



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

June 28, 2023

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

**Re: Docket No. E-2, Sub 1311 – Application of Duke Energy Progress, LLC,
for a Certificate of Public Convenience and Necessity to Construct a
9.5 MW Solar Photovoltaic Generating Facility in Buncombe County,
North Carolina**

Dear Ms. Dunston:

Attached for filing on behalf of the Public Staff in the above-referenced docket is the Public Staff's Proposed Order, submitted in compliance with the Commission's May 25, 2023 Order Requiring Proposed Orders, and the Commission's June 23, 2023 Order Granting Public Staff's Motion for Extension of Time.

By copy of this letter, we are forwarding a copy to all parties of record.

Sincerely,

Electronically submitted

/s/ Anne M. Keyworth

Staff Attorney

anne.keyworth@psncuc.nc.gov

cc: Parties of Record

Attachment

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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) **PUBLIC STAFF'S**
Necessity to Construct a 9.5 MW Solar) **PROPOSED ORDER**
Photovoltaic Generating Facility in)
Buncombe County, North Carolina)

HEARD: May 22, 2023, at 2:00 p.m.

BEFORE: Chair Charlotte A. Mitchell, Presiding; and Commissioners ToNola
D. Brown-Bland; Daniel G. Clodfelter; Kimberly W. Duffley; Jeffrey A.
Hughes, Floyd B. McKissick, Jr., and Karen M. Kemerait.

APPEARANCES:

For Duke Energy Progress, LLC:

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BY THE COMMISSION: On January 23, 2023, Duke Energy Progress, LLC (DEP or the Company) filed a verified application pursuant to N.C. Gen. Stat. § 62-110.1 and Commission Rule R8-61 for a Certificate of Public Convenience and Necessity (Application) to construct a solar photovoltaic electric generator on DEP-owned land in Buncombe County, North Carolina (Asheville Solar Facility). According to DEP, the Asheville Solar Facility was proposed in connection with 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 (Western Carolinas Modernization Project (WCMP) Order). In support of the Application, the Company included exhibits and the direct testimony of Justin LaRoche, Director of Renewable Development, Duke Energy Corporation.

The Company also filed with the Application Exhibit 1A (a portion 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 issued in Docket No. E-100, Sub 179 (Carbon Plan Order), the as-filed 2022 joint DEP and Duke Energy Carolinas, LLC (DEC and, together with DEP, Duke Energy) Carbon Plan (Duke Energy Proposed Carbon Plan), as well as Appendix E (Solar) to Duke Energy's Proposed Carbon Plan); Exhibit 1B (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). The Asheville 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 filed in Docket No. E-2, Sub 1300 (Multi-Year Rate Plan or MYRP).

PROCEDURAL BACKGROUND

The intervention of Public Staff has been recognized pursuant to N.C.G.S. § 62-15(d) and Commission Rule R1-19(e).

On February 2, 2023, the Commission issued its Order Scheduling Hearings, Requiring Filing of Testimony, Establishing Procedural Guidelines and Requiring Public Notice (Scheduling Order). The Scheduling Order, among other things, scheduled a public witness hearing on the Company's Application to be held in Buncombe County on April 5, 2023, and an expert witness hearing on the Company's Application to be held in Raleigh on May 22, 2023. Further, the Scheduling Order required DEP to publish notice of its Application and the public witness hearing.

On March 14, 2023, the Company filed an affidavit of publication from the Asheville Citizen Times (Asheville, North Carolina) stating that the publication of notice was completed on March 9, 2023.

On March 24, 2023, the State Environmental Review Clearinghouse filed a letter, along with state agencies' comments about the Asheville Solar Facility,

stating that no further action was needed on the Commission's part for compliance with the North Carolina Environmental Policy Act.

On March 28, 2023, DEP filed a motion seeking to cancel the April 5, 2023 public hearing, citing the fact that no written complaints regarding the Asheville Plant Solar Facility had been received in this docket.

On March 29, 2023, the Commission issued an order cancelling the public witness hearing scheduled for April 5, 2023.

On April 26, 2023, DEP filed Supplemental Information Regarding its Application for a Certificate of Public Convenience and Necessity.

On May 5, 2023, the Public Staff filed the testimony of Energy Division Engineer Jeff Thomas. On May 9, 2023, the Public Staff filed its Corrections to Testimony of Jeff Thomas, correcting two typographical errors in the Thomas Testimony. On May 16, 2023, the Public Staff filed corrections to the corrected pages of the Thomas Testimony, further correcting a typographical error and including the corrected pages.

On May 18, 2023, the Public Staff and DEP filed a joint motion to excuse witnesses, cancel expert witness hearing, and admit evidence.

On May 22, 2023, the Commission held an expert witness hearing in Raleigh to receive expert witness testimony into the record. During the hearing, the Commission orally denied the Public Staff and DEP's joint motion to excuse witnesses, cancel expert witness hearing, and admit evidence.

On May 23, 2023, the Public Staff filed a letter of correction to Jeff Thomas's oral testimony.

On May 25, 2023, the Commission issued an order requiring parties to file proposed orders or briefs in this docket on or before 21 days from the issuance of the transcript.

On June 2, 2023, the transcript of the expert witness hearing was issued, making proposed orders and briefs due on June 23, 2023.

On June 22, 2023, the Public Staff filed a motion seeking to extend the deadline by which parties may file proposed orders and briefs up to and including June 28, 2023. The Commission granted the Public Staff's motion the following day.

Since the filing date of the Company's Application, statements of position have been filed in this docket by one individual and by the City of Asheville, Buncombe County, MountainTrue, and the Sierra Club, all in support of the Asheville Solar Facility and none in opposition.

Based on the Company's verified Application, the testimony and exhibits received into evidence, and the entire record, the Commission makes the following

FINDINGS OF FACT

1. Duke Energy Progress, LLC, is a public utility with a public service obligation to provide electric utility service to customers in its service area in North Carolina and is subject to the jurisdiction of the Commission.

2. The Commission has jurisdiction over this Application pursuant to the Public Utilities Act. Pursuant to N.C.G.S. § 62-110.1 and Commission Rule R8-61(b), a public utility or other person must receive a CPCN from the Commission prior to constructing an electric generating facility to be directly or indirectly used for public utility service.

3. The Application satisfies each of the requirements of N.C.G.S. § 62-110.1 and Commission Rule R8-61.

4. The Asheville Solar Facility is identified in, and consistent with, DEP's 2020 IRP and 2020 IRP Update filed in Docket No. E-100, Sub 165, as well as the Carbon Plan Order.

5. The Asheville Solar Facility will contribute to meeting the needs of customers within DEP-West, a region in which the development of new solar generation resources faces many challenges.

6. The WCMP includes targets of 15 megawatts (MW) of solar and 5 MW of energy storage in the Asheville region, which were originally proposed by DEP in its application to construct combined cycle generating units at the Asheville coal generation facility site. DEP's application to construct generating units pursuant to the Mountain Energy Act did not include an application to construct a solar facility, but the construction of a solar facility in the Asheville region was contemplated by the WCMP Order. The Asheville Solar Facility is part of the larger WCMP.

7. DEP will gain valuable experience in designing, constructing, and operating a solar facility on a closed coal ash landfill site in the mountain region of

North Carolina, as well as pairing the solar facility with energy storage, by constructing the Asheville Solar Facility.

8. Such experience will be beneficial to DEP and others in considering future development of solar facilities on closed coal ash landfills, in the mountain region of North Carolina, and paired with energy storage.

9. DEP has taken steps to reduce the development costs of the Asheville Solar Facility that are within the Company's control.

10. Construction of the Asheville Solar Facility is consistent with the public convenience and necessity.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1 – 2

These findings are informational, procedural, and jurisdictional in nature and are uncontroverted.

General Statute § 62-110.1 is intended to provide for the orderly expansion of electric generating capacity in order to create a reliable and economical power supply and to avoid the costly overbuilding of generation resources. *State ex rel. Utilities Comm. v. Empire Power Co.*, 112 N.C. App. 265, 278 (1993), *disc. rev. denied*, 335 N.C. 564 (1994); *State ex rel. Utilities Comm. v. High Rock Lake Ass'n*, 37 N.C. App. 138, 141, *disc. rev. denied*, 295 N.C. 646 (1978). A public need for a proposed generating facility must be established before a certificate is issued. *Empire*, 112 N.C. App. at 279- 80; *High Rock Lake*, 37 N.C. App. at 140. Beyond need, the Commission must also determine if the public convenience and necessity are best served by the generation option being proposed. The standard

of public convenience and necessity is relative or elastic, rather than abstract or absolute, and the facts of each case must be considered. *State ex rel. Utilities Comm. v. Casey*, 245 N.C. 297, 302 (1957). “[Chapter 780 of the 1975 Session Laws], codified as G.S. 62-110.1(c)-(f), directs the Utilities Commission to consider the present and future needs for power in the area, the extent, size, mix and location of the utility’s plants, arrangements for pooling or purchasing power, and the construction costs of the project before granting a certificate of public convenience and necessity for a new facility.” *High Rock Lake*, 37 N.C. App. at 140-41.

As hereinafter discussed in this order, the Commission has considered all of these factors – need, the size and mix of existing plants, pooling, purchases, demand-side management (DSM), alternative technologies including renewables, fuel costs, and construction costs – in determining whether the public convenience and necessity are served by DEP’s proposal in this docket.

EVIDENCE AND CONCLUSION FOR FINDING OF FACT NO. 3

This finding of fact is supported by the Application and exhibits, the direct and rebuttal testimony and exhibits of DEP witness LaRoche, and the testimony of Public Staff witness Thomas.

Summary of the Evidence

The Asheville Solar Facility is described in the Application and the direct testimony of DEP witness LaRoche and consists of approximately 9.5 MW alternating current (AC)/~12.8 MW direct current (DC) solar photovoltaic (PV)

capacity. According to witness LaRoche, the Asheville Solar facility will consist 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 Asheville Solar Facility is expected to produce approximately 19,761 MWh per year and to have a 23.7% capacity factor. The service life of the asset is 35 years. Tr. at 13-14; Official Exhibits at 12-13, 21, 38.

As described in the Application and the testimony of witness LaRoche, the Asheville Solar Facility will be sited on the former coal ash basin that is being fully removed and decommissioned (1964 Ash Basin), on the former coal plant itself that is being fully removed and decommissioned, and on top of the lined landfill being constructed on site. The Asheville Facility will be interconnected to the existing Asheville Steam Electric Plant West 115kV Bus using the vacant old Unit #1 bay position. The project has completed all interconnection studies and has executed a Large Generator Interconnection Agreement. The site is approximately 806 acres, a portion of which is occupied by an operating two-unit combined cycle (CC) station, two combustion turbines, electrical substations, former ash basins, and an ash landfill. Consistent with Commission Rule R8-61, DEP submitted information concerning the Asheville Solar Facility site and permitting details, and details related to the anticipated construction schedule and other aspects of the facility. Tr. Official Exhibits at 13-14, 22.

In this supplemental filing, the Company publicly disclosed that the estimated cost of the Asheville Solar Facility is approximately \$24.3 million. Tr. Official Exhibits at 873.

Public Staff witness Thomas testified that the Application, as supplemented, is complete and satisfies the requirements of N.C.G.S. § 62-110.1 and Commission Rule R8-61. Tr. at 37.

Discussion and Conclusion

The Commission concludes that the Application is complete and satisfies the requirements of N.C.G.S. § 62-110.1 and Commission Rule R8-61.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 4 – 5

These findings of fact are supported by the Application and exhibits, the direct and rebuttal testimony and exhibits of DEP witness LaRoche, and the testimony of Public Staff witness Thomas.

Summary of the Evidence

According to the Application, the comprehensive planning process for the 2020 IRP demonstrates that a combination of renewable resources, DSM and energy efficiency (EE) programs, and additional base load, intermediate, and peaking generation are required over the next 15 years to reliably meet customer demand. The solar PV generation of the Asheville Solar Facility will contribute to the diverse resource mix identified in the IRP. The solar facility does not require any additional fuel to operate, and no fuel will be stored at the site. 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 and calls for 100 MW of energy storage and approximately 930 MW of incremental solar installations from 2021 through 2025. Finally, 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. Tr. Official Exhibits at 7, 15, 20.

The Company also noted in the Application the challenges inherent in finding available sites within the Asheville region that can support a solar facility of this scale while limiting environmental impacts given the topography and high land cost in the Asheville region, noting that the site in this instance is an optimal location for the Asheville 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 and therefore has no associated land costs. Tr. Official Exhibits at 12-13, 23.

Public Staff witness Thomas testified that, although the Asheville Solar Facility would contribute to DEP-West's load, it is likely unnecessary to meet DEP-West's load at this time, it will not contribute significantly to meeting DEP-West's

winter peaking needs, and it is significantly more expensive than other solar capacity that could be more cost-effectively procured through a competitive process in DEP-East. Witness Thomas testified that DEP-West's reliance on importing power to meet local demand has significantly decreased in recent years with the operation of the Asheville CC unit, although DEP-West is still reliant on imports which are increasing in the fall and spring relative to summer and winter. In addition, witness Thomas testified that there is a clear trend of increasing winter and summer peaks and energy consumption over time in DEP-West, and that DEP-West's peak loads are projected to grow faster than those of DEP as a whole. Tr. at 47-55.

Witness Thomas testified that, although the Application does not specifically mention pairing the Asheville Solar Facility with energy storage, the MYRP includes a 17 MW, four-hour battery to be installed at the retired Asheville coal plant in support of the WCMP, known as the Lake Julian battery energy storage system (BESS). Witness Thomas further explained that the Lake Julian BESS is anticipated to come online prior to the Asheville Solar Facility and both resources will share a point of interconnection and a main power transformer, resulting in some cost savings to the overall project. Moreover, witness Thomas testified that the Lake Julian BESS will be dispatched to provide capacity and energy arbitrage benefits, as well as energy services to the bulk power system, although these benefits from the Lake Julian BESS are not necessarily contingent upon being co-located with the Asheville Solar Facility. Tr. at 47-52.

With this information in mind, witness Thomas testified that the Public Staff is not convinced that the Asheville Solar Facility is needed in DEP-West, nor that ratepayers would benefit from solar energy at such a premium cost. Instead, witness Thomas testified that the Company could build a larger facility in DEP-East for the same cost as the Asheville Solar Facility, and that, absent the WCMP Order, DEP would likely procure solar capacity in its eastern region at a significant discount to the Asheville Solar Facility. According to witness Thomas, the WCMP Order alone and the fact that the Asheville Solar Facility is part of the WCMP do not justify the need for the Asheville Solar Facility. Witness Thomas explained that, although DEP needs a significant amount of solar energy to meet the carbon reduction requirements of S.L. 2021-165, Section 5 (HB 951), this legislation requires that solar be acquired in a least-cost manner. In witness Thomas' view, less expensive options are available to the Company than this proposed facility, and the capital for this facility and DEP's interconnection resources could be more effectively allocated elsewhere. Accordingly, witness Thomas testified that the Asheville Solar Facility is needed only insofar as the Commission continues to believe that the WCMP Order is dispositive in the determination of need. If the Commission believes the WCMP alone is sufficient to support the need for this Facility, witness Thomas recommended approval of the CPCN, while if the Commission no longer believes the WCMP is sufficient to support the need for the Facility, then witness Thomas recommended that the Commission deny the CPCN and direct DEP to remove the Asheville Solar Facility from the Carbon Plan

baseline and competitively procure the shortfall, potentially in DEP-East, and to wheel the power to DEP-West if necessary. Tr. at 35-36; 42-43.

In rebuttal testimony, DEP witness LaRoche reiterated that the Commission should consider the challenges of siting a utility-scale solar generation facility, such as the Asheville Solar Facility, in the DEP-West region in light of the fact that the topography and relatively few parcels of land that can accommodate industrial installations limit the number of locations where a large solar facility can be sited, as evidenced by the limited number of existing solar facilities in the region. Tr. at 23-24.

At the hearing, witness LaRoche testified that, in the Company's 2022 RFP solicitation, there were no solar projects sited in DEP-West and that, due to the challenges of topography, cost of land, availability of interconnection, and size issues, "we're not going to see 80 megawatt facilities sited" in the western region. In addition, witness LaRoche testified that the cost would have been higher if the Company was leasing the land for this project from a third-party landowner. With regard to load, witness LaRoche testified that the Company needs more energy to serve the load in DEP-West during the summer and winter peaks and that, although there is "a small short-term dip" in DEP-West's load forecast, "in the longer term, it's actually rebounding up in the other direction, meaning that we need more resources to feed DEP-West." Tr. at 68-69; 97.

Witness Thomas testified that, although DEP-West exports power during certain times, on an annualized basis, DEP-West needs additional energy and that,

during certain times, the Company is importing “quite a bit of their energy.” Witness Thomas also testified that although the wheeling charges DEP-West currently has to pay for power imported from DEP-East are “not insignificant,” the difference between the Asheville Solar Project and other projects being procured through the 2026 Solar Investment Project is “so great that even [the Public Staff’s] estimates of the wheeling charges would not have been enough to overcome that.” In addition, witness Thomas recognized that siting solar in DEP-West has benefits in terms of faster interconnection times than DEP-East, that the United States Department of Energy (DOE) has pushed for the utilization of retired coal sites or retired coal ash basins for siting solar projects, and that there are tax benefits associated with building solar on a retired coal site. Tr. at 106-07, 112-13, 120-21, 133.

Discussion and Conclusions

The Commission concludes that the Asheville Solar Facility is consistent with DEP’s 2020 IRP, its 2020 IRP Update, and the Carbon Plan Order. The Commission gives significant weight to the 2020 IRP, the 2020 IRP Update, and the Carbon Plan Order as indicators of a need for additional solar resources. The Commission acknowledges the evidence that peak load in DEP-West occurs in the winter and the summer and that the Asheville Solar Facility alone will not contribute significantly to meeting DEP-West’s winter peaking needs. Nonetheless, the IRP and Carbon Plan Order demonstrate that the Asheville Solar Facility’s energy production will be useful to meet the needs of DEP’s customers in this region of the state where the capacity to import electric power into the region is limited and

where the load forecast demonstrates the need for more resources to supply DEP-West's load. The pairing of this facility with the Lake Julian BESS adds additional value to DEP-West customers to meet peak demand as well as serving other capacity and energy arbitrage benefits and ancillary services to the bulk power system, not to mention cost savings insofar as the interconnection costs will be allocated between the two projects.

In addition, as the Commission recognized in the Woodfin Order, in large measure the DEP-West area is an "energy island." Woodfin Order at 6. The Commission is persuaded by the evidence that developing solar facilities in the DEP-West area is challenging due to geographical and market conditions. Beyond the Application and the testimony of DEP witness LaRoche describing the challenges, the lack of solar projects sited in the DEP-West service territory in the Competitive Procurement of Renewable Energy (CPRE) program is evidence of these challenges. Further, the limited amount of existing utility-scale solar development in DEP-West is evidence of these challenges.

The Commission also notes the benefits of siting solar in DEP-West as described by witness Thomas in terms of faster interconnection times than DEP-East, the DOE's push for the utilization of retired coal sites or retired coal ash basins for siting solar projects, and the potential for tax benefits associated with building solar on a retired coal site.

The Commission further notes the history of importing energy into DEP-West and the existing limited transmission options existing in DEP-West. WCOMP

Order at 16. Thus, the Commission points out and notes the fact that there exist limitations on DEP's ability to import power into the region.

The Commission concludes that providing a diversity of energy resources at a relatively reasonable cost based on the challenges associated with developing generating resources in the region and based on the transmission limitations of the area is important to serving the needs of DEP's customers.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 6

This finding of fact is supported by the Application and exhibits, the direct and rebuttal testimony and exhibits of DEP witness LaRoche, and the testimony of Public Staff witness Thomas.

Summary of the Evidence

In its Application, the Company asserted that the Asheville Solar Facility is a key component of the WCMP and that it satisfies the requirements set forth in the WCMP Order, which accepted DEP's commitment to solar and storage projects and directed DEP to file as soon as practicable CPCN applications to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region and 5 MW of storage in the Asheville region. In addition, the Company noted that the WCMP calls for the deliberate investment in distributed energy resources, including solar and storage, and increased promotion and access to new and existing DSM/EE programs in Western North Carolina. Witness LaRoche described the WCMP as a collaborative energy innovation project for the Asheville area in the western region of DEP's service territory, with the goal of the WCMP

being to partner with the local community and elected leaders to help transition Western North Carolina to a cleaner, smarter, and more reliable energy future. Witness LaRoche also testified that in the WCMP Order, the Commission accepted DEP's commitment to solar and storage projects and directed DEP file as soon as practicable CPCN applications to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region. Tr. at 14-15; Tr. Official Exhibits at 11, 14, 20.

Witness Thomas again emphasized the cost of the project and testified that, although adding the Asheville Solar Facility to the portfolio of projects under the WCMP will not materially impact the levelized cost of energy (LCOE) for the WCMP or cause the WCMP's LCOE to be greater than DEP's avoided costs, in comparison to similar projects in other regions, the capital cost of the Asheville Solar Facility is 49% greater than the capital cost of other projects between five and 20 MW that were installed in 2021 and 98% greater than projects in the southeast region that were installed in 2021. Moreover, witness Thomas testified that the Company's annual WCMP progress reports and reports on stakeholder engagement filed in Docket No. E-2, Sub 1089 (WCMP annual reports), do not make clear whether DEP is utilizing DSM/EE to reduce demand in the DEP-West territory. Despite these concerns, witness Thomas recognized that, in the Woodfin Order, the Commission gave dispositive weight to the WCMP and approved that project, in part, due to the Woodfin Facility's consistency with the expectation contained in the WCMP Order that 15 MW of solar would be built in the region. Tr. at 41, 45, 50-51, 55,

In his rebuttal testimony, witness LaRoche testified that the Commission should consider the overwhelming public support DEP has received for each of the renewable energy projects the Company has proposed in the Asheville region, and that DEP conceptualized the WCMP in response to significant community and stakeholder engagement through which DEP learned that its customers in the DEP-West region strongly support the addition of renewable energy resources to serve their communities. Like the other renewable energy projects the Company has proposed under the WCMP, witness LaRoche testified that members of the Asheville community support the construction of the Asheville Solar Facility, as evidenced by the letters of support that have been filed by various individuals and organizations in this docket. Tr. at 23.

Concerning the cost comparisons raised by witness Thomas, witness LaRoche testified that, given the fact that the WCMP Order required DEP to site a solar generating project in an area of North Carolina that is not conducive to the lowest cost solar, a more reasonable comparison would be between the projected costs of the Asheville Facility and other solar projects in the Asheville region or other regions with similar geographical challenges. Witness LaRoche also took issue with witness Thomas' comparison of the LCOE for the Asheville Solar Facility to the solar reference and avoided costs, stating instead that the LCOE for the Asheville Solar Facility reflects the costs of siting a solar facility in a challenging location whereas the solar reference and avoided costs are benchmarks that are used to assess proposals from solar developers to construct facilities in a competitive process, which are often being constructed at up to 80 MW. In addition,

witness LaRoche noted that Duke Energy's ongoing solar procurements are being conducted pursuant to legislation that prescribes specific requirements for how Duke Energy must acquire those resources, and that those same requirements do not apply to the Commission's directives in the WCMP Order. Finally, although witness LaRoche agrees that it is currently less expensive to procure solar resources in DEP-East than in DEP-West, he testified that cost is not necessarily always the primary driver for a resource siting decision. In this instance, witness LaRoche observes that the WCMP seeks to address the dearth of renewable energy generation in the western region due to the relatively higher costs and siting challenges associated with installing solar facilities in the area, and that DEP's proposal to construct the Asheville Facility recognizes that customers in DEP-West desire to be included in the energy transition notwithstanding the region's geographical limitations. According to witness LaRoche, DEP has made a concerted effort to identify the most viable locations to site its proposed renewable energy projects in DEP West, including the Asheville Solar Facility. Tr. at 25-28,

At the hearing, witness LaRoche stated that the LCOE of the Asheville Solar Facility was close to that of the Woodfin Facility. With the exception of the Woodfin Facility, witness LaRoche testified that he could not find other suitable comparison projects. Witness LaRoche explained that there are certain fixed costs that go into developing any project and that, when these costs are spread out over a smaller project, like this 9.5 MW project, instead of a larger 80 MW project, the smaller project is going to have a relatively higher cost per kW. Witness LaRoche further testified that the other components that the Company can control will be

competitively procured. Witness LaRoche also testified that, absent the WCMP Order, it's unlikely that the Company would have proposed this project given the difficulty the project would have in being competitively developed, vetted, and procured through the CPRE program. Finally, witness LaRoche testified that the Company previously identified a number of other land parcels for the siting of the 15 MW solar facility called for in the WCMP Order but that it ultimately found none of those sites to be amenable due to issues such as cost, typography, and technology challenges. Tr. at 78-79, 92, 96.

Witness Thomas testified that all CPCN applications – including those related to the WCMP Order – are subject to the standard process of review that is unique to the CPCN process. In this proceeding, witness Thomas explained that the Public Staff applied the same level of review as with any other CPCN while taking into consideration the entirety of the WCMP Order and the subsequent orders related thereto. To the extent that the Commission still considers the WCMP to set a firm expectation of building solar and storage and to be controlling here, witness Thomas testified that the Public Staff supports the approval of this CPCN as evidenced by the Public Staff's agreement to include the project in the MYRP's revenue requirement, while noting that review of this project on its own merits without the WCMP Order at play would likely have resulted in a recommendation by the Public Staff of disallowing the CPCN. In addition, witness Thomas testified that, in light of the WCMP Order's clear expectation of siting 15 MW of solar at the Asheville Plant, he did not believe that DEP thoroughly evaluated alternative sites upon which it might have otherwise sited solar in the region. Tr. at 127-29.

With regard to DSM/EE measures in DEP-West, witness Thomas testified that he attempted to determine if there were any specific DSM/EE programs that have been proposed in DEP-West or any incremental DSM/EE gains made by DEP-West as compared to DEP as a whole by reviewing the WCMP annual reports and by attending a meeting of a group formed as a result of DEP's community outreach efforts within the WCMP which currently focuses on helping the City of Asheville and Buncombe County advance its renewable energy goals - the Blue Horizon Project Community Council - but that DEP indicated that it did not track this data by such granular levels. Although the Public Staff attempted to utilize data from the Carbon Plan proceeding to "tease out" the DSM/EE differences in DEP-West and DEP-East, this endeavor "proved to be near impossible." Tr. at 109-10, 117-20.

Finally, witness Thomas testified that the Commission would be well within its rights to impose conditions on the project, such as a review of whether the project stayed on budget, where any cost overruns came from, what factors influence the construction schedule, what lessons were learned by building the facility on the coal ash landfill, and how this project might be parlayed into other generation facilities on coal sites in the future.

When asked whether DEP's procurement of more storage than called for by the WCMP Order offsets the amount of solar required by the WCMP Order, witness Thomas testified that batteries do not constitute clean generation and that, in his view, it would not be in "the spirit of the WCMP" to offset the 15 MW of solar with excess storage. Tr. at 134-36.

Finally, the Commission notes its receipt of numerous public statements of support for the Asheville Solar Facility and no statement of opposition. Buncombe County filed a letter in this docket noting that the commitment to 15 MW of solar in the Asheville area was a key part of obtaining community support for WCMP.

Discussion and Conclusions

The WCMP Order indicated an expectation that DEP would file an application for a CPCN to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region as soon as practicable. The Commission concludes that the Asheville Solar Facility is consistent with the expectation of the WCMP Order, particularly in light of the challenges associated with developing generating facilities and transmission facilities in DEP-West, as discussed elsewhere in this Order.

The WCMP Order expressly encouraged the collaborative efforts of DEP and Asheville area community leaders working together to formulate a package of DSM/EE and renewable energy goals that: (1) balanced the community's interests in establishing a diversity of supply and demand resources; and (2) would eliminate the need for the 186-MW combustion turbine peaking unit that initially was proposed by DEP as part of the WCMP. DEP's request for a CPCN for the peaking unit was denied by the Commission in the WCMP Order. Thus, the WCMP Order directed DEP and the DEP-West community to work together in solving the energy needs and challenges facing the region. The Commission takes note of the work and efforts of the stakeholders in this regard, as well as the statements of support

for the Asheville Solar Facility. Working together to identify and to solve the problems and challenges facing North Carolina — paying special and deliberate attention to the existence of energy-burdened customers and solutions for this burden — is in the public interest and a critical component of the energy transition.

Thus, the Commission concludes that the Asheville Solar Facility is consistent with the WCMP Order and with the Commission’s directive to engage with the community in planning for the energy transition.

The Commission notes, however, that the WCMP Order called for the increased promotion and access to new and existing DSM/EE programs in Western North Carolina and that it is unclear what DEP has done to increase promotion of, access to, or creation of new or existing DSM/EE programs. Accordingly, the Commission concludes that DEP shall track and report in the WCMP annual reports the efforts it has instituted to increase promotion and access to new and existing DSM/EE programs in Western North Carolina in a manner that allows the Commission to differentiate the success of DSM/EE initiatives in DEP-West and DEP as a whole.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 7 – 8

These findings of fact are supported by the Application and exhibits, the direct and rebuttal testimony and exhibits of DEP witness LaRoche, and the testimony of Public Staff witness Thomas.

Summary of the Evidence

DEP witness LaRoche testified that the Asheville Solar Plant is already zoned for industrial purposes, that the land has already been cleared, and that DEP has received the required zoning permit approval from Buncombe County. In addition, witness LaRoche testified that construction and operation of the Asheville Facility will allow DEP to build upon the learnings from its operation of the other solar facilities it has constructed in the DEP-West region, which has numerous geographical challenges associated with developing solar facilities including the availability of suitable land, higher land costs in the Asheville area versus other areas of the state, topography, and rocky subsurface conditions. Tr. at 24-25.

Witness Thomas testified that the portion of the Asheville Solar Facility located on the coal ash landfill area will require a novel mounting technology that will be integrated with the closure turf covering. In addition, witness Thomas testified that the Lake Julian BESS will be dispatched to provide capacity and energy arbitrage benefits, as well as energy services to the bulk power system. Moreover, witness Thomas explained that the Lake Julian BESS is one of three MYRP energy storage facilities located in DEP-West, and that approximately 35% of the Company's existing and planned 150 MW of energy storage in DEP's MYRP is located in DEP-West. Tr. at 38, 49-50.

At the hearing, witness LaRoche testified that, due to the challenging topography in DEP-West, the cost of land, and availability of interconnection, CPRE projects are not going to be sited in DEP-West and that, indeed, no solar projects in DEP's 2022 RFP were sited in DEP-West's service territory. In addition, witness LaRoche testified that the engineering for the Asheville Solar Facility will

be different from the Woodfin Facility, both in terms of the facilities' design and equipment insofar as the Woodfin Facility utilized a ballasted tracking system on a municipal landfill and the Asheville Solar Facility will be utilizing a turf material fixed tilt system on a lined-capped coal ash landfill. Specifically, witness LaRoche testified that this would be a "first of its kind of the racking system on [top of] the landfill." Tr. at 66-69; 89.

Discussion and Conclusions

The Commission notes that the development of utility-scale generating facilities, including solar facilities, involves making use of significant acreage of cleared land. In the coastal and piedmont regions of North Carolina, land already cleared for agricultural purposes has been reused for solar facilities. Such land is not abundantly available in the mountain region, and as a result, siting a utility-scale solar farm in the mountain region is challenging, as evidenced by the lack of bids in the CPRE program. Again, the relative dearth of utility-scale solar facilities in the western region of the state underscores this point. The Commission notes that the Asheville Solar Facility provides a unique opportunity to reuse an existing cleared and relatively flat parcel of land, already zoned for and historically used for industrial purposes. Siting the Asheville Solar Facility on the coal ash landfill, in addition to making productive reuse of land and minimizing the environmental impacts associated with constructing a solar facility, will provide the Company with the opportunity to gain valuable experience in developing, constructing, owning, and operating a facility on a landfill/industrial site. Moreover, adaptively reusing the coal ash landfill for this purpose is consistent with the policy of the state to

encourage and promote harmony between utilities, their users, and the environment. N.C.G.S. § 62-2(a)(5).

Further, as previously mentioned in this Order, one of the expectations of the WCMP Order was that DEP would seek to develop solar facilities in the western region. That expectation is consistent with several policies of the state, including the development of diversified energy resources, the development of renewable energy, and carbon emission reduction requirements. N.C.G.S. § 62-2(a)(10); N.C.G.S. § 62-110.9. The Commission gives significant weight to the role that the Asheville Solar Facility will play in directly supporting these state policies and in serving as an example of how these policies might continue to be implemented in western North Carolina, particularly where the 2022 CPRE RFP included no solar projects sited in DEP-West.

To realize these public benefits of the Asheville Solar Facility, the Commission will require that DEP make available to interested North Carolina government and nonprofit entities nonconfidential information and lessons learned from DEP's development of the Asheville Solar Facility. To be clear, DEP is not required to carry out research or develop data that DEP is not otherwise maintaining, but, rather, to respond promptly and thoroughly to inquiries from interested persons by answering questions and sharing nonconfidential technical and cost information and lessons learned from developing, constructing, owning, and operating the Asheville Solar Facility.

Thus, the Commission gives significant weight to the unique features of the Asheville Solar Facility that will allow for valuable experience to be gained and shared in the interest of furthering the existing policies of the state.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 9

This finding of fact is supported by the Application and exhibits, the direct and rebuttal testimony and exhibits of DEP witness LaRoche, and the testimony of Public Staff witness Thomas.

Summary of the Evidence

As noted above, DEP witness LaRoche testified that the site was determined to have the following beneficial characteristics which have helped reduce the overall cost of the project: (1) it is a brownfield development on a former coal generation site and suitable for solar; (2) the acreage is sufficient for siting multiple MW of solar generation and the site is primarily clear of trees and debris; (3) the point of interconnection is located 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) it is not adjacent to residential customers; (5) it does not require tree clearing to support the solar; and (6) the property is Company-owned. Tr. at 16.

Witness LaRoche testified that DEP did not evaluate the wholesale market for alternatives to the capacity and energy to be provided by the Asheville Solar Facility due to the unique circumstances of the facility and the expectation set forth in the WCMP Order. According to witness LaRoche, DEP will conduct a

competitive bid process for all of the major components and construction of the project to ensure the lowest reasonable cost for its customers. In addition, witness LaRoche testified that tax credits and accelerated depreciation benefits will offset project costs for the benefit of customers. Tr. at 18-20.

Witness Thomas testified that locating the Asheville Solar Facility at the site of the retired Asheville coal generation facility qualifies the facility for increased tax benefits associated with the Inflation Reduction Act (IRA) of 2022. Specifically, witness Thomas testified that the classification of the Asheville Solar Facility as an energy community qualifies the facility for a ten percent increase to the production tax credit and that, assuming that the prevailing wage and apprenticeship standards are met, the Asheville Solar Facility may qualify for a production tax credit of approximately \$30 per MWh for the first ten years of operation. Witness Thomas explained that the Public Staff's calculation of the Asheville Solar Facility's LCOE already includes the impact of this tax credit and the energy community status. Tr. at 46-47.

At the hearing, witness LaRoche testified that the cost of the project would have been higher if the Company was leasing the land from a third-party landowner, and that DEP's use of the existing infrastructure for this project that is already on site has helped lower interconnection costs. Witness LaRoche explained that the interconnection costs for this project will be even less due to the allocation of some of the interconnection costs to the Lake Julian BESS, and that, while interconnection typically costs no less than \$4 to 5 million when a new tap station is required, the existing infrastructure in this case brings that cost down to

approximately \$1.7 million. According to witness LaRoche, DEP intends to use the IRA's Production Tax Credit for the Asheville Solar Facility, which would be eligible for a ten percent bonus rate due to the site being located in a qualifying energy community. The Company estimates savings from the IRA of roughly \$3.5 million over a ten-year period. Tr. at 62-64, 69, 90-91.

Witness Thomas cautioned that some of the Company's production tax credit may be transferred by sale and not claimed entirely by DEP given that DEP may have limits on the amount of credit that the Company can claim in any given year due to its tax liability. Tr. at 101-03.

Discussion and Conclusions

With respect to those cost items that are in the Company's control, the Commission concludes that the Company has taken reasonable steps to select a site which ensures the least impact to customers. The Commission is satisfied that the Company has delivered a cost-effective project that has market-competitive equipment and construction costs and no land cost, and that the WCMP Order required DEP to site a solar generating project in an area of North Carolina that is not conducive to the lowest cost solar. Finally, the Commission notes that the Public Staff did not identify any cost item that the Company has delivered in an unreasonable or imprudent manner.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 10

This finding of fact is supported by the Application and exhibits, the direct and rebuttal testimony and exhibits of DEP witness LaRoche, and the testimony of Public Staff witness Thomas.

Summary of the Evidence

In the Application, the Company described the Asheville Solar Facility as a key component of the WCMP and stated that the WCMP Order accepted DEP's commitment to solar and storage projects and directed DEP to file as soon as practicable CPCN applications to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region. Witness LaRoche described the WCMP as a "collaborative energy innovation project for the Asheville area in the western region of DEP's service territory." As noted above, the Company described the site in this instance as an optimal location for the Asheville 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 and therefore has no land costs associated. DEP witness LaRoche emphasized how these benefits contribute to cost savings and that the Company will conduct a competitive bid process for all of the major components and construction of the project to ensure the lowest reasonable cost for our customers, as well as offset costs with tax credits and

accelerated depreciation benefits for the benefit of customers. Tr. at 14, 16, 20, 40; Tr. Official Exhibits at 12-14, 20-21.

In general, the Public Staff expressed concerns about the cost of the Asheville Solar Facility relative to other solar facilities in the southeast. Witness Thomas testified that, although adding the Asheville Solar Facility to the portfolio of projects under the WCMP will not materially impact the LCOE for the WCMP or cause the WCMP's LCOE to be greater than DEP's avoided costs, in comparison to similar projects in other regions, the capital cost of the Asheville Solar Facility is 49% greater than the capital cost of other projects between 5 and 20 MW that were installed in 2021 and 98% greater than projects in the southeast region that were installed in 2021. Tr. at 45-47, 55

In addition, witness Thomas testified that the Asheville Solar Facility will be paired with the Lake Julian BESS – one of three battery storage projects in DEP-West identified in the Company's MYRP – which will be dispatched to provide capacity and energy arbitrage benefits, as well as energy services to the bulk power system. Witness Thomas also testified that the portion of the Asheville Solar Facility located on the coal ash landfill area will require a novel mounting technology that will be integrated with the closure turf covering. Tr. at 38, 49-50.

In rebuttal testimony, witness LaRoche noted that, with regard to cost, Duke Energy's ongoing solar procurements are being conducted pursuant to legislation that prescribes specific requirements for how Duke Energy must acquire those resources, and that those same requirements do not apply to the Commission's

directives in the WCMP Order. In addition, although witness LaRoche agrees that it is currently less expensive to procure solar resources in DEP-East than in DEP-West, cost is not necessarily always the primary driver for a resource siting decision. In this instance, witness LaRoche observes that the WCMP seeks to address the dearth of renewable energy generation in the western region due to the relatively higher costs and siting challenges associated with installing solar facilities in the area, and that DEP's proposal to construct the Asheville Facility recognizes that customers in DEP-West desire to be included in the energy transition notwithstanding the region's geographical limitations. According to witness LaRoche, DEP has made a concerted effort to identify the most viable locations to site its proposed renewable energy projects in DEP-West, including the Asheville Solar Facility. Tr. at 26-28.

At the hearing, witness Thomas testified that the Asheville Solar Facility has the benefit of being tied to the Lake Julian BESS, making it capable of providing additional value to ratepayers in a manner that the Woodfin Facility did not provide. Witness Thomas also recognized that siting solar in DEP-West has benefits in terms of faster interconnection times than DEP-East, that the DOE has pushed for the utilization of retired coal sites or retired coal ash basins for siting solar projects, and that there are tax benefits associated with building solar on a retired coal site. However, witness Thomas testified that the Public Staff has concerns about local governments' efforts to have their aggressive renewable energy goals subsidized with significant investment by regulated electric utilities' ratepayers. According to witness Thomas, to the extent that renewable energy projects are being used to

meet local government goals, which are above and beyond those set by statute, the local government entity associated should be paying for the achievement of that goal. Tr. at 105, 112-14, 123-25.

Discussion and Conclusions

Given the Company's cost estimate, the Commission shares the concerns expressed by the Public Staff regarding the cost of the Asheville Solar Facility. However, the Commission is mindful of the expectation expressed in the WCMP Order, the collaborative effort undertaken by DEP with stakeholders in DEP-West, and the support of the community for the Asheville Solar Facility. The Commission is persuaded by the relative dearth of utility-scale solar facilities in the western region of the state that a comparison of the costs of the Asheville Solar Facility to the costs of a solar facility that is developed in the eastern region of the state or that is transmission-tied may not be a fair or accurate comparison. Further, the Commission is persuaded by the testimony of the DEP witness LaRoche that siting of the facility on DEP-owned land that has already been cleared, is not adjacent to residential customers, and will make use of existing infrastructure for required interconnections is a significant accomplishment given the limited number of options in the Asheville region, and that construction and operation of the Asheville Solar Facility will allow DEP to build upon the learnings from its operation of the other solar facilities it has constructed in the DEP-West Region.

The Commission is further persuaded that the Asheville Solar Facility's energy production will be useful in meeting the needs of DEP's customers in this

region of the state where the capacity to import electric power into the region is limited and where the load forecast demonstrates the need for more resources to supply DEP-West's load. The pairing of this facility with the Lake Julian BESS adds additional value to DEP-West customers in meeting peak demand as well as serving other capacity and energy arbitrage benefits and ancillary services to the bulk power system, not to mention cost savings insofar as the interconnection costs between will be allocated between the two projects. The Commission also notes the benefits of siting solar in DEP-West as described by witness Thomas in terms of faster interconnection times than DEP-East, the DOE's push for the utilization of retired coal sites or retired coal ash basins for siting solar projects, and the potential for tax benefits associated with building solar on a retired coal site. Thus, the Commission is persuaded that the Asheville Solar Facility presents benefits that help to balance the cost.

Additionally, as discussed in detail elsewhere in this Order, the Commission concludes that DEP has taken measures to mitigate those cost items within the Company's control associated with the development of the facility.

Based on the foregoing, weighing all evidence of record, the Commission concludes that construction of the Asheville Solar Facility is consistent with the public convenience and necessity under N.C.G.S. § 62-110.1, and, therefore, should be approved. The Commission notes that the approval of this CPCN is based upon the unique facts regarding this application, including the WCMP Order and the Woodfin Order, and should not be cited by utilities to support a future project, where the primary reason is attainment of local renewable energy goals.

The Commission will assign no precedential value to this Order in such circumstance.

IT IS, THEREFORE, ORDERED as follows:

1. That the Application filed in this docket shall be, and the same is hereby, approved, and a certificate of public convenience and necessity for the Asheville Solar Facility is hereby granted;

2. That DEP shall track and report in the WCMP annual reports filed in Docket No. E-2, Sub 1089, the efforts the Company has instituted to increase promotion and access to new and existing DSM/EE programs in Western North Carolina in a manner that allows the Commission to differentiate the success of DSM/EE initiatives in DEP-West and DEP as a whole;

3. That DEP shall make available to interested North Carolina government and nonprofit entities nonconfidential information and lessons learned from DEP's development of the Asheville Solar Facility; and

4. That Attachment A shall constitute the certificate of public convenience and necessity issued to DEP for the Asheville Solar Facility.

ISSUED BY ORDER OF THE COMMISSION.

This the ____ day of _____, 2023

NORTH CAROLINA UTILITIES COMMISSION

A. Shonta Dunston, Chief Clerk

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-2, SUB 1311

Duke Energy Progress, LLC
410 South Wilmington Street
Raleigh, North Carolina 27601

is hereby issued this

**CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
PURSUANT TO N.C.G.S. § 62-110.1**

for a 9.5-MW_{AC} solar photovoltaic electric generating facility

to be located at

46 Duke Energy Lane, Arden,
Buncombe County, North Carolina,

subject to all orders, rules, regulations and conditions as are now or may hereafter
be lawfully made by the North Carolina Utilities Commission.

ISSUED BY ORDER OF THE COMMISSION

This the ____ day of _____, 2023.

NORTH CAROLINA UTILITIES COMMISSION

A. Shonta Dunston, Chief Clerk

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Proposed Order has been served on all parties of record or their attorneys, or both, in accordance with Commission Rule R1-39, by United States Mail, first class or better; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 28th day June, 2023.

Electronically submitted
/s/ Anne M. Keyworth
Staff Attorney