

**BEFORE
THE NORTH CAROLINA UTILITIES COMMISSION**

DOCKET NO. E-2 SUB 1300

In the Matter of:)
)
Application of Duke Energy Progress, LLC)
For Adjustment of Rates and Charges)
Applicable to Electric Service in North)
Carolina and Performance-Based Regulation)

**SUPPLEMENTAL DIRECT
TESTIMONY OF
JUSTIN C. LAROCHE
FOR DUKE ENERGY
PROGRESS, LLC**

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

2 A. My name is Justin C. LaRoche, and my business address is 400 South Tryon
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, where I am responsible for the development of new
7 renewable facilities, including solar and wind, on behalf of Duke Energy’s
8 regulated utilities, including Duke Energy Progress, LLC (“DEP” or the
9 “Company”).

10 **Q. DID YOU PREVIOUSLY SUBMIT PRE-FILED DIRECT TESTIMONY**
11 **IN SUPPORT OF DEP’S PERFORMANCE-BASED REGULATION**
12 **(“PBR”) APPLICATION ON OCTOBER 6, 2022?**

13 A. Yes.

14 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT**
15 **TESTIMONY?**

16 A. Pursuant to an agreement reached between the Company and Public Staff,
17 witnesses supporting projects contained in DEP’s Multiyear Rate Plan
18 (“MYRP”) are filing supplemental direct testimony describing updates (based
19 on a set of agreed-upon criteria) to their respective MYRP projects. My
20 supplemental direct testimony addresses updates associated with the proposed
21 solar projects contained in DEP’s MYRP.

1 **Q. ARE YOU PROVIDING ANY EXHIBITS WITH YOUR**
2 **SUPPLEMENTAL DIRECT TESTIMONY?**

3 A. Yes. My testimony includes the following four exhibits:

4 • LaRoche Supplemental Exhibit 1 contains revised cost estimates for both
5 the 2026 Solar Investment Project and the Asheville Plant Solar Investment
6 Project.

7 • LaRoche Supplemental Exhibit 2 compares the initial cost estimates
8 associated with the 2026 Solar Investment Project and the Asheville Plant
9 Solar Investment included in DEP’s October 6, 2022 PBR Application with
10 updated costs included in this supplemental filing.

11 • LaRoche Supplemental Exhibit 3 is a map that shows the location of the
12 2026 Solar Investment Project and the preliminary project site layout.

13 • LaRoche Supplemental Exhibit 4 provides the revised Present Value
14 Revenue Requirements (“PVRR”) for the 2026 Solar Investment and the
15 Asheville Solar Investment projects.

16 **Q. WERE THESE SUPPLEMENTAL EXHIBITS PREPARED OR**
17 **PROVIDED BY YOU OR UNDER YOUR DIRECTION AND**
18 **SUPERVISION?**

19 A. Yes.

I. MYRP PROJECT UPDATES – SOLAR

Q. IS DEP PROPOSING TO INCLUDE ANY NEW SOLAR PROJECTS AS PART OF ITS MYRP THAT WERE NOT INCLUDED IN DEP’S PBR APPLICATION?

A. No. DEP is not proposing to add any new solar projects as part of its proposed MYRP. However, as discussed in my pre-filed Direct Testimony, Step 1 evaluations for the 2022 Solar Procurement Program (“2022 SP Program”) were completed in November 2022 and DEP has now identified an early winner that is part of the 2026 Solar Investment Project.

Q. PLEASE DESCRIBE THE UPDATES TO THE 2026 SOLAR INVESTMENT PROJECT THAT DEP IS PROPOSING TO INCLUDE IN ITS MYRP.

A. DEP is updating the 2026 Solar Investment Project to reflect the selection of a proposal from the 2022 SP Program RFP as an early winner. On November 28, 2022, [BEGIN CONFIDENTIAL ██████████ END CONFIDENTIAL] (the “Market Participant”) was notified that its [BEGIN CONFIDENTIAL ██████████ END CONFIDENTIAL] project (the “Selected Solar Project”) was selected as a Utility Ownership Track early winner. Accordingly, DEP has updated the 2026 Solar Investment Project to reflect this selection.¹

¹ For the purposes of this testimony, “2026 Solar Investment Project” and “Selected Solar Project” are used interchangeably to refer to the same solar facility.

1 Q. PLEASE FURTHER DESCRIBE THE SELECTED SOLAR PROJECT.

A. The Market Participant submitted the Selected Solar Project into the 2022 SP Program as an asset transfer proposal. Per 2022 SP Program RFP Guidelines, an asset transfer proposal means a bid whereby the third-party solar developer proposes to sell a fully developed project to DEP, and DEP is responsible for final engineering, procurement, and construction.

7 The Selected Solar Project is an [BEGIN CONFIDENTIAL [REDACTED]

0 completed all environmental studies, secured county permit approval, and fully
1 executed an interconnection agreement. LaRoche Supplemental Exhibit 3
2 provides a map and preliminary project site layout for the Selected Solar
3 Project.

14 **Q. WILL DEP FILE AN APPLICATION FOR A CERTIFICATE OF**
15 **PUBLIC CONVENIENCE AND NECESSITY (“CPCN”) FOR THE 2026**
16 **SOLAR INVESTMENT PROJECT?**

17 A. Yes. The Market Participant has already requested and received a CPCN for the
18 2026 Solar Investment Project² and DEP intends to file an application to transfer
19 the CPCN by mid-year 2023.

² [BEGIN CONFIDENTIAL ██████████
██████████ END CONFIDENTIAL].

1 **Q. HAS THE COST ESTIMATE FOR THE 2026 SOLAR INVESTMENT**
2 **PROJECT CHANGED SINCE DEP FILED ITS PBR APPLICATION?**

3 A. Yes. DEP has updated the cost to align with the project costs as submitted into
4 the 2022 SP Program. LaRoche Supplemental Exhibit 1 provides the updated
5 cost for the 2026 Solar Investment Project.

6 **Q. DOES THE 2026 SOLAR INVESTMENT PROJECT IMPACT OTHER**
7 **ASPECTS OF DEP'S PROPOSED MYRP?**

8 A. Yes. These updates will impact DEP's revenue requirement. Accordingly, DEP
9 has updated Witness Kathryn Taylor's Supplemental Exhibit 4 to reflect revised
10 annual operations & maintenance costs and estimated Inflation Reduction Act
11 ("IRA") tax benefits, including those associated with the Selected Solar Project.

12 **Q. ARE THERE ANY UPDATES TO THE ASHEVILLE SOLAR**
13 **PROJECT?**

14 A. Yes. DEP has updated the costs associated with the Asheville Solar Project to
15 correct the Allowance for Funds Used During Construction ("AFUDC"). In
16 addition, on January 23, 2023, DEP filed an application for a CPCN to construct
17 the Asheville Solar Project.³ The NCUC has issued a scheduling order and
18 established evidentiary hearing dates for the CPCN request.

19 **Q. ARE THERE ANY CHANGES TO THE ESTIMATED SCHEDULE FOR**
20 **THE PROPOSED MYRP SOLAR PROJECTS?**

21 A. No. At this time, DEP does not anticipate any schedule changes associated with
22 the solar projects included in DEP's MYRP.

³ *Application for a Certificate of Public Convenience and Necessity to Construct the Asheville Plant Solar Generating Facility*, Docket No. E-2, Sub 1311 (Jan. 23, 2023).

1 **Q. HAS THE COMPANY IDENTIFIED SOLAR PROJECTS THAT WERE**
2 **INCLUDED IN DEP'S PBR APPLICATION THAT ARE NO LONGER**
3 **NECESSARY OR WERE MOVED OUT OF THE MYRP PERIOD?**

4 A. No.

5 **II. MYRP PROJECT COST UPDATES - SOLAR**

6 **Q. IS DEP PROPOSING TO UPDATE COSTS ASSOCIATED WITH ANY**
7 **OF THE SOLAR MYRP PROJECTS INCLUDED IN DEP'S PBR**
8 **APPLICATION?**

9 A. Yes. As summarized in Witness Taylor's supplemental testimony, the Company
10 and Public Staff reached a consensus approach regarding the criteria pursuant
11 to which MYRP projects and their cost estimates would be updated in this
12 supplemental filing.

13 Pursuant to this consensus approach, my supplemental direct testimony
14 describes the cost updates to the two solar projects referenced in my direct
15 testimony, the 2026 Solar Investment Project and the Asheville Solar Project.

16 **Q. PLEASE EXPLAIN WHICH PROJECTS' COST ESTIMATES ARE**
17 **BEING UPDATED AND THE BASIS FOR EACH OF THE UPDATES.**

18 A. LaRoche Supplemental Exhibit 1 provides the updated cost estimates for the
19 2026 Solar Investment and the Asheville Solar projects.

20 The updates to the 2026 Solar Investment Project reflect the Selected
21 Solar Project's selection as the early winner in the 2022 SP Program. This
22 includes the addition of Transmission Network Upgrade costs associated with

1 the project. LaRoche Supplemental Exhibit 1 provides the cost estimate for the
2 2026 Solar Investment Project.

3 As mentioned above, costs associated with the Asheville Solar Project
4 are being updated to correct the AFUDC. LaRoche Supplemental Exhibit 1
5 provides the cost estimate for the Asheville Solar Investment Project.

6 Additionally, after DEP filed its PBR Application on October 6, 2022,
7 the Company was better able to assess the impact of the IRA. As described in
8 more detail in Witness John Panizza's and Witness Taylor's testimony and
9 below, the 2026 Solar Investment and the Asheville Solar Project may qualify
10 for certain credits under the recently enacted IRA.

11 **Q. HOW DID DEP DEVELOP THE COST ESTIMATE UPDATES FOR**
12 **THE 2026 SOLAR INVESTMENT PROJECT?**

13 A. DEP has revised and updated the cost estimate for the 2026 Solar Investment
14 Project to reflect bid costs submitted into the 2022 SP Program, rather than
15 relying on design assumptions and cost estimates associated with generic solar
16 projects. Pursuant to the 2022 SP Program, there are two elements to asset
17 transfer proposals. First, the Market Participant submitted its fixed price to sell
18 the fully developed project to DEP, known as the asset transfer Purchase Price.
19 This price does not include any procurement or installation of equipment.
20 Second, the Duke Energy Utility Ownership Team, representing DEP, then
21 submitted its estimated costs to construct and operate the facility. This includes
22 engineering, procurement, and construction ("EPC") costs, as well as major
23 equipment, labor, interconnection, and associated permitting and development

1 costs. The Company used operational experience and knowledge to develop the
2 cost estimates that were submitted to the 2022 SP Program. Interconnection
3 costs, including Transmission Network Upgrade cost estimates were provided
4 by DEP Transmission.

5 DEP believes that using the project costs as submitted in the 2022 SP
6 Program is an appropriate and accurate approach now that an early winner has
7 been selected.

8 **Q. HAS DEP ESTIMATED POTENTIAL OPERATING BENEFITS**
9 **ASSOCIATED WITH THE PROPOSED SOLAR MYRP PROJECTS?**

10 A. Yes. Because the IRA was enacted only a few weeks prior to DEP's filing of its
11 PBR Application, the PBR Application did not include analysis of the impacts
12 of that law. Accordingly, DEP is including that analysis in this supplemental
13 filing. Potential IRA impacts and savings constitute "operational benefits"
14 within the meaning of N.C. Gen. Stat. § 62-133.16(c)(1)(a). Witness Taylor's
15 Supplemental Exhibit 4 shows the updated revenue requirement calculations
16 for the MYRP projects and includes an estimated revenue requirement impact
17 associated with potential IRA tax credits.

18 **Q. WILL DEP'S PROPOSED SOLAR MYRP PROJECTS QUALIFY FOR**
19 **TAX CREDITS UNDER THE IRA?**

20 A. Yes. As explained in the supplemental testimony of Witness Panizza, the solar
21 projects proposed in this case will be eligible for either the investment tax credit
22 ("ITC") or the ten-year production tax credit ("PTC").

1 **Q. WHICH IRA TAX CREDIT HAS DEP SELECTED FOR THE**
2 **PROPOSED SOLAR MYRP PROJECTS?**

3 A. At this time, DEP has not decided whether it will choose the ITC or the PTC.
4 DEP will likely select an option prior to the start of construction. At that time,
5 DEP will have more information available that will help inform this decision,
6 including more detailed cost estimates, more detailed guidance from Treasury
7 and the IRS, and qualification guidelines for various credit provisions.

8 **Q. DID DEP MAKE CERTAIN ASSUMPTIONS OR MODEL SCENARIOS**
9 **RELATED TO IRA CREDIT OPTIONS FOR THE SOLAR MYRP**
10 **PROJECTS?**

11 A. Yes. The updated MYRP revenue requirement calculations prepared by Witness
12 Taylor assume that DEP will select the PTC option for the 2026 Solar
13 Investment Project⁴ and the Asheville Solar Project.⁵ These assumptions are
14 supported by the comparison and analysis illustrated in LaRoche Supplemental
15 Exhibit 4. LaRoche Supplemental Exhibit 4 provides a summary of the present
16 value revenue requirement (“PVRR”) for the various tax credit scenarios likely
17 for each solar MYRP project. This analysis helped DEP examine the overall
18 potential benefits that might result under each scenario.

19 Additionally, the production and PTC rate assumptions used in the
20 calculations performed by Witness Taylor are consistent with the calculations
21 supporting LaRoche Supplemental Exhibit 4. Importantly, there remains a great

⁴ This PTC option assumes PTC base credit plus prevailing wage and apprenticeship added but excludes domestic content and energy communities’ bonuses.

⁵ This PTC option assumes PTC base credit plus prevailing wage and apprenticeship and energy communities’ bonuses but excludes domestic content.

1 deal of uncertainty regarding the estimates and impacts associated with the IRA
2 tax benefits, and the Company is requesting to defer any over/under recoveries
3 not reflected in rates.

4 **Q. WHY DID DEP ASSUME THE SELECTION OF THE PTC OPTION?**

5 A. LaRoche Supplemental Exhibit 4 provides a summary of the PVRR for the
6 various tax credit scenarios likely for each solar MYRP project. The PTC
7 scenarios (scenarios 1 and 2) have the lowest revenue requirements, and thus
8 present the most value to customers as compared to the scenarios utilizing the
9 ITC (scenarios 3, 4, and 5).⁶ Note: The analysis provided in LaRoche
10 Supplemental Exhibit 4 assumes that prevailing wage and apprenticeship
11 standards are met. It is also important to note that selection of the PTC or ITC
12 must be based on the relevant facts and circumstances of each project.

13 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT**
14 **TESTIMONY?**

15 A. Yes.

⁶ Scenario 5 models an ITC transfer. An ITC transfer would result in the lowest revenue requirement for the Asheville Solar Project, and the second-lowest revenue requirement for the 2026 Solar Investment Project. Because it is uncertain whether an ITC transfer is subject to normalization or not, DEP included it in the analysis but opted to assume the PTC utilization as the most reliable assumption.

DUKE ENERGY PROGRESS, LLC
MYRP PROJECTS - SUPPLEMENTAL
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LaRoche Supplemental Exhibit 1
Docket No. E-2, Sub 1300
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Line No.		MYRP Project Name	FERC Function	Project Forecasted In-		MYRP Project Description & Scope	Reason for the MYRP Project	Total Project Amount (System)			
				Service Date				Projected In-Service Costs	Projected Annual Net O&M	Projected Installation O&M	
1		2026 Solar Investment	Other Production Plant in Service, Transmission Plant in Service	Sep-25		Procurement of 80 MWs achieving in-service September 1, 2025	Meets new solar generation resources established in IRP, encourages carbon reduction through utility scale solar energy, and supports the solar procurement targets established for the 2022 Solar Procurement RFP.	\$ 135,556,000	\$ 679,639	\$ -	
2		Asheville Plant Solar	Other Production Plant in Service	Sep-25		Asheville Plant Solar (9.5 MWs) achieving in-service September 1, 2025	Meets the solar development requirements established in the Western Carolinas Grid Modernization Project CPCN proceeding, encourages carbon reduction through utility scale solar energy, and meets new solar generation resources established in IRP.	\$ 24,320,483	\$ 288,932	\$ -	
TOTALS								\$ 159,876,483	\$ 968,572	\$ -	

DUKE ENERGY PROGRESS, LLC
MYRP PROJECTS - ORIGINAL FILING VS SUPPLEMENTAL FILING COMPARISON
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LaRoche Supplemental Exhibit 2
Docket No. E-2, Sub 1300
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Line No.	MYRP Project Name	FERC Function	Filed Oct 2022 - Total Project Amount (System)				Filed Feb 2023 - Total Project Amount (System)				Supplemental Update Criteria
			Project Forecasted In-Service Date	Projected In-Service Costs	Projected Annual Net O&M	Projected Installation O&M	Project Forecasted In-Service Date	Projected In-Service Costs	Projected Annual Net O&M	Projected Installation O&M	
1	2026 Solar Investment	Other Production Plant in Service, Transmission Plant in Service *	Sep-25	\$ 124,639,796	\$ 1,025,000	\$ -	Sep-25	\$ 135,556,000	\$ 679,639	\$ -	Project > \$10M
2	Asheville Plant Solar	Other Production Plant in Service	Sep-25	\$ 25,723,329	\$ 118,750	\$ -	Sep-25	\$ 24,320,483	\$ 288,932	\$ -	Project > \$10M
TOTALS				\$ 150,363,125	\$ 1,143,750	\$ -		\$ 159,876,483	\$ 968,572	\$ -	

* Note Necessary transmission network upgrades are within the scope of this project. Estimated costs of those upgrades were determined and provided to Witness Taylor for use in calculating the NC Retail revenue requirement and the FERC Function for each project was updated accordingly.

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

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PVRR Scenario Comparison			
		PVRR (\$000s)	
Scenario	Normalize ITC / PTC	Asheville Plant Solar	2026 Solar Investment (Gideon)
1) PTC Transfer	No	REDACTED	REDACTED
2) PTC Usage in 2031	No	REDACTED	REDACTED
3) ITC Transfer	Yes	REDACTED	REDACTED
4) ITC Usage in 2031	Yes	REDACTED	REDACTED
5) ITC Transfer	No	REDACTED	REDACTED

Asheville Plant Solar scenarios include the higher ITC and PTC credit values for energy communities.