

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-2, SUB 1318
DOCKET NO. EC-67, SUB 55

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of)
Joint Application of Duke Energy Progress,)
LLC and North Carolina Electric)
Membership Corporation for a Certificate)
of Public Convenience and Necessity to)
Construct a 1,360 MW Natural Gas-Fueled)
Combined Cycle Electric Generating)
Facility in Person County, North Carolina)

**DIRECT TESTIMONY OF
H. LEE MITCHELL, IV,
ON BEHALF OF DUKE ENERGY
PROGRESS, LLC**

1 **I. INTRODUCTION AND OVERVIEW**

2 **Q. MR. MITCHELL, PLEASE STATE YOUR NAME, BUSINESS**
3 **ADDRESS AND POSITION WITH DUKE ENERGY CORPORATION.**

4 A. My name is H. Lee Mitchell, IV. My business address is 525 South Tryon Street,
5 Charlotte, North Carolina 28202. I am the Director of Fuel Strategy and
6 Planning for Duke Energy.

7 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.**

8 A. I obtained a Bachelor of Science in Business Administration from the
9 University of Richmond and a Master of Science in Natural Gas Engineering
10 and Management from the University of Oklahoma.

11 **Q. PLEASE SUMMARIZE YOUR BUSINESS BACKGROUND AND**
12 **EXPERIENCE.**

13 A. After five years trading wholesale petroleum products, I started my career with
14 Duke Energy in January 2013 as a Real-Time Power Trader. In this role, I
15 optimized bulk power purchases and sales for Duke Energy Carolinas, LLC
16 (“DEC”), Duke Energy Progress, LLC (“DEP” or the “Company,” and
17 collectively with DEC, the “Companies”), and Duke Energy Florida, LLC.
18 From October 2015 to May 2019, I was employed as a Natural Gas Originator,
19 where I was responsible for physical gas supply and gas transportation to
20 support Duke Energy’s regulated generation fleet. In May 2019, I assumed the
21 role of Manager of Coal and Gas Origination where I oversaw the coal and
22 natural gas origination teams responsible for fuel supply on behalf of Duke
23 Energy’s regulated electric utility subsidiaries. I assumed my current position

1 in July 2020.

2 **Q. WHAT ARE YOUR RESPONSIBILITIES IN YOUR CURRENT**
3 **POSITION?**

4 A. My responsibilities generally include directing enterprise fuel strategy for all
5 regulated Duke Energy electric utility subsidiaries, and, specifically, supporting
6 Duke Energy's generation transition away from coal to cleaner burning fuels,
7 such as natural gas and other developing alternatives. This includes the
8 management of long-term fuel planning, implementation of fuel-related
9 initiatives, and leading the execution of strategic transactions to improve fuel
10 security and supply to reliably and affordably serve Duke Energy's customers.

11 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?**

12 A. Yes. I testified before the North Carolina Utilities Commission ("Commission")
13 in Docket No. G-9, Sub 722 on behalf of DEP's affiliate, DEC. This is my first-
14 time filing testimony with the Commission on behalf of DEP.

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

16 A. The purpose of my testimony is to provide the Commission an overview of
17 DEP's strategy and executable plan to fuel the estimated 1,360 megawatt
18 ("MW") combined cycle ("CC") gas turbine facility (the "Proposed Facility")
19 that DEP proposes to construct at the site of its existing Roxboro Plant
20 ("Roxboro"), in Person County, North Carolina. My testimony initially
21 provides the Commission an update on the changing landscape for additional
22 new interstate natural gas pipeline infrastructure into the Carolinas and the
23 Companies' involvement in these projects to support the fuel security of both

1 existing and proposed new natural gas generation. My testimony then addresses
2 DEP’s strategy and executable plan to ensure the sufficiency of natural gas firm
3 transportation (“FT”) to the Proposed Facility, as directed by the Commission’s
4 *Order Adopting Initial Carbon Plan and Providing Direction for Future*
5 *Planning*, issued on December 30, 2022, in Docket No. E-100, Sub 179
6 (“Carbon Plan Order”).¹

7 **II. CAROLINAS FUEL SECURITY AND GAS SUPPLY STRATEGY**

8 **Q. PLEASE DESCRIBE THE COMPANIES’ CURRENT INTERSTATE FT**
9 **CAPACITY AND NEED FOR ADDITIONAL FT TO SUPPORT THE**
10 **FUEL SECURITY OF ITS EXISTING CC FLEET AND THE**
11 **PROPOSED FACILITY.**

12 A. The Companies’ existing CC fleet has a natural gas full load burn requirement
13 of approximately 980,000 million British thermal units (“MMBtu”) per day.
14 Currently, the Companies have 447,560 MMBtu per day of contracted term FT
15 on Transcontinental Pipe Line Company, LLC (“Transco”). As described
16 further in Appendix K (Natural Gas, Low-Carbon Fuels and Hydrogen) of the
17 Companies’ 2023-2024 Carbon Plan and Integrated Resource Plan (“CPIRP”
18 or the “Plan”), including the initial Plan filed with the Commission on August
19 17, 2023, in Docket No. E-100, Sub 190, and the Supplemental Planning
20 Analysis (“SPA”) filed in the same docket on January 31, 2024, the Companies
21 need additional interstate FT capacity to support their existing CC generation,
22 which is itself necessary to reliably retire coal-fired generating resources while

¹ Exhibit 1A Carbon Plan Order at 132 (Ordering Paragraph No. 18).

1 meeting the growing need for natural gas in the Carolinas. This existing FT need
2 is largely driven by the 2020 cancellation of the planned Atlantic Coast Pipeline
3 and to meet the growing need of the system. The addition of the Proposed
4 Facility to the Company's fleet will add to the Companies' need for additional
5 interstate FT.

6 **Q. PLEASE DESCRIBE THE PLANNED OR NEARLY COMPLETE**
7 **INTERSTATE PIPELINE PROJECTS THAT WILL PROVIDE**
8 **NEEDED FUEL SECURITY FOR THE PROPOSED FACILITY AS**
9 **WELL AS THE COMPANIES' EXISTING CC FLEET.**

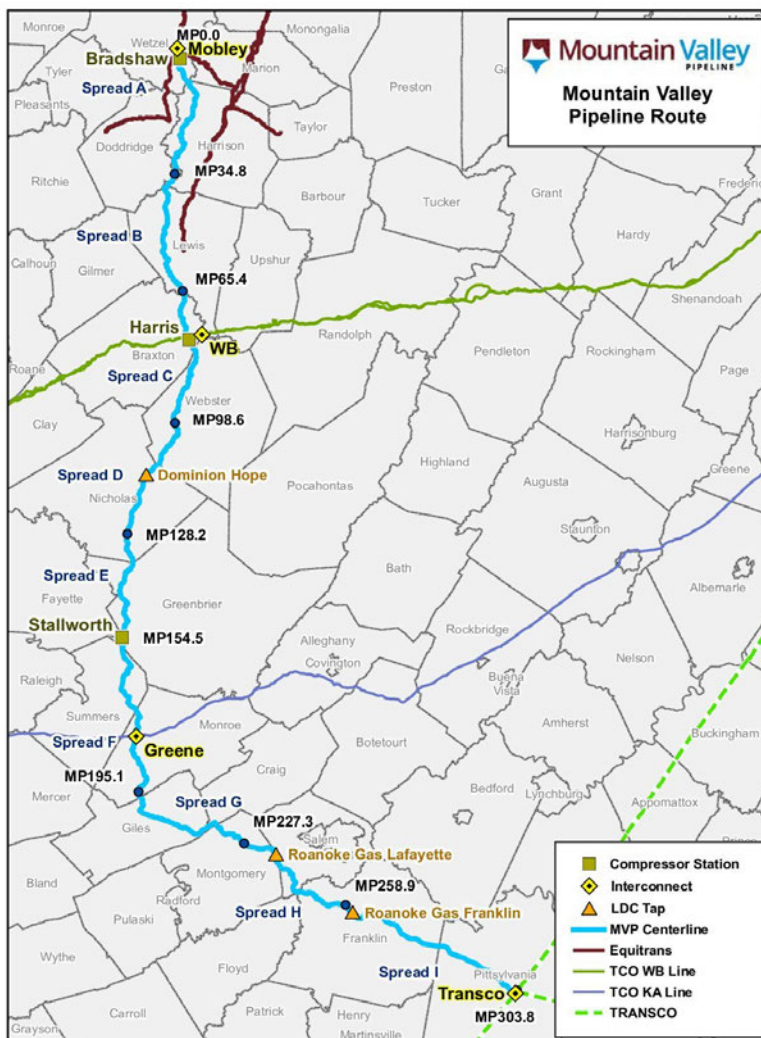
10 A. There are three planned major interstate pipeline projects that will provide
11 additional gas supply and interstate FT to the Proposed Facility as well the
12 existing CC fleet: the Mountain Valley Pipeline ("MVP"), Transco's Southeast
13 Supply Enhancement ("SSE") expansion, and MVP Southgate ("Southgate").
14 As shown in Figure 1, MVP, a greenfield interstate pipeline that is regulated by
15 the Federal Energy Regulatory Commission ("FERC"), spans approximately
16 303 miles from northwestern West Virginia to southern Virginia.² The project
17 will provide up to two billion cubic feet of natural gas supply daily into the mid-
18 Atlantic market from Appalachia.³ MVP will deliver gas into both Southgate
19 and Transco, including the Transco FT capacity that is part of the SSE
20 expansion.

² Mountain Valley Pipeline, <https://www.mountainvalleypipeline.info/> (last visited Mar. 28, 2024).

³ *Id.*

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Figure 1: Mountain Valley Pipeline Map⁴



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In mid-February 2024, project developer Equitrans Midstream stated that it expects to complete construction and commissioning of the project in Q2 2024.⁵ Given the construction progress and the increased certainty of it ultimately coming into service, the Companies included MVP in their base fuel supply assumptions in the SPA filed with the Commission on January 31, 2024. While

⁴ *Id.*

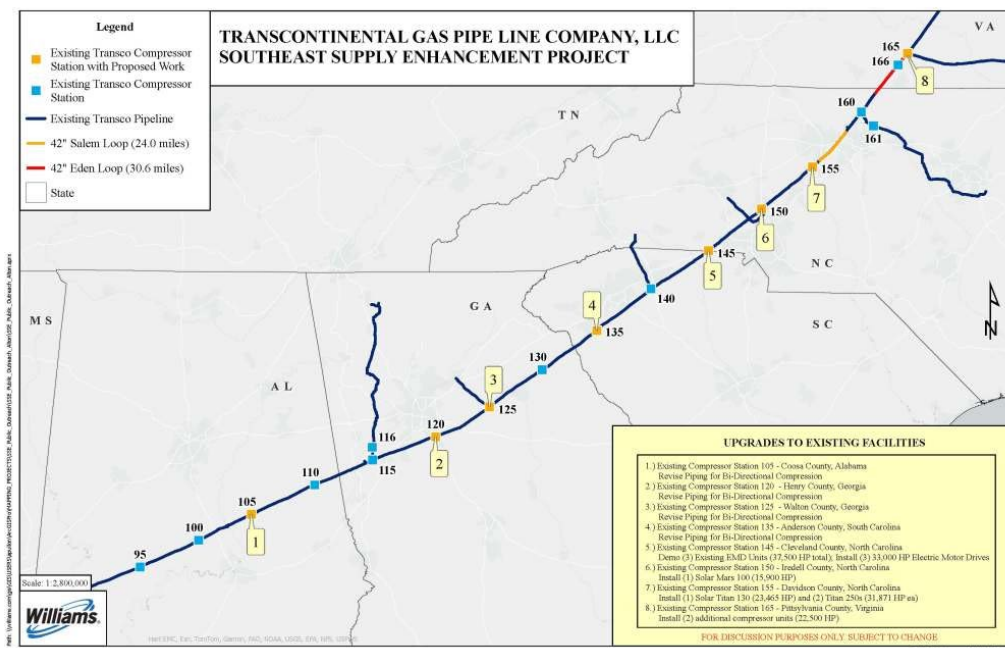
⁵ Equitrans Midstream, Investor Presentation at 4 (February 2024), available at https://s22.q4cdn.com/743133753/files/doc_earnings/2023/q4/presentation/Investor-Presentation-Q4-2023.pdf.

1 MVP will provide immediate benefits to the mid-Atlantic natural gas markets
2 when it is placed into service, additional expansions from the terminus of MVP
3 will be required for the full benefit of MVP to be realized in the Carolinas.
4 These expansions include Transco SSE and Southgate.

5 Transco is currently the interstate pipeline from which the Companies
6 receive their natural gas supply in the Carolinas. Nearly all the Companies'
7 current Transco FT has a south-to-north primary flow, sourcing natural gas
8 supply in the Gulf Coast and transporting it to the Carolinas. This existing FT
9 from the Gulf Coast does not allow for a primary flow from the MVP terminus
10 in southern Virginia southward into the Carolinas. Furthermore, there is a
11 Transco system constraint at Station 160 in Rockingham County, North
12 Carolina, that limits gas supply flowing southward from Virginia into the
13 Carolinas. In short, further expansion of the Transco system is required to move
14 incremental volumes of MVP-sourced lower-priced Appalachian gas supply
15 from the interconnect in Virginia into the Carolinas. The SSE project, shown in
16 Figure 2, will substantially expand the north-to-south flow capacity from the
17 MVP terminus on Transco into the Carolinas.

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Figure 2: Transco Southeast Supply Enhancement Map⁶



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The SSE expansion is a brownfield project, meaning that it will include upgrades to existing facilities or new pipeline adjacent to existing pipeline (also described as “looping”). On February 1, 2024, Transco requested that FERC initiate a certificate pre-filing request of its SSE expansion.⁷ SSE is proposed to provide 1,586,900 MMBtu/day of FT from MVP into the southeastern United States, with the capacity bringing new lower-cost gas supply into or through North Carolina.⁸ The target in-service date of the SSE project is by the end of 2027.⁹

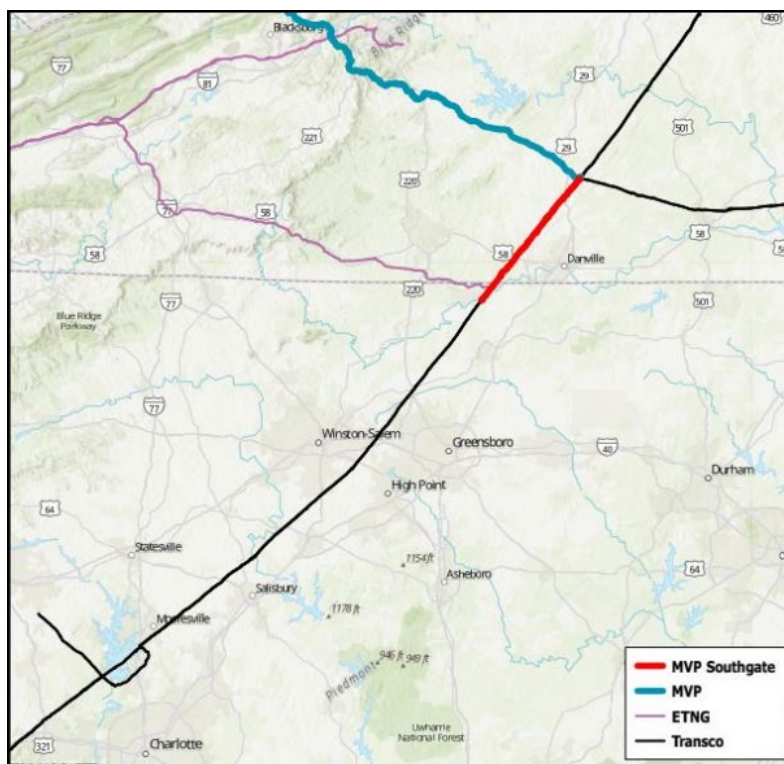
⁶ Williams Companies, Southeast Supply Enhancement, <https://www.williams.com/expansion-project/southeast-supply-enhancement/> (last visited Mar. 28, 2024).

⁷ *Transcontinental Gas Pipe Line Company, LLC*, Request for Pre-Filing Review, Docket No. PF24-2-000 at 1 (filed Feb. 1, 2024).

⁸ See *Transcontinental Gas Pipe Line Company, LLC*, Request for Pre-Filing Review, Docket No. PF24-2-000 at 1-2 (filed Feb. 1, 2024).

⁹ *Transcontinental Gas Pipe Line Company, LLC*, Request for Pre-Filing Review, Docket No. PF24-2-000 at 1 (filed Feb. 1, 2024).

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Figure 3: MVP Southgate Map¹³

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3 On February 2, 2024, Southgate commenced an Open Season for this revised
 4 project, with a targeted completion for the project in the middle of 2028.¹⁴
 5 Southgate plans to finalize the scope and timeframe of the redesigned project
 6 after the Open Season.¹⁵

7 **Q. HAVE THE COMPANIES CONTRACTED FOR FT IN THE**
 8 **PROPOSED PIPELINE PROJECTS THAT WILL INCREASE GAS**
 9 **DELIVERABILITY INTO THE CAROLINAS?**

¹³ Mountain Valley Pipeline, LLC, Southgate Project Non-Binding Open Season at 2 (Feb. 2, 2024), available at <https://www.mvpsouthgate.com/wp-content/uploads/2024/02/MVP-Southgate-Open-Season-2-2-24.pdf>.

¹⁴ *Id.*

¹⁵ Mountain Valley Pipeline, LLC, Southgate Project Non-Binding Open Season at 1 (Feb. 2, 2024), available at <https://www.mvpsouthgate.com/wp-content/uploads/2024/02/MVP-Southgate-Open-Season-2-2-24.pdf>.

1 A. Yes. The Companies have contracted for interstate FT rights with both Transco
2 for its SSE project and MVP for its Southgate project. The Companies have
3 contracted for 1,000,000 MMBtu/day of FT rights on the SSE project and
4 250,000 MMBtu/day of FT rights on the Southgate project.

5 **Q. PLEASE DESCRIBE HOW THE CONTRACTED INTERSTATE**
6 **NATURAL GAS FT CAPACITY SUPPORTS THE PROPOSED**
7 **FACILITY.**

8 A. The Companies' contracted interstate FT volumes in the Transco SSE project
9 and the Southgate project could be redelivered into intrastate infrastructure to
10 serve the Proposed Facility with firm gas supply.

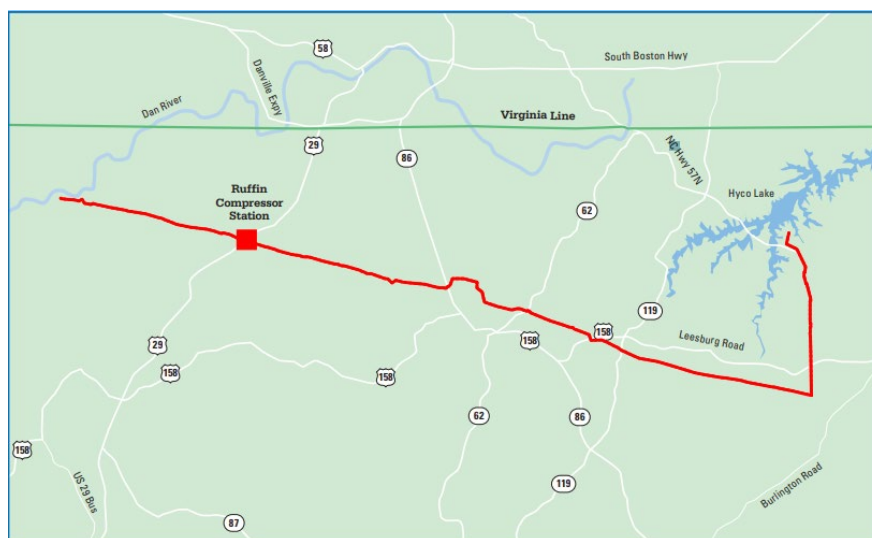
11 **III. PLANS FOR INTRASTATE GAS DELIVERY TO THE PROPOSED**
12 **FACILITY**

13 **Q. HOW DOES DEP PLAN TO REDELIVER NATURAL GAS WITHIN**
14 **NORTH CAROLINA FROM THE INTERSTATE PIPELINES TO THE**
15 **PROPOSED FACILITY?**

16 A. The Company has contracted with Public Service Company of North Carolina,
17 Inc. d/b/a Dominion Energy North Carolina ("PSNC") to redeliver gas to the
18 Proposed Facility from both Transco and Southgate. Independent of DEP's plan
19 to construct the Proposed Facility, PSNC planned to construct additional state
20 jurisdictional pipeline facilities through Person County to comply with federal
21 safety regulations and to accommodate customer growth on its system. PSNC's
22 project is known as the T15 Pipeline Reliability Project ("T15 Project"). To
23 support the gas supply needs of the Proposed Facility, PSNC has agreed to
24 change the scope of the T15 Project to construct incremental facilities necessary

1 to deliver gas to the Proposed Facility. Specifically, PSNC will increase the
 2 diameter of the pipeline that it had planned to construct for approximately
 3 thirty-seven miles. PSNC will also construct an approximately nine-mile lateral
 4 pipeline to the east of Hyco Lake to deliver gas to the Proposed Facility, add
 5 additional compression at its existing Ruffin facility, a metering and regulation
 6 station at the Proposed Facility, and enhanced interconnection facilities with
 7 upstream interstate natural gas transportation facilities. Figure 4 provides a map
 8 of the T15 Project.

9 **Figure 4: PSNC T15 Reliability Project Map**¹⁶



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11 **Q. HAS DEP CONTRACTUALLY ACQUIRED INTRASTATE FT WITH**
 12 **PSNC TO SUPPORT THE NEEDS OF THE PROPOSED FACILITY?**

13 **A.** Yes. The Company has executed an FT agreement with PSNC which fulfills the
 14 Proposed Facility's intrastate gas FT needs. PSNC filed the agreement with the

¹⁶ Dominion Energy, T15 Reliability Project, <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/natural-gas/t15-pipeline/proposed-route.pdf> (last visited Mar. 28, 2024).

1 Commission for review and approval on October 16, 2023, in Docket No. G-5,
2 Sub 668.

3 **IV. SUFFICIENCY OF GAS TRANSPORTATION TO THE PROPOSED**
4 **FACILITY**

5 **Q. DOES DEP HAVE SUFFICIENT NATURAL GAS FT CAPACITY TO**
6 **PROVIDE FUEL SECURITY AND TO ENSURE RELIABLE**
7 **OPERATION OF THE PROPOSED FACILITY?**

8 A. Yes. The Company has contracted to enable sufficient intrastate FT natural gas
9 capacity to support the Proposed Facility. Given the capacity and efficiency of
10 the Proposed Facility's configuration, DEP¹⁷ has also contracted to enable
11 sufficient interstate FT natural gas capacity to support the Proposed Facility's
12 natural gas demand requirements in addition to the Companies' existing gas
13 generation fleet. These incremental interstate FT volumes help provide
14 adequate fuel security for the Companies' entire CC fleet, which, in turn,
15 supports maintaining system reliability.

16 Pursuant to the Commission's Carbon Plan Order, DEP is providing this
17 analysis of the sufficiency of natural gas FT capacity to provide fuel security
18 and to ensure reliable operation of the Proposed Facility.¹⁸ As the Commission
19 noted in the Carbon Plan Order, FT capacity "is essential to manage the natural

¹⁷ As the Commission is aware, DEC acts as DEP's contracting agent for FT and natural gas supply per the Asset Management and Delivered Supply Agreement ("AMA") approved by the Commission See *Order Accepting Affiliate Agreement and Allowing Payment Thereunder*, Docket Nos. E-2, Sub 998A and E-7, Sub 986A (Dec. 19, 2012) ("The AMA as filed provides that its purpose is to facilitate the coordination and optimization of capacity and supply rights owned by [DEP] and DEC to reduce the cost of providing electric service to both [DEP]'s and DEC's native load customers.").

¹⁸ Exhibit 1A Carbon Plan Order at 132 (Ordering Paragraph No. 18) (stating "[t]hat in any future CPCN filing for natural gas-fired generating resources, Duke shall provide an analysis of the sufficiency of firm natural gas transportation capacity for the proposed facility[.]").

1 gas supply security necessary for reliable, cost-effective generation and for the
2 reliable operation of the electric system at this time.”¹⁹ For purposes of planning
3 the Companies’ combined interstate natural gas FT portfolio, the Companies
4 plan to acquire a volume of interstate FT rights that is equivalent to the
5 Companies’ full-load-burn of their CC units. Dual-fuel simple cycle
6 combustion turbines and natural gas co-fired coal units can also access the
7 interstate FT portfolio when available but utilize their respective alternative
8 fuels for fuel security purposes.

9 Tables 1 and 2 represent an analysis of the Companies’ respective CC
10 generation interstate FT requirements (demand) as well as their contracted
11 interstate FT rights (supply):

¹⁹ Exhibit 1 A Carbon Plan Order at 38 (Finding of Fact No. 27).

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Table 1: DEC and DEP – Interstate FT CC Requirements

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[BEGIN CONFIDENTIAL]

| Company | Combined Cycle Generation | Intrastate Firm Transport | Approximate Max Demand (MMBtu/Day) |
|--|----------------------------------|----------------------------------|---|
| DEC | Buck CC | Piedmont | |
| DEC | Dan River CC | Piedmont | |
| DEC | WS Lee CC | Piedmont | |
| DEP | Asheville CC | PSNC | |
| DEP | HF Lee CC | Piedmont | |
| DEP | Richmond Co CCs | Piedmont | |
| DEP | Sutton CC | Piedmont | |
| Existing CCs Demand Total | | | |
| DEP | Proposed Facility | PSNC | |
| CC2 and CC3 | | | |
| Proposed Facility, CC2, CC3 Demand Total | | | 705,000 |
| Forecasted Interstate FT Requirements | | | 1,685,000 |

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[END CONFIDENTIAL]

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Table 2: DEC and DEP – Interstate FT Rights

| Pipeline | FT Rate / Expansion | Physical Gas Supply Source | FT Rights (MMBtu/Day) |
|--|---------------------------------|---------------------------------------|----------------------------------|
| Transco | 85 North | Gulf Coast | 175,000 |
| Transco | Mid-South | Gulf Coast | 93,000 |
| Transco | Rate Schedule FT | Gulf Coast | 75,000 |
| Transco | Sundance | Gulf Coast | 75,000 |
| Transco | Sunbelt | Gulf Coast | 16,560 |
| Transco | Carolinas Market Link | MVP/Station 165 | 13,000 |
| Existing Interstate FT Total | | | 447,560 |
| Transco | Southeast Supply Enhancement | MVP/Station 165 | 1,000,000 |
| MVP | Southgate | MVP/Station 165 | 250,000 |
| Contracted Interstate FT Total | | | 1,250,000 |
| Forecasted Interstate FT Rights | | | 1,697,560 |

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As shown in the previous tables, the Companies' contracted interstate FT rights meet the forecasted interstate FT requirements for the CC fleet including the forecasted generation needs of the Proposed Facility, therefore demonstrating sufficient FT capacity for the Proposed Facility.

Q. MR. MITCHELL, DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.