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VIA ELECTRONIC FILING

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
Raleigh, North Carolina 27603

**RE: Index to Direct Testimony and Identification of Designated Issues for
the 2023-2024 Carbon Plan and Integrated Resource Plan Proceeding
Docket No. E-100, Sub 190**

Dear Ms. Dunston:

As directed by the North Carolina Utilities Commission's ("Commission") February 21, 2024 *Order Establishing Additional Procedures for Expert Witness Hearing*¹ (the "Order") in the above-captioned Docket, Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, the "Companies") hereby submit their proposed index of "Designated Issues" to assist the Commission in its review and consideration of the Companies' proposed 2023-2024 Carbon Plan and Integrated Resource Plan Proceeding ("CPIRP" or the "Plan") and supporting testimony in the above-captioned Docket. In response to the Order, the Companies have prepared the following two documents:

- Attachment 1 is the Companies' Identification of Designated Issues for the 2023-2024 Carbon Plan and Integrated Resource Plan Proceeding (the "Designated Issues List"). The Designated Issues List identifies the key issues in this proceeding, including the Companies' execution plans and requests for relief presented in their January 31, 2024, Verified Amended Petition that are central to the Commission's determination in this proceeding. The Designated Issues List is built on and largely replicates the topics identified in the similar Issues Report from the 2022 Carbon Plan proceeding in Docket No. E-100, Sub 179 (with additional details added in a few areas).²

¹ Order at 2 (Ordering Paragraph No. 2).

² See the Companies' Issues Report, submitted on July 22, 2022, in Docket No. E-100, Sub 179, available at <https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=05107bf5-f629-47fe-89a4-d89218882c97>.

March 6, 2024

Page 2

- Attachment 2 is the Companies' Index of Designated Issues in Direct and Supplemental Direct Testimony and 2023-2024 CPIRP ("Index of Designated Issues"). The Index of Designated Issues identifies where each of the Designated Issues is discussed in the Companies' initial Direct and Supplemental Direct Testimony as well as in the Plan, including the initial Plan filed on August 17, 2023, and the Supplemental Planning Analysis filed on January 31, 2024.³

Together, the Designated Issues List and Index of Designated Issues appropriately identify and categorize the entirety of the Plan documents and testimony filed by the Companies to date in this proceeding. To further assist the Commission in its review of the CPIRP, the Companies are also providing as Attachment 3 a comprehensive table of contents to the CPIRP. For further organizational guidance, the Companies note that the previously filed Appendix N (Cross Reference) to the initial Plan identifies where in the CPIRP the Companies have addressed specific regulatory and legal requirements applicable to the Plan filed in this proceeding.

The Companies appreciate the Commission's request for these organizational tools to assist in its review of the significant amount of information presented in the CPIRP and supporting Direct Testimony in this proceeding.

If you have any questions, please do not hesitate to contact me. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack Jirak", written in a cursive style.

Jack E. Jirak

Enclosure

cc: Parties of Record

³ Attachment 2 provides a roadmap showing where each Designated Issue is addressed in both the Companies' testimony and CPIRP documents. As is shown in Attachment 2, the majority of the Companies' testimony covers only a single Designated Issue. As such, the Companies are not submitting a separate index for each witness or panel since such an index would not provide further meaningful guidance. The Companies hope that the comprehensive Index of Designated Issues provides the Commission and all parties with the desired guidance regarding the Designated Issues.

**Duke Energy Progress, LLC’s and Duke Energy Carolinas, LLC’s
Identification of “Designated Issues” for 2023-2024 Carbon Plan and Integrated
Resource Plan Proceeding**

Designated Issues	
1.	Planning Objectives in a Changing Energy Landscape
2.	Modeling (Methodology, Key Assumptions, and Other Modeling Issues)
3.	Coal Unit Retirement Analysis
4.	Load Forecast
5.	Planning Reserve Margin / 2023 Resource Adequacy Study
6.	Natural Gas Supply and Hydrogen
7.	Pathways, Portfolios, and Portfolio Comparison and Evaluation
8.	Execution Plan
9.	Near-Term Actions: Supply-Side Development and Procurement Activities - Solar - Battery Storage - Onshore wind - New Gas - Pumped Storage Hydro - Advanced Nuclear - Offshore Wind
10.	Near-Term Actions: Existing Resources - Existing Gas Fleet (Flexibility Projects) - Existing Nuclear (SLRs and Uprate Projects)
11.	Advancing Grid Edge and Customer Programs
12.	Transmission System Planning and Grid Transformation - Strategic Transmission Additions / RZEP 2.0 - Carolinas Transmission Planning Collaborative - Regional / Interregional Transmission Planning Process
13.	Ensuring Reliability and Operational Resilience
14.	Requests for Relief and “Selection” of Resources to Execute Carbon Plan
15.	Dual State Planning for the Carolinas System
16.	Merger

Index of Designated Issues in Duke Energy Carolinas, LLC’s and Duke Energy Progress, LLC’s Direct and Supplemental Direct Testimony and 2023-2024 Carbon Plan and Integrated Resource Plan (“CPIRP”)¹

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
1. Planning Objectives in a Changing Energy Landscape	IRP and Near-Term Actions Panel (Direct)	Section III.A (Pages 14-16) Section III.C (Page 24)	Chapter 1: Planning for a Changing Energy Landscape	Overall Chapter addresses these issues.
	Snider (Supplemental Direct)	Page 7	Executive Summary	Pages 3-9
	IRP and Near-Term Actions Panel (Supplemental Direct)	Section II. (Pages 4-9)	Chapter NC: 2023-2024 CPIRP Update	Pages 3-4
2. Modeling (Methodology, Assumptions, and Other Modeling Issues)	IRP and Near-Term Actions Panel (Direct)	Overall Panel testimony addresses these issues.	Chapter 2: Methodology and Key Assumptions	Overall Chapter addresses these issues.
			Chapter NC: 2023-2024 CPIRP Update	Pages 4-5
			Appendix C: Quantitative Analysis	Overall Appendix addresses these issues.
	IRP and Near-Term Actions Panel (Supplemental Direct)	Overall Panel testimony addresses these issues.	Supplemental Planning Analysis	Section 2 (Pages 12-22)
			Attachments II & III: 2022 ELCC Study and 2023 Wind ELCC Study	Overall Attachments address these issues.
3. Coal Unit Retirement Analysis	IRP and Near-Term Actions Panel (Direct)	Section III.A (Pages 14-15) Section III.D (Pages 32-37)	Chapter 4: Execution Plan	Overall Chapter addresses this issue.
			Appendix C: Quantitative Analysis	Pages 47-48
			Chapter NC: 2023-2024 CPIRP Update	Pages 22-24

¹ The CPIRP includes the initial Plan filed on August 17, 2023, as well as the Supplemental Planning Analysis filed on January 30, 2024.

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
	IRP and Near-Term Actions Panel (Supplemental Direct)	Section III. (Pages 12-16)	Supplemental Planning Analysis	Section 3 (Pages 33-34)
			Appendix F: Coal Retirement Analysis	Overall Appendix addresses this issue.
			Supplemental Planning Analysis	Pages 33-34
			Supplemental Planning Analysis Technical Appendix	Pages 5-6
4. Load Forecast	IRP and Near-Term Actions Panel (Direct)	Section III.A (Pages 16-20)	Appendix C: Quantitative Analysis	Pages 12-18
	Snider (Supplemental Direct)	Pages 3-10; 12	Appendix D: Electric Load Forecast	Overall Appendix addresses this issue.
	IRP and Near-Term Actions Panel (Supplemental Direct)	Section II. (Pages 4-9)	Supplemental Planning Analysis	Section 1 (Pages 3-6) Section 2 (Pages 12-23)
	Bowman (Direct)	Section IV. (Pages 19-20)	Supplemental Planning Analysis Technical Appendix	Pages 6-10
	Bowman (Supplemental Direct)	Pages 4-7		
5. Planning Reserve Margin / 2023 Resource Adequacy Study	Resource Adequacy Panel (Direct)	Overall Panel testimony addresses these issues.	CPIRP Attachment I (2023 Resource Adequacy Study)	Overall Attachment addresses these issues.
	IRP and Near-Term Actions Panel (Direct)	Section III.A (Page 20)	Appendix C: Quantitative Analysis	Pages 10-11
6. Natural Gas Supply and Hydrogen	Dispatchable Generation and Fuel Supply (Direct)	Section III. (Pages 14-17) Section V. (Pages 23-27)	Appendix K: Natural Gas, Low-Carbon Fuels, and Hydrogen	Overall Appendix addresses these issues.
7. Pathways, Portfolios, and	IRP and Near-Term Actions Panel (Direct)	Overall Panel testimony addresses these issues.	Chapter 2: Methodology and Key Assumptions	Pages 43-44

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
Portfolio Comparison and Evaluation			Chapter 3: Portfolios	Overall Chapter addresses these issues.
			Chapter NC: 2023-2024 CPIRP Update	Pages 8-13
			Appendix C: Quantitative Analysis	Pages 49-65; 79-83; 99-106
	IRP and Near-Term Actions Panel (Supplemental Direct)	Overall Panel testimony addresses these issues.	Supplemental Planning Analysis	Section 3 (Pages 32-45)
8. Execution Plan	IRP and Near-Term Actions Panel (Direct)	Overall Panel testimony addresses this issue.	Chapter 4: Execution Plan	Overall Chapter addresses this issue.
	IRP and Near-Term Actions Panel (Supplemental Direct)	Overall Panel testimony addresses this issue.	Supplemental Planning Analysis	Section 4 (Pages 46-59)
	Bowman (Direct)	Section V. (Pages 22-27), Attachment 1 and Attachment 2		
9. Near-Term Actions: Supply-Side Development and Procurement Activities	IRP and Near-Term Actions Panel (Direct)	Section V.A-B (Pages 48-52)	Chapter 4: Execution Plan	Pages 8-31
	Snider (Supplemental Direct)	Pages 11-12	Chapter NC: 2023-2024 CPIRP Update	Pages 14-21
	IRP and Near-Term Actions Panel (Supplemental Direct)	Section IV. Pages 25-32 Section V. (Pages 25-34)	Supplemental Planning Analysis	Section 4 (Pages 46-57)
a. Solar	Renewables and Energy Storage Panel	Section III.A (Pages 12-18)	Chapter 4: Execution Plan	Pages 10-11; 19-21
			Appendix C: Quantitative Analysis	Pages 26-31
			Appendix I: Renewables and Energy Storage	Pages 4-8

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
			Supplemental Planning Analysis	Section 4 (Pages 47; 50-51)
b. Battery Storage	Renewables and Energy Storage Panel	Section III.C (Pages 28-33)	Chapter 4: Execution Plan	Pages 10-11; 19; 21; 23
			Appendix C: Quantitative Analysis	Pages 27; 32
			Appendix I: Renewables and Energy Storage	Pages 9-13
			Supplemental Planning Analysis	Section 4 (Page 52)
c. Onshore Wind	Renewables and Energy Storage Panel	Section III.B (Pages 18-27)	Chapter 4: Execution Plan	Pages 10-11; 19; 24-25
			Appendix C: Quantitative Analysis	Pages 35-36
			Appendix I: Renewables and Energy Storage	Pages 18-24
			Supplemental Planning Analysis	Section 4 (Page 47)
d. New Gas	Dispatchable Generation and Fuel Supply (Direct)	Overall Panel testimony addresses these issues.	Chapter 4: Execution Plan	Pages 10-11; 28-30
			Appendix C: Quantitative Analysis	Pages 33-36
			Appendix K: Natural Gas, Low-Carbon Fuels, and Hydrogen	Pages 5-6
			Supplemental Planning Analysis	Pages 24-26; 55-57
e. Pumped Storage Hydro	Long Lead Generation and Pumped Storage Hydro Panel	Section III.A (Pages 12-16)	Chapter 4: Execution Plan	Pages 10-11; 19; 21-23
			Appendix C: Quantitative Analysis	Pages 27-28

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
f. Advanced Nuclear	Long Lead Generation and Pumped Storage Hydro Panel	Section III.B (Pages 16-23)	Appendix I: Renewables and Energy Storage	Pages 14-17
			Supplemental Planning Analysis	Section 4 (Pages 51-52)
			Chapter 4: Execution Plan	Pages 10-11; 19; 27-28
			Appendix C: Quantitative Analysis	Pages 38-40
g. Offshore Wind	Long Lead Generation and Pumped Storage Hydro Panel	Section III.C (Pages 23-30) Long Lead Generation and Pumped Storage Hydro Panel <u>Exhibit 1</u>	Appendix J: Nuclear	Overall Appendix addresses this issue.
			Supplemental Planning Analysis	Section 4 (Pages 54-55)
			Chapter 4: Execution Plan	Pages 10-11; 19; 26
			Appendix C: Quantitative Analysis	Pages 36-38
11. Near-Term Actions: Existing Resources	Long-Lead Generation and Pumped Storage Hydro (Direct)	Section III.A (Pages 12-16)	Appendix I: Renewables and Energy Storage	Pages 25-31
			Supplemental Planning Analysis	Section 4 (Pages 52-53)
			Chapter 4: Execution Plan	Pages 12-16
			Chapter NC: 2023-2024 CPIRP Update	Pages 21-22
11. Near-Term Actions: Existing Resources	IRP and Near-Term Actions Panel (Direct)	Section III.E (Pages 37-38)		
	G. Snider (Supplemental Direct)	Page 11		
	IRP and Near-Term Actions Panel (Supplemental Direct)	Section III. (Page 14) Section IV. (Pages 26-27)		

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
a. Existing Gas Fleet (Flexibility Projects)	Dispatchable Generation and Fuel Supply (Direct)	Overall Panel testimony addresses this issue.	Chapter 4: Execution Plan	Pages 14-15
b. Existing Nuclear (SLRs and Uprate Projects)	Long-Lead Generation and Pumped Storage Hydro (Direct)	Section III.B (Pages 16-20)	Chapter 4: Execution Plan	Pages 15-16
12. Advancing Grid Edge and Customer Programs	Grid Edge and Customer Programs Panel (Direct)	Overall Panel testimony addresses these issues.	Appendix H: Grid Edge and Customer Programs	Overall Appendix addresses these issues.
			Chapter NC: 2023-2024 CPIRP Update	Pages 25-26
13. Transmission System Planning and Grid Transformation	Transmission and Interconnection Panel (Direct)	Overall Panel testimony addresses these issues.	Appendix L: Transmission and System Planning and Grid Transformation	Overall Appendix addresses these issues.
			Chapter NC: 2023-2024 CPIRP Update	Pages 24-25
a. Strategic Transmission Additions / RZEP 2.0	Transmission and Interconnection Panel (Direct)	Section III.B (Page 18-19)	Appendix L: Transmission and System Planning and Grid Transformation	Pages 25-26
b. Carolinas Transmission Planning	Transmission and Interconnection Panel (Direct)	Section III.A (Pages 10-19)	Appendix L: Transmission and System Planning and Grid Transformation	Pages 8-14
c. Regional / Interregional Transmission Planning Process	Transmission and Interconnection Panel (Direct)	Section IV. (Pages 22-30)	Appendix L: Transmission and System Planning and Grid Transformation	Pages 15-17

Testimony Index			CPIRP Documents Index	
Designated Issues	Duke Energy Direct Testimony	Section/Pages	CPIRP	Section/Pages
14. Ensuring Reliability and Operational Resilience	Reliability and Operational Resilience Panel (Direct)	Overall Panel testimony addresses these issues.	Chapter NC: 2023-2024 CPIRP Update	Pages 6-8
	Bowman (Direct)	Section V. (Pages 24-28)	Appendix C: Quantitative Analysis	Pages 10-12
			Appendix M: Reliability and Operational Resilience	Overall Appendix addresses these issues.
15. Requests for Relief and “Selection” of Resources to Execute Carbon Plan	Bowman (Supplemental Direct)	Overall testimony and Bowman Supplemental Direct <u>Exhibits 1</u> and <u>2</u> address these issues.	Chapter NC- 2023-2024 CPIRP Update	Page 29
			Chapter NC Supplement: 2023-2024 CPIRP Supplemental Planning Analysis	Page 8
16. Dual State Planning for the Carolinas System	Bowman (Direct)	Introduction (Pages 4-6) Section IV. (Pages 18-19)	Appendix B: DEC and DEP System Overview	Overall Appendix addresses this issue.
	Bowman (Supplemental Direct)	Page 5		
	Carolinas Utility Operations Panel (Direct)	Section V. (Pages 11-12)		
17. Merger	Bowman (Direct)	Section V. (Pages 24-28)	Chapter 4: Execution Plan	Pages 38-41
	Carolinas Utility Operations Panel (Direct)	Overall Panel testimony addresses these issues.		

2023-2024 Carolinas Resource Plan

Comprehensive Table of Contents

Chapter 1: Planning for a Changing Energy Landscape

Energy Transition Already in Progress	2
Planning Impacts of a Changing Energy Landscape.....	4
Growth in Demand Through Strong Economic Development, Load Forecast	6
Increased Power Supply Adequacy and Reliability Needs with Higher Reserve Margin	6
Policy and Regulatory Landscape Necessitates Balancing Requirements and Risks Across Planning Objectives.....	7
Industry Exit from Coal Driving Need to Balance Significant Levels of Risks	8
Financial Incentive Opportunities Coupled with Inflationary and Lead-Time Challenges Impacting Resource Cost Assumptions.....	10
Technology Advances Critical to Orderly Energy Transition and Diverse Power Supply	11
Consumer Trends Increasingly Influencing Plan Supply Choices and the Demand-Side Options.....	11
Keys to An Orderly Energy Transition in a Changing Energy Landscape.....	12
Meaningful and Sustained Plan Execution Advances Reliable Solutions for a Changing Energy Landscape.....	14

Chapter 2: Methodology and Key Assumptions

Resource Planning Objectives for an Orderly Energy Transition	2
Complying with Applicable Laws and Regulations.....	3
Maintaining or Improving Reliability	4
Conducting Risk Adjusted Planning and Considering Consumer Affordability	5
Planning for Increasingly Clean Resource Mix	5
Resource Diversity to Mitigate Fuel and Technology Risks, Enhance Reliability	6
Accounting for Plan Execution and Foreseeable Conditions in the Planning Environment.....	6
Analytical Framework.....	6
Pathway and Portfolio Development	7
Portfolio Matrix.....	10
Analytical Process – Overview.....	14
Modeling Software and Development of Modeling Assumptions.....	16
Modeling Software.....	16
DEC & DEP System Configuration.....	16
Reliability Requirements.....	17

Electric Load Forecast	19
Demand-Side Management.....	28
Supply-Side Resources	29
Inflation Reduction Act of 2022	40
Infrastructure Investment and Jobs Act.....	43
Portfolio Development	43
Production Cost.....	44
Reliability Verification	45
Performance Analysis.....	45
Performance Sensitivity Analysis	45

Chapter 3: Portfolios

Carolinas Resource Plan Pathways and Core Portfolios.....	2
Coal Unit Retirement Dates	4
Results Summary	5
Planning Across Energy Transition Pathways	8
Exploring Portfolio Variants.....	15
Resource Availability.....	15
Natural Gas Supply	17
Insights from Portfolio Sensitivity Analysis	17
Resource Cost	17
Fuel Commodity Price	17
High and Low Load Growth Cases.....	18
Energy Efficiency and Demand Response.....	18
Insights from Performance Sensitivity Analysis	19
Supplemental Portfolios	21
No Carbon Constraints Portfolio.....	21
Proposed Environmental Protection Agency Regulations	21
Portfolio Comparison and Evaluation	23
Portfolio Evaluation: Cost and Affordability	26
Portfolio Evaluation: Increasingly Clean Resource Mix.....	27
Portfolio Evaluation: Reliability and Flexibility.....	28
Portfolio Evaluation: Balancing Risks for a Changing Energy Landscape.....	30
Summary of Portfolio Evaluation.....	32

Chapter 4: Execution Plan

Execution Planning Horizons and Navigating Uncertainty	2
Navigating Uncertainty	3
Optimizing For Execution.....	4
Critical Execution Phase in the Energy Transition	4
Recent Progress Executing the Energy Transition	5
Supply-Side and Transmission Progress Update	6
Grid Edge and Customer Programs Recent Progress Update	7
Overview of Near-Term Actions.....	8
Optimizing Existing Supply-Side Resources	8
New Supply-Side Resources.....	8
Detailed Execution Plans: Existing Supply-Side Resources.....	12
Retiring Existing Coal.....	12
Expanding Flexibility of the Existing Gas Fleet	14
Extending the Life of Existing Nuclear Fleet	15
Detailed Execution Plans: New Supply-Side Resources	17
Supply-Side Asset Development, Acquisition and Procurement Approach	17
Significantly Expanding Utility-Scale Solar.....	20
Increasing System Flexibility and Maintaining Reliability with Energy Storage.....	21
Planning for New Wind Energy Resources	24
Advanced Nuclear Strategy	27
Transitioning with Additional Dispatchable Natural Gas Resources.....	28
Assessing the Viability of Hydrogen Resources.....	30
Transmission System Planning and Grid Transformation	32
Enabling Coal Unit Retirements	32
Renewable Enabling Transmission.....	33
Grid Edge and Customer Programs.....	34
Pursuing Duke Energy Carolinas and Duke Energy Progress Merger	38
Checking and Adjusting in Response to a Changing Energy Landscape	38

Chapter NC: 2023-2024 CPIRP Update

Changing Energy Landscape in a Critical Phase of Energy Transition	3
Updated Modeling Process Builds on 2022 Carbon Plan Approach.....	4
Maintaining or Improving Reliability Remains Core Planning Objective.....	6

Planning for Interim Target Through Continued Orderly Energy Transition Requires Balancing Executability, Reliability and Costs	8
New Supply-Side Resources Proposed for Selection in 2023-2024 CPIRP	14
Update on Initial Development Activities for Long Lead-Time Resources and Plans for Future Development.....	17
Critical Role of Optimizing Existing Resources in Energy Transition	21
Planning for Orderly Coal Unit Retirements	22
Update on Transmission System Planning and Grid Transformation.....	24
Update on Grid Edge and Customer Programs.....	25
Engagement Plans for Impacted Communities.....	26
Parallel Review by South Carolina Commission.....	28
Closing and Summary of Requests to Commission	29

Chapter SC: State Law and Policy Support

Portfolio P3 Charts a Path for Reliable and Increasingly Clean Energy Over the Next 15 Years, and Will be Checked and Adjusted as Needed in Future IRP Filings.....	2
While the 15-Year Plan Can Be Revisited in Future Filings, Portfolio P3 Does Include Actions That Must Be Pursued in the Near-Term in Order to Ensure Energy Supply for the Future....	3
Portfolio P3 Includes a Disciplined and Orderly Exit from Coal Generation Through 2035.....	7
Portfolio P3 Meets the Requirements and Aspirations of South Carolina Law & Policy	9
The IRP Statute: Portfolio P3 Meets South Carolina’s Balancing Test for Determining the Most Reasonable and Prudent Plan for South Carolina	10
Commission Approval of Portfolio 3 is Also Supported by Other Provisions of South Carolina Law & Policy.....	14
Closing and Summary of Requests to Commission	34

Appendix A: Stakeholder Engagement

Stakeholder Engagement Process and Objectives	3
Stakeholder Meetings	5
Engagement Meeting 1: February 22, 2023.....	6
Engagement Meeting 2: March 16, 2023.....	7
Engagement Meeting 3: March 22, 2023.....	8
Engagement Meeting 4: May 31, 2023	9
Engagement Meeting 5: June 13, 2023	9
Incorporation of Stakeholder Feedback into Developing Portfolios.....	11

Modeling Assumptions	11
Additional Stakeholder Activities	13
Engagement with Environmental Justice Stakeholders and Impacted Communities.....	15

Appendix B: Duke Energy Carolinas, LLC and Duke Energy Progress, LLC System Overview

Duke Energy Carolinas and Duke Energy Progress Owned Generation	3
Wholesale Purchases.....	24
Non-Utility Generation Summary	25

Appendix C: Quantitative Analysis

Introduction.....	2
Analytical Process - Overview	2
Modeling Software and Development of Modeling Assumptions.....	4
Modeling Software.....	4
Planning Horizon	7
CO ₂ Emissions Planning Consideration in Portfolio Development	7
Modeling the Carolinas Systems.....	8
Reliability Requirements.....	10
Electric Load Forecast	12
Existing Resources	18
Forecasted Demand-Side Management.....	23
Forecasted Supply-Side Resources	26
Selectable Supply-Side Resources	28
Transmission Costs	40
Inflation Reduction Act of 2022 and Infrastructure Investment and Jobs Act.....	42
Fuel Supply and Commodity Pricing.....	42
Portfolio Development	47
Coal Retirement Analysis	47
Capacity Expansion Modeling	48
Capacity Expansion Portfolio Development - Pathway 1	49
Capacity Expansion Portfolio Development - Pathway 2	51
Capacity Expansion Portfolio Development - Pathway 3	56
Core Portfolio Resource Summary Through Base Planning Period	64
Production Cost.....	66

Bad Creek Powerhouse II Economic Verification	66
Reliability Verification	67
Resource Adequacy and Reliability Analysis	67
Final Portfolios.....	78
Performance Analysis.....	83
Present Value Revenue Requirement.....	85
Performance Sensitivity Analysis	90
Customer Bill Impact Analysis	92
CO ₂ Emissions and Reduction Trajectory.....	94
Performance with Respect to Proposed Environmental Protection Agency’s Clean Air Act Section 111 Proposed Rule	96
Performance Analysis.....	83
Recommend Portfolio – P3 Base.....	103
P3 Base – Capacity and Energy Mix Summary	104
Load Capacity and Reserve Summary.....	107
First Year of Resource Need.....	112

Appendix D: Electric Load Forecast

Overview of the Forecasting Process.....	2
Assumptions, Drivers, and Estimation.....	6
Customer Growth.....	10
Critical Peak Pricing	12
Adjustments for Economic Development Activity	13
Rooftop Solar.. ..	15
Modeling Behind-the-Meter Solar Adoption	16
Electric Vehicles	17
Net Impact of Rooftop Solar and Electric Vehicles.....	19
Forecast Results and Commentary	22
Historical and Projected Load Forecast Information.....	23

Appendix E: Screening of Generation Alternatives

Technically and Economically Excluded Screening Results	2
Technically and Economically Screened-In Results	5
Baseload and Peaking/Intermediate Technologies.....	6
Variable Technologies	6

Storage Technologies.....	7
Modeling Technology Simplification	7
Generic Unit Cost Information.....	7
Capital Cost Forecast	9
2023 Generic Unit Technology Costs	11
Benefits and Challenges of Levelized Cost of Energy.....	13

Appendix F: Coal Retirement Analysis

A Changing Energy Landscape – Impacts of Industry Exit from Coal.....	2
Changing Economics of Coal	2
Coal Supply and Transportation Constraints	3
Evolving Coal Unit Generation and Dispatch Equation	4
Policies and Regulations Impacting Coal	5
Implications for the Companies’ Coal Facilities.....	5
Coal Retirement Analysis.....	6
Analytical Assumptions for Maintaining Existing Coal Assets	7
Endogenous Coal Retirement Modeling	11
Determination of Optimal Coal Retirement Dates	12
Supplemental Scenario Analysis.....	16
Moving from Planning to Execution	16

Appendix G: Integrated System and Operations Planning (ISOP)

Background on Integrated System and Operations Planning	1
Underlying Integrated System and Operations Planning Capabilities	2
Morecast: 11-year Hourly Distribution Circuit Level Forecasting	2
Integrated System and Operations Planning Data Systems	2
Advanced Distribution Planning.....	3
Bulk System Benefit Quantification	3
Integrated System and Operations Planning Contributions to the Carolinas Resource Plan	3
Non-Traditional Solution Screening	3
Battery Energy Storage System Evaluation	5
Distributed Generation Guidance Maps.....	6
System Reliability Requirements.....	6
Portfolio Screening Tool.....	7

Integrated System and Operations Planning Developments Beyond the 2023 Carolinas Resource Plan.....	7
Strategic Transmission Planning.....	7
Carolinas Transmission & Distribution Climate Risk & Resilience Study.....	8
Grid Hosting Capacity Analyses.....	9
Customer Programs as Non-Traditional Solutions	9
Integrated System and Operations Planning Stakeholder Engagement.....	9
Integrated System and Operations Planning Engagement Sessions.....	9
Carolinas Transmission & Distribution Climate Risk & Resilience Study Technical Working Group.....	10
Coordination with Wholesale Customers.....	10

Appendix H: Grid Edge and Customer Programs

Customer Programs.....	1
Energy Efficiency Programs	2
Demand Response Programs	2
Voltage Optimization (Conservation Voltage Reduction).....	2
Rate Design.....	3
Electric Vehicles	3
Behind-the-Meter Generation and Storage	3
Clean Energy Customer Programs	3
Risks to Reaching Grid Edge and Customer Program Targets	4
Energy Efficiency	5
A Changing Energy Landscape.....	5
Challenges to Expanding the Energy Efficiency Portfolio	6
Contributions to the Resource Plan.....	8
Enablers.....	13
Execution Plan	17
Demand Response	17
A Changing Energy Landscape.....	17
Contributions to Resource Plan.....	18
Enablers.....	19
Execution Plan	20
Voltage Optimization.....	24
A Changing Energy Landscape.....	24
Contributions to Resource Plan.....	24
Enablers.....	26
Execution Plan	26

Rate Design	27
A Changing Energy Landscape	27
Contributions to Resource Plan	28
Enablers	29
Execution Plan	29
Electric Vehicles	30
A Changing Energy Landscape	36
Contributions to Resource Plan	39
Efficiently Serving Electric Fleet Load	42
Enablers	44
Execution Plan	44
Behind-the-Meter Generation and Storage	45
A Changing Energy Landscape	47
Enablers	47
Clean Energy Customer Programs (Beyond the Meter)	49
Rapid Prototyping for Grid Edge and Customer Programs Beyond Energy Efficiency and Demand-Side Management Programs	51

Appendix I: Renewables and Energy Storage

Changing Energy Landscape	2
Need for Increasingly Carbon-Free and Fuel-Free Resources	2
Diverse and Complementary Resources	2
Operational Considerations for Integrating Renewables and Storage	3
Execution Risk Management	4
Solar, Solar Paired with Storage	4
Current & Future Planning Considerations	4
Procuring Solar and Solar Paired with Storage	4
Unlocking Solar Resources through Strategic Transmission	5
Policy Support for Solar Resources	5
Supply Chain Considerations	5
Solar and Solar Paired with Storage Contributions to a Diverse, Complementary Resource Mix	6
Solar and Solar Paired with Storage Operational Considerations	7
Execution Risk Management	7
Stand-alone Energy Storage	9
Current & Future Planning Considerations	9
Ongoing Development Work to Deliver Stand-alone Energy Storage Resources	12
Stand-alone Energy Storage Complementary Contributions in a Diverse Resource Mix	12

Stand-alone Energy Storage Operational Considerations	13
Execution Risk Management	14
Bad Creek Powerhouse II	14
Current & Future Planning Considerations	14
Bad Creek Powerhouse II's Contributions to Diverse, Complementary Nature of Resource Mix.....	16
Bad Creek Powerhouse II Operational Considerations.....	16
Bad Creek Powerhouse II Development Activities.....	17
Execution Risk Management	17
Onshore Wind	18
Current & Future Planning Considerations.....	18
Onshore Wind Contributions to Diverse, Complementary Nature of Resource Mix	22
Onshore Wind Operational Considerations	22
Execution Risk Management	24
Offshore Wind.....	25
Current & Future Planning Considerations.....	25
Offshore Wind Contributions to Diverse, Complementary Nature of Resource Mix.....	29
Offshore Wind Operational Considerations.....	29
Execution Risk Management	30

Appendix J: Nuclear

A Changing Energy Landscape	2
Existing Nuclear	2
Introduction to Duke Energy's Nuclear Fleet	2
Subsequent License Renewal.....	4
Expansion of Existing Plants: Power Upgrades and Measurement Uncertainty Recapture	7
Advanced Nuclear.....	8
Leading Next Generation Nuclear Technologies	9
Federal Government Funding for Advanced Nuclear	11
Time Frame for Development and Commercialization.....	14
Execution and Risk Management.....	15
Advanced Nuclear Development Activities.....	16
Timeline for Advanced Nuclear Plants	19

Appendix K: Natural Gas, Low Carbon Fuels and Hydrogen

A Changing Energy Landscape	1
Natural Gas.....	2
Supply and Transport.....	2
New Hydrogen-Capable Natural Gas-Fired Generation	5
Natural Gas Execution and Risk Management	9
Other Gas Activities.....	10
Low-Carbon Fuels	12
Renewable Natural Gas.....	12
Hydrogen.....	12
Low-Carbon Fuels Execution and Risk Management.....	17

Appendix L: Transmission System Planning and Grid Transformation

Transmission Planning in a Changing Energy Landscape	2
Existing Transmission Systems of DEC and DEP.....	3
Transmission System Planning to Ensure System Adequacy and Reliability	5
Transmission System Planning Regulatory Requirements	7
Transmission Planning Processes	8
Local Transmission Planning Process.....	8
Results of 2022–2032 Local Transmission Plan and Development of 2023–2033 Plan	11
Revisions to the Local Transmission Planning Process	13
Use of Grid Enhancing Technologies and Consideration of Non-Wires Alternatives.....	14
Regional and Interregional Transmission Planning Process	15
Definitive Interconnection System Impact Studies and Generator Interconnection Impact on Transmission Upgrades	17
Definitive Interconnection System Impact Study Cluster Process.....	17
Generator Replacement Request Process.....	19
Impacts for Solar and Solar Paired with Storage Interconnections and Allowable Capacity	19
Transmission Outage Coordination Impacts.....	20
Interconnection Process Improvements – From Fully Executed Generator Interconnection Agreement to Permission to Operate	22
Interconnection Risks – Customer Delays and Transmission Upgrades.....	23

Transmission Network Upgrades Keeping Pace with Solar and Solar Paired with Storage Interconnections	23
Status Update on Transmission Expansion Plan Projects and Benefits from These Upgrades.....	26
Impacts for Standalone Storage Interconnections	27
Transmission Planning for Enabling an Orderly Transition with Coal Plant Retirements	28
DEC.....	28
DEP.....	29
Transmission Needed to Enable Additional Pumped Storage Hydro Capacity at Bad Creek	30
Near-Term Transmission Needed to Enable Onshore and Potential Offshore Wind Resource	30
Onshore Wind... ..	30
Offshore Wind.....	31
Transmission Needed to Support Importing Capacity and/or Energy from Neighboring Systems (Southern Co, TVA, PJM).....	33
Import Capability from PJM.....	33
Import Capability from Southern Company	36
Import Capability from TVA	36
Risks Associated with Off-System Capacity Purchases	37
Southeast Energy Exchange Market	37
New Greenfield Transmission Needed to Achieve Long-Term Transmission System Transformation	38
Assessment of Transmission System Upgrade Cost Impacts of Carolinas Resource Plan Portfolios	39
Execution and Risk Management.....	39

Appendix M: Reliability and Operational Resilience

Maintaining or Improving Reliability	2
Meeting Mandatory Reliability Standards	4
Flexible Generation Needs for a Changing Landscape with Increasing Uncertainty	4
Importance of Dispatchable Capacity Resources.....	11
Eastern Interconnection Impacts of the Changing Energy Landscape.....	14
Inverter-Based Resources and System Reliability	16
Modeling Resource and Energy Adequacy.....	19
Future System Resilience	22
Conclusion: An Orderly Transition to Ensure Reliability and Resilience.....	25

Appendix N: Cross Reference

Table N-2: PSCSC Order No. 2021-447, PSCSC Order No. 2023-189 Cross Reference.....	2
Table N-2: PSCSC Order No. 2021-447, PSCSC Order No. 2023-189 Cross Reference.....	4
Table N-3: NCUC Proposed R8-60A Cross Reference.....	10
Table N-2: NCUC Carbon Plan Order and IBR Order Cross Reference	22
Table N-3: Glossary of Terms.....	37

Supplemental Planning Analysis

Section 1: Summary	3
Background	3
Historic Load Growth Through Robust Economic Development in the Carolinas	3
Other Recent Changes in Energy Landscape Integrated into Supplemental Planning Analysis	5
Scope	6
Summary of P3 Fall Base Results	7
Additional Supply-Side Resources are Needed to Meet Significant Load Growth Due to Robust Economic Development	7
Customer Financial Impacts	10
Section 2: Methodology and Key Assumptions Updates	12
Updated Modeling Inputs Used for Supplemental Planning Analysis	12
Electric Load Forecast	13
Resource Costs	23
Natural Gas Supply	24
Resource Availability	25
Portfolios Modeled in Supplemental Planning Analysis	29
Additional Supporting Analyses	30
Reliability Verification	30
Bad Creek Powerhouse II Economic Verification	30
Supplemental Coal Retirement Analysis	31
Section 3: Portfolio Additions and Analysis Results	32
Coal Unit Retirements Dates	33
Supplemental Portfolio Analysis	35
Portfolio Performance	41
Portfolio Evaluation: Cost and Affordability	43
Portfolio Evaluation: Increasingly Clean Resource Mix	44
Summary of Portfolio Evaluation	45
Section 4: Execution Plan Updates	46
Additional Supply-Side Actions	46
Supplemental Updates to Detailed Execution Plan	49
Retiring Existing Coal	49
Significantly Expanding Utility-Scale Solar	50
Increasing System Flexibility and Maintaining Reliability with Energy Storage	51
Offshore Wind	52
Advanced Nuclear Strategy	54
Dispatchable Natural Gas	55
Transmission System Planning and Grid Transformation	58

Other Execution Considerations.....	58
Optimizing for Execution.....	58
Continued Commitment to Grid Edge and Customer Programs Integral to the Plan	59
Checking and Adjusting in Response to Changing Energy Landscape	59

Chapter NC Supplement: 2023–2024 Carbon Plan and Integrated Resource Plan Supplemental Planning Analysis

Overview and Key Takeaways from Supplemental Planning Analysis	2
Updated Near-Term Action Plan Informed by Energy Transition Pathway 3 and Recommended P3 Fall Base Portfolio.....	4
Update on Parallel Review of Carolinas Resource Plan by the Public Service Commission of South Carolina	8
Updated Requests to Commission	8

Chapter SC Supplement: Energy Transition Pathway 3 Remains the Most Reasonable and Prudent Plan for South Carolina’s Future and Portfolio P3 Fall Base Enables the Companies to Reliably Serve South Carolina’s Economic Development Success

Overview and Key Takeaways from Supplemental Planning Analysis	37
The Companies’ Plan and Portfolio P3 Fall Base Presents the Most Reasonable and Prudent Plan under Act 62	41
Near-Term Actions that Must Be Pursued in 2024-2026 to Ensure a Reliable Energy Supply for South Carolina’s Future.....	43
Impacts of Dual-State Planning and the Location of Identified Generating Resources.....	47
Closing and Summary of Requests to Commission	47

Supplemental Planning Analysis Technical Appendix

Additional Supporting Inputs, Modeling Updates and Adjustments.....	2
Additional Supporting Analyses	3
Reliability Verification	3
Bad Creek Powerhouse II Economic Verification	4
Supplemental Coal Retirement Analysis Results.....	5
Supplemental Pathway 3 Sensitivity Analysis Portfolio Results.....	6
P3 Fall High Load	6
P3 Fall High Load Interruptible	6
P3 Fall High CC/CT Cost	7
Results for Fall Supplemental Updates to Pathway 1 and Pathway 2 Portfolios	8
Recommended Portfolio – P3 Fall Base	10
Load, Capacity and Reserves Summary.....	10
First Year of Resource Need.....	15
Results for Informational Portfolio SP SC No CO2 Constraint Fall Supplemental.....	16

CERTIFICATE OF SERVICE

I certify that copies of Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's *Index to Direct Testimony and Identification of Designated Issues for the 2023-2024 Carbon Plan and Integrated Resource Plan Proceeding*, filed today in Docket No. E-100, Sub 190, have been served by electronic mail, hand delivery, or by depositing a copy in the United States mail, postage prepaid, properly addressed to parties of record.

This the 6th day of March, 2024.

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