION PROJECT

4. As discussed in the WCMP CPCN Order, the Western Carolinas Modernization Project (“WCMP”) is an energy innovation project for the Asheville area in the western region of DEP. Through this project, DEP has partnered with the local community and elected leaders to help transition Western North Carolina to a cleaner, smarter and more reliable energy future. DEP is committed to this partnership to promote the efficient use of energy in the region. The WCMP has allowed DEP to retire the previously operational Asheville coal units and replace that capacity with new natural gas combined cycle units.

5. The WCMP calls for the deliberate investment in distributed energy resources, including solar and storage, and increased promotion and access to new and existing demand-side management and energy efficiency (“DSM/EE”) programs. In the WCMP CPCN Order, the Commission accepted DEP’s commitment to solar and storage projects and directed DEP, “to file as soon as practicable the CPCN to construct at least 15

MW of solar at the Asheville Plant or in the Asheville region” and “to move forward in a timely manner with the 5 MW storage project in the Asheville region.” WCMP CPCN Order at p. 38.

6. The Commission previously approved CPCN applications for DEP’s Hot Springs Microgrid (“Hot Springs”)¹ and Woodfin Solar Facility projects (“Woodfin”)². Hot Springs included 2 MWac of solar and 4 MW of battery storage and was placed in service in July 2022. Woodfin provides another 5 MW of solar and is expected to be placed in service in Summer 2023. Combined, these two projects provide 7 MW of solar generation. The addition of the Asheville Plant Solar Facility will allow DEP to meet its commitment to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region.

PROJECT OVERVIEW

7. The Asheville Plant Solar Facility consists of an approximately 9.5 megawatt (“MW”) alternating current (“AC”) / ~12.8 MW direct current (“DC”) solar photovoltaic (“PV”) electric generator that will be located at the Asheville Plant site. It is part of the WCMP and complies with the Commission’s directive in the WCMP CPCN Order that DEP move forward in a timely manner on DEP’s commitment to site solar and energy storage in the Asheville region. Construction of the Asheville Plant Solar Facility will further transform the Asheville Plant site while promoting the continued transition to clean energy.

8. In addition, finding available sites within the Asheville region that can support a solar facility of this scale while limiting environmental impacts (such as tree

¹ Docket No E-2, Sub 1185 CPCN Order, May 10, 2019.

² Docket No. E-2 Sub 1257 CPCN Order, April 20, 2021.

clearing and wetland disturbance) is challenging, given the topography and high land cost in the Asheville region. The Asheville Plant site is an optimal location for the Asheville Plant Solar Facility because it: (1) is a brownfield development on a former coal generation site and suitable for solar, (2) has the acreage sufficient for siting multiple MW of solar generation and is primarily clear of trees and debris; (3) has the point of interconnection onsite, does not require additional land rights or permitting to access the interconnection facilities, and takes advantage of the existing transmission switching station onsite; (4) is not adjacent to residential customers; (5) does not require tree clearing to support the solar facility; and (6) is Company-owned.

TECHNOLOGY

9. The Asheville Plant Solar Facility consists of PV modules affixed to a fixed-tilt racking system, 20 degree fixed-tilt racking, solar inverters, electrical protection and switching equipment, and step-up transformers. Additional equipment to support the facility will include circuit breakers, combiners, surge arrestors, conductors, disconnect switches, and connection cabling. The Project will install solar PV modules on (i) the former coal ash basin that is being fully removed and decommissioned, (ii) the former coal plant itself that is being fully removed and decommissioned and (iii) on top of the lined landfill being constructed on site.

10. Exhibit 2 contains additional details concerning the Asheville Plant Solar Facility site and permitting details and includes Appendices 1 and 2 that provide site layout and other information. Exhibit 3 contains additional details related to cost and other financial aspects of the project. Exhibit 4 identifies details related to the anticipated construction schedule and other aspects of the facility. The Asheville Plant Solar Facility

will be interconnected to the existing Asheville Steam Electric Plant West 115kV Bus using the vacant old Unit #1 bay position³.

NEED FOR THE PROJECT

11. The Asheville Plant Solar Facility is a key component of the WCMP. In addition to allowing DEP to meet its commitments, construction of the facility is consistent with, and will promote, the public policies of North Carolina, specifically those enumerated in Senate Bill 3 (Session Law 2007-397) and will contribute to achieving the carbon dioxide (“CO₂”) reduction targets established by HB 951 (Session Law 2021-165).

12. Among other requirements, Commission Rule R8-61 requires a description of “[t]he extent to which the proposed facility would conform to the utility’s most recent biennial report and the most recent annual report that was filed pursuant to Rule R8-60.” The Commission has recently acknowledged the substantial overlap between the IRP process pursuant to N.C. Gen. Stat. § 62-110.1(c) and the analyses required to meet the CO₂ emissions reduction targets of N.C. Gen. Stat. § 62-110.9. Therefore, the Commission in its November 19, 2021 Order Requiring Filing of Carbon Plan and Establishing Procedural Deadlines in Docket No. E-100, Sub 179 delayed the next comprehensive IRP filings under Commission Rule R8-60(h)(1) to September 2023, and in its Carbon Plan Order, directed Duke Energy to file a full Carbon Plan and IRP by no later than September 1, 2023 and to propose rules to govern such new combined process.

13. In light of the fact that this Application is being filed in the midst of the transition period in the IRP structure and rules, out of an abundance of caution, DEP confirms that Asheville Plant Solar Facility is consistent with the Company’s 2020

³ The Project has completed all interconnection studies and has executed a Large Generator Interconnection Agreement.

Integrated Resource Plan (“IRP”) and the 2020 IRP Update. The 2020 IRP was filed on September 1, 2020, in Docket No. E-100, Sub 165, and includes an update on the Company’s progress on the Western Carolinas Modernization Plan in Appendix N. The 2020 IRP demonstrates that a combination of renewable resources, DSM/EE programs, and additional base load, intermediate, and peaking generation will be required over the next fifteen years to reliably meet customer demand. From a total system perspective, the DEP 2020 IRP identifies the need for approximately 8,800 MW of new resources to meet customers’ energy needs by 2035. Additionally, the 2020 IRP calls for 100 MW of energy storage and approximately 930 MW of incremental solar installations from 2021 through 2025.

14. Furthermore, the Asheville Plant Solar Facility is consistent with the Carbon Plan adopted by the Commission in its Carbon Plan Order. The Company’s proposed Carbon Plan, filed with the Commission on May 16, 2022, in Docket No. E-100, Sub 179, assumed as a baseline solar generation amounts that included the Asheville Plant Solar Facility. Accordingly, the Asheville Plant Solar Facility is consistent with the 2020 IRP as well as the Carbon Plan.

ENVIRONMENTAL

15. Operation of the Asheville Plant Solar Facility will have no emissions or pollutants, and the generation source of the solar facility’s power will be 100% renewable. In addition, the Asheville Plant Solar Facility shall be designed in accordance with State of North Carolina environmental requirements with regard to materials.

COST ESTIMATES

16. The cost estimate for the Asheville Plant Solar Facility is approximately [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]. The estimate includes Engineering Procurement & Construction (“EPC”), major equipment, labor, and associated permitting and development costs. The average annual operating cost is approximately [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]. The costs reflect the requirement that DEP must site the facility in the Asheville region. Any tax credits and accelerated depreciation benefits will offset project costs for the benefit of customers.

17. The Project anticipates qualifying for tax credits available through the Inflation Reduction Act (“IRA”), including a production tax credit (“PTC”) or investment tax credit (“ITC”). The Company will use the applicable tax credit in calculating amounts associated with recovery of the Project in retail rates. The Company will carefully examine the appropriateness of utilizing the PTC or ITC based on the facts and circumstances of the Project and will focus on maximizing the value for customers over the life of the Project. As DEP and the entire industry await guidance and official rules from the IRS, it will continue evaluating relevant provisions and applicability for: (1) siting in an energy community; (2) meeting domestic content standards; and (3) meeting prevailing wage standards, although DEP anticipates that the Project will qualify for the energy community adder.

CONTRACTORS

18. The Company will contract with reputable component manufacturers. The Company will also seek to purchase components and services from North Carolina

providers – to the extent that they provide the required functionality and are cost competitive in relation to other options – so as to promote economic development in the State. The Company plans to issue competitive request for proposals (“RFP”) to competitively source the EPC and major equipment to execute the project as cost-effectively as possible for customers. DEP has not yet signed any binding agreements, other than a Large Generator Interconnection Agreement, related to the Asheville Plant Solar Facility.

PROCEDURAL ISSUES

The Commission has previously received comments concerning the intersection of the PBR process and the CPCN process. In its comments, Duke Energy emphasized the need for a flexible approach that ensures the required level of review while also optimizing administrative efficiency. Duke Energy also noted that a one-size-fits-all approach was not appropriate given the wide variety of both foreseeable and unforeseeable circumstances that might arise. In its September 8, 2022 Order Approving Template Notice and Providing Initial Guidance on Issues Related to CPCN Process and Cost Recovery Under PBR in Docket No. E-100, Sub 178, the Commission agreed that flexibility on this issue was appropriate and declined to adopt the rigid and formulaic approach urged by certain intervenors.

This set of facts illustrates the wisdom of a flexible approach. In this case, DEP had sufficient information to support inclusion of the Asheville Plant Solar Facility in the DEP PBR Application. As part of the PBR Application, DEP provided substantial detailed information regarding the cost and schedule of the project, along with site plans and other details as summarized in the testimony of witness Justin LaRoche (who is also filing

testimony in this proceeding). In addition Public Staff has already issued substantial discovery concerning the Asheville Plan Solar Facility and DEP has provided responses to all questions. In essence, Public Staff and all parties have effectively already had a head start on assessing the Asheville Plan Solar Facility.

As Duke Energy pointed out in comments in Docket No. E-100, Sub 178, both the PBR Application process and the CPCN process require essentially the same determination from the Commission—whether the capital project is needed and whether the projected cost is reasonable. Because there is no fundamental difference between the need and cost determination required under the PBR Application process and that required under the CPCN process, the Commission appropriately retained flexibility to approve cost recovery within a MYRP for a capital project that has not yet obtained a CPCN

In this particular circumstance, DEP is now in a position to submit the CPCN application in parallel with the PBR application process. While this will not be possible in all future scenarios,⁴ in this case the submission of the CPCN application allows DEP to seek to fulfill the requirement under N.C. Gen. Stat. § 62-110.1 to obtain a CPCN for the project in parallel with the PBR process.

WHEREFORE, Duke Energy Progress, LLC respectfully requests that the Commission issue a Certificate pursuant to N.C. Gen. Stat. § 62-110.1 that the public convenience and necessity require construction of the Asheville Plant Solar Facility and requests such further relief as the Commission deems just and proper.

⁴ For instance, as will be described in more detail in supplemental testimony in the DEP PBR proceeding, the other solar generating facility in the MYRP already has a CPCN that will need to be transferred to DEP.

Respectfully submitted, this the 20th day of January 2023.



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Attorneys for Duke Energy Progress, LLC

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-2, SUB 1311

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of)
Application of Duke Energy Progress, LLC)
for A Certificate of Public Convenience)
and Necessity to Construct a Solar)
Generating Facility in Buncombe County,)
North Carolina)

**DIRECT TESTIMONY OF
JUSTIN LAROCHE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Justin LaRoche, and my business address is 526 South Church
3 Street, Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Corporation (“Duke Energy”) as a Director of
6 Renewable Development.

7 **Q. WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR OF**
8 **RENEWABLE DEVELOPMENT?**

9 A. I oversee the development of new renewable facilities, including solar and
10 wind, on behalf of Duke Energy’s regulated utilities, including Duke Energy
11 Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”). In my
12 current role, I am responsible for conducting solar development activities,
13 including project siting, land acquisition, resource assessment, permitting,
14 obtaining interconnection rights, project layout and design, and arranging
15 contracts for engineering, procurement and construction services, as well as
16 originating, structuring, and executing transactions to acquire rights to existing
17 solar development projects from third-party developers.

18 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND**
19 **PROFESSIONAL BACKGROUND.**

20 A. I have a bachelor’s degree in Accounting from the University of North Carolina
21 Belk College of Business and a master’s degree in business administration from
22 the University of South Carolina Darla Moore School of Business. I began my
23 career with Duke Energy in 2008 as an intern where I supported initiatives

1 within corporate finance, energy efficiency and regulated renewables. From
2 2010 to 2012, I served as a project manager within the grid modernization
3 group, after which I returned to regulated renewables in 2012. Since 2014, I
4 have been supporting and leading Duke Energy's renewable investments in
5 solar and wind facilities throughout our regulated service territory.

6 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NORTH**
7 **CAROLINA UTILITIES COMMISSION ("COMMISSION")?**

8 A. No. However, I submitted pre-filed direct testimony before this Commission
9 in DEP's 2022 Rate Case in Docket No. E-2, Sub 1300. An evidentiary hearing
10 has not occurred in that docket as of the date of this filing.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony in this proceeding is to support DEP's Application
13 for a Certificate of Public Convenience and Necessity ("CPCN") to construct a
14 Solar Generating Facility in Buncombe County, North Carolina ("Asheville
15 Plant Solar Facility").

16 **Q. WERE YOU INVOLVED IN PREPARING DEP'S APPLICATION IN**
17 **THIS DOCKET?**

18 A. Yes.

19 **Q. PLEASE DESCRIBE THE ASHEVILLE PLANT SOLAR FACILITY.**

20 A. As detailed in the CPCN Application, the Asheville Plant Solar Facility will be
21 constructed as an approximately 9.5 megawatt ("MW") alternating current
22 ("AC") / ~12.8 MW direct current ("DC") solar photovoltaic ("PV") electric

1 generator in Buncombe County, North Carolina. The entire facility will be
2 located at the Asheville Plant site, which is owned by DEP.

3 The Asheville Plant Solar Facility consists of PV modules affixed to a
4 fixed-tilt racking system, 20 degree fixed-tilt racking, solar inverters, electrical
5 protection and switching equipment, and step-up transformers. Additional
6 equipment to support the facility will include circuit breakers, combiners, surge
7 arrestors, conductors, disconnect switches, and connection cabling. Appendix
8 2 to Exhibit 2 shows the preliminary site layout of all major equipment
9 including the PV panels' location and Exhibit 4 provides further facility details.
10 The facility is expected to produce approximately 19,700 MWh per year. This
11 corresponds to a 23.7% net capacity factor (year 1). The service life of the asset
12 is 35 years.

13 **Q. PLEASE DESCRIBE THE PURPOSE OF THE ASHEVILLE PLANT**
14 **SOLAR FACILITY.**

15 A. The Asheville Plant Solar Facility is part of a larger solar deployment plan and
16 grid modernization effort in the Western Carolinas called the Western Carolinas
17 Modernization Project or "WCMP". The WCMP is a collaborative energy
18 innovation project for the Asheville area in the western region of DEP's service
19 territory. As the Commission is aware from the proceedings in Docket No. E-
20 2, Sub 1089 (the "WCMP CPCN Docket"), the goal of the WCMP is to partner
21 with the local community and elected leaders to help transition Western North
22 Carolina to a cleaner, smarter, and more reliable energy future. DEP is

1 committed to this partnership to promote the efficient use of energy in the
2 region.

3 **Q. HOW DOES THE ASHEVILLE PLANT SOLAR FACILITY RELATE**
4 **TO THE COMPANY'S COMMITMENTS AND THE COMMISSION'S**
5 **ORDER IN THE WCMP CPCN DOCKET?**

6 A. In the WCMP CPCN Docket, DEP applied for a CPCN to construct two natural
7 gas-fired combined cycle units in Buncombe County near the City of Asheville.
8 Construction of the combined cycle units would allow DEP to retire the then-
9 existing coal-fired units at the Asheville plant. In its application, DEP also
10 committed to build up to 15 MW of solar generation at the Asheville Plant and
11 invest in a minimum of 5 MW of utility-scale storage pilot in the DEP-Western
12 region. The Commission granted DEP's application to construct the gas-fired
13 units and indicated that it expected DEP to file "as soon as practicable the
14 CPCN to construct at least 15 MW of solar at the Asheville Plant or in the
15 Asheville region." WCMP CPCN Docket Order at 38. Accordingly, the
16 Asheville Plant Solar Facility fulfills DEP's commitment and complies with the
17 Commission's directive in the WCMP CPCN Docket.

18 **Q. PLEASE DISCUSS THE NEED FOR THE ASHEVILLE PLANT SOLAR**
19 **FACILITY.**

20 A. The Project complies with DEP's commitments and the Commission's
21 requirements in the WCMP CPCN Order. Additionally, the facility will
22 contribute to achieving the carbon dioxide ("CO₂") reduction targets
23 established by HB 951 (Session Law 2021-165).

1 **Q. ARE THERE ANY UNIQUE BENEFITS TO THE SITE WHERE DEP**
2 **WILL CONSTRUCT THE ASHEVILLE PLANT SOLAR FACILITY?**

3 A. Yes. The Asheville Plant Solar Facility will be constructed at the Asheville
4 Plant site, which has the following beneficial characteristics: (1) the site is a
5 brownfield development on a former coal generation site and suitable for solar,
6 (2) the acreage is sufficient for siting multiple MW of solar generation and the
7 site is primarily clear of trees and debris; (3) the point of interconnection is
8 located onsite, does not require additional land rights or permitting to access the
9 interconnection facilities, and takes advantage of the existing transmission
10 switching station onsite; (4) the site is not adjacent to residential customers; (5)
11 the site does not require tree clearing to support the solar; and (6) the property
12 is Company-owned.

13 **Q. IS THE ASHEVILLE PLANT SOLAR FACILITY CONSISTENT WITH**
14 **DEP'S MOST-RECENT INTEGRATED RESOURCE PLAN?**

15 A. Yes. This Application is being filed in the midst of a transition period in the
16 North Carolina Integrated Resource Plan (“IRP”) structure and rules, as
17 described in the Application. However, I can confirm that the Asheville Plant
18 Solar Facility is consistent with Company’s 2020 IRP and 2020 IRP Update.
19 The Company’s 2020 IRP was filed in Docket No. E-100, Sub 165 and includes
20 15 MW of solar that represents the solar required to meet the Company's
21 commitment to the WCMP. From a total system perspective, the DEP 2020
22 IRP identifies the need for approximately 8,800 MW of new resources to meet
23 customers’ energy needs by 2035. Additionally, the 2020 IRP calls for 100 MW

1 of energy storage and approximately 930 MW of incremental solar installations
2 from 2021 through 2025. Accordingly, the Asheville Plant Solar Facility is
3 consistent with the DEP 2020 IRP.

4 **Q. IS THE ASHEVILLE PLANT SOLAR FACILITY CONSISTENT WITH**
5 **THE 2022 CARBON PLAN ADOPTED BY THE COMMISSION IN ITS**
6 **DECEMBER 30, 2022 ORDER IN DOCKET NO. E-100, SUB 179**
7 **(“CARBON PLAN ORDER”)?**

8 A. Yes. The Asheville Plant Solar Facility is consistent with the Carbon Plan
9 adopted by the Commission in its Carbon Plan Order. The Company’s
10 proposed Carbon Plan, filed with the Commission on May 16, 2022, in Docket
11 No. E-100, Sub 179, assumed as a baseline solar generation amounts that
12 included includes 130 MW of new solar in DEP by year-end 2025, including
13 the Asheville Plant Solar Facility. Accordingly, the Asheville Plant Solar
14 Facility is consistent with the 2020 IRP as well as the 2022 Carbon Plan.

15 **Q. PLEASE DISCUSS THE ENVIRONMENTAL ATTRIBUTES OF THE**
16 **ASHEVILLE PLANT SOLAR FACILITY.**

17 A. Operation of the Asheville Plant Solar Facility will have no emissions or
18 pollutants, and the generation source of the solar power will be 100%
19 renewable. In addition, the facility will be designed in accordance with State
20 of North Carolina environmental requirements with regard to materials.

21 **Q. TO YOUR KNOWLEDGE, HAS DEP FILED AND PROVIDED ALL**
22 **INFORMATION AND OBTAINED OR IDENTIFIED ALL FEDERAL**
23 **AND STATE LICENSES, PERMITS, AND EXEMPTIONS REQUIRED**

1 **FOR CONSTRUCTION AND OPERATION OF THIS PROPOSED**
2 **GENERATION FACILITY?**

3 A. Yes. I believe that the CPCN Application provides all information required
4 under the Commission’s rules. A complete list of all required federal, state and
5 local approvals and their status is included in Exhibit 2 to the Application.

6 **Q. WHAT IS THE PROJECTED COST OF THE ASHEVILLE PLANT**
7 **SOLAR FACILITY?**

8 A. The cost estimate for the Asheville Plant Solar Facility is approximately
9 **[BEGIN CONFIDENTIAL]** ██████████ **[END CONFIDENTIAL]**. The
10 estimate includes Engineering Procurement & Construction (“EPC”), major
11 equipment, labor, and associated permitting and development costs. The
12 average annual operating cost is approximately **[BEGIN CONFIDENTIAL]**
13 ██████████ **[END CONFIDENTIAL]**. Any tax credits and accelerated
14 depreciation benefits will offset project costs for the benefit of customers.

15 **Q. PLEASE COMMENT ON THE PROJECTED COST FOR THE**
16 **ASHEVILLE PLANT SOLAR FACILITY?**

17 A. As with the WCMP Woodfin Solar Facility (approved by the Commission in
18 Docket No. E-2, Sub 1257), the cost of the Asheville Plant Solar Facility is
19 higher than many other utility-scale solar facilities in North Carolina due to the
20 location and the relatively small size of the project. As was the case with the
21 Woodfin Solar Facility, the Company believes that the Asheville Plant Solar
22 Facility is cost-effective given the parameters of the Commission’s directive in
23 the WCMP Order. Under the WCMP Order, the Company was directed to site

1 and construct smaller solar generating projects in an area of the state that is not
2 conducive to the lowest cost solar development. Under those parameters, the
3 Company has delivered a cost-effective project that has market-competitive
4 equipment and construction costs and no land cost.

5
6 The Company acknowledges that in the order approving the Woodfin Solar
7 Facility, the Commission expressed concern regarding the project cost, and the
8 Company understands that similar concerns may exist for the Asheville Plant
9 Solar Facility. However, while siting a larger facility in a different region of
10 North Carolina could result in potentially lower costs, the Asheville Plant Solar
11 Facility fulfills DEP commitment and complies with the Commission's
12 directive to DEP to construct up to 15 MW of solar generation in the Asheville
13 region in the WCMP CPCN Docket and does so in the most cost-effective
14 manner possible.

15 **Q. WHAT IS THE ESTIMATED CONSTRUCTION SCHEDULE FOR THE**
16 **ASHEVILLE PLANT SOLAR FACILITY?**

17 A. If Commission approval were to be obtained, the limited notice to proceed is
18 expected to be issued in late 2023, with site mobilization to begin in late 2024
19 or early 2025, with final commissioning in September 2025.

20 **Q. DID DEP EVALUATE THE WHOLESALE MARKET FOR**
21 **ALTERNATIVES TO SERVE THE NEEDS THE PROJECT WILL**
22 **MEET?**

1 A. No. Because of the unique circumstances of the Asheville Plant Solar Facility,
2 and the Commission's WCMP CPCN order requirements, DEP did not evaluate
3 the existing wholesale market for alternatives to the capacity and energy to be
4 provided by the Asheville Plant Solar Facility. DEP will conduct a competitive
5 bid process for all of the major components and construction of the project to
6 ensure the lowest reasonable cost for our customers. Upon a favorable ruling
7 on this Application, DEP will execute agreements to procure equipment and
8 construct the facility. DEP intends to seek to obtain components and services
9 from North Carolina providers where possible and effective.

10 **Q. IN CONCLUSION, WHY IS DEP REQUESTING APPROVAL TO**
11 **CONSTRUCT THE ASHEVILLE PLANT SOLAR FACILITY?**

12 A. The Asheville Plant Solar Facility is one of many deployments and initiatives
13 designed to meet the goals of the WCMP Order and DEP's commitment to
14 invest in smart, clean energy projects in Western North Carolina. The Asheville
15 Plant Solar Facility presents a unique opportunity for DEP to collaborate with
16 our customers and community stakeholders on an innovative solution and
17 reflects Duke Energy's commitment to proactively support our customers and
18 their energy-related goals and objectives. We are pleased with the strong local
19 support for the Asheville Plant Solar Facility and look forward to bringing it
20 online for our customers' benefit.

21 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

22 A. Yes.