Before the North Carolina Utilities Commission

Docket No. G-9, Sub 727

Annual Review of Gas Costs Pursuant to G.S. 62-133.4(c) and Commission Rule R1-17(k)(6)

Testimony and Exhibits of Gennifer Raney

On Behalf Of Piedmont Natural Gas Company, Inc.



1 Q. Please state your name and your business address.

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- A. My name is Gennifer Raney. My business address is 4720 Piedmont Row
 Drive, Charlotte, North Carolina.
- 4 Q. What is your position with Piedmont Natural Gas Company
 5 ("Piedmont" or the "Company")?
 - A. I am the Director of Pipeline Services in the Natural Gas Business Unit of Duke Energy Corporation ("Duke Energy"), of which Piedmont is a wholly owned subsidiary.
 - Q. Please describe your educational and professional background.
 - I graduated from Louisiana State University in Baton Rouge, LA in 1992 with a Bachelor of Science degree in Finance, and I graduated from the University of St. Thomas in Houston, TX in 1998 with a Masters of Business Administration, Finance concentration. In 1992 I was employed by Shell Oil Company as a Product Accountant for Gas Exploration and Production. In 1995 I was employed by Vastar Resources, Inc. as a Treasury Analyst. In 1997 I accepted a position in Vastar Gas Marketing, Inc. (which later became Southern Company Energy Marketing, Inc.) as a Transportation and Exchange Representative. In 1999 I was promoted to the position of Associate, Producer Services. In 2000, I was employed by Deloitte & Touche, LLC as a Consulting Manager. In 2002, I was employed by Duke Energy and have held positions in Risk Management, Trading Operations, Power Business Development, Commercial Analytics, Wholesale Power Sales, and Renewable Energy Business Development.

Beginning in 2014, I became Natural Gas Business Development Director.

This group became part of the Natural Gas Business Unit after the integration of Duke Energy and Piedmont. In November 2017, I accepted my current position as Director of Pipeline Services.

Q. Please describe the scope of your present responsibilities for Piedmont.

- A. My current major responsibilities for Piedmont include managing pipeline capacity planning and relations, annual design day, monthly, and daily forecasting, and management of third party shipper business on Piedmont's system. In addition, I am responsible for oversight of Piedmont's activities at the Federal Energy Regulatory Commission ("FERC") regarding interstate pipelines that the Company utilizes for transportation and storage services.
- Q. Have you previously testified before this Commission or any other regulatory authority?
- A. Yes. I presented pre-filed testimony before the Public Service Commission of South Carolina earlier this year in Docket No. 2018-4-G.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony is filed in response to the requirements of Commission Rule R1-17(k)(6), which provides for an annual review of Piedmont's gas costs. In my testimony, I discuss the market requirements of Piedmont's North Carolina customers, including the projected growth in those markets, the capacity acquisition policies and practices we employ to serve those markets, the calculation of our design day requirements, and the efforts

undertaken by Piedmont at the FERC on behalf of its customers to ensure
that interstate transportation and storage services are reasonably priced.

Q. What is the period of review in this docket?

- 4 A. The review period is June 1, 2017 through May 31, 2018.
 - Q. Please give a general description of Piedmont and its market in North Carolina.
 - A. Piedmont is a local distribution company principally engaged in the purchase, distribution and sale of natural gas to more than 1 million customers in North Carolina, South Carolina, and the metropolitan area of Nashville, Tennessee. Piedmont currently serves approximately 745,000 customers in the State of North Carolina. During the twelve month period ending May 31, 2018, Piedmont delivered approximately 438 million dekatherms ("dts") of natural gas to its North Carolina customers.

Piedmont provides service to two distinct markets – the firm market (principally those that have no alternate source of fuel) and the interruptible market (principally those that either have access to an alternate fuel or who are prepared to cease operating in the event of interruption until service can be resumed). Although Piedmont competes with electricity for the attachment of firm customers, once attached these customers generally have no readily available alternative source of energy and depend on natural gas for their basic space heating or utility needs. During the twelve month period ending May 31, 2018, approximately 93%, of Piedmont's North Carolina deliveries were to the firm market.

In the interruptible market, Piedmont competes on a month-to-month and day-to-day basis with alternative sources of energy, primarily fuel oil or propane and, to a lesser extent, coal or wood. These larger commercial and industrial customers may buy alternate fuels when they are less expensive than gas or when their service is interrupted by Piedmont. During the twelve month period ending May 31, 2018, approximately 7% of Piedmont's North Carolina deliveries were to the interruptible market.

Q. How does Piedmont calculate its customer growth?

- A. Piedmont reviews historical customer additions, holds discussions with various business leaders/trade allies and field sales employees, and considers forecasts of local, regional and national business drivers (i.e., economic conditions, demographics, etc.) to derive its customer growth projections.
- Q. Are there any changes in the Company's customer mix or customer market profiles that it forecasts for the next ten years?
- A. For the next ten years, the Company expects the economy to continue to grow resulting in increasing residential and commercial demand as detailed in the "Winter 2018 2019 Design Day Demand & Supply Schedule",
 Exhibit_ (GJR-5C). The Company also expects industrial activity to grow modestly.
- Q. How will these changes impact the Company's gas supply, transportation, and storage requirements?

1	A.	The residential and commercial growth changes will result in greater firm
2		temperature-sensitive requirements that will require firm sales service from
3		the Company.

- Q. Please identify the rate schedules and special contracts that the Company uses to determine its design day demand requirements for planning purposes and explain the rationale and basis for each rate schedule or special contract included in the determination of design day demand requirements.
- A. The Company uses the following rate schedules, each of which is for firm sales service, to determine its design day demand requirements:
 - 101 Residential Service;
- 102– Small General Service;

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- 152 Medium General Service;
- 143 Experimental Motor Vehicle Fuel Service;
- 103 Large General Sales Service;
 - 12 Service to Military Installations in Onslow County (Camp Lejeune).
 - Piedmont also includes any special contracts for which Piedmont is providing firm sales service in the determination of its design day requirements.
 - Q. How did the Company calculate its design day requirements for Winter 2017-2018?

Piedmont's design day calculations for Winter 2017-2018 were performed in the same manner used for the Winter 2016-2017 design day calculations, as described in Company witness Michelle Mendoza's testimony last year. Specifically, all of the usage data was refreshed utilizing the actual firm customer sendout data from November 2011 through March 2017, which included the most current winter weather experience for all firm customer classes. Next, a linear regression analysis was conducted to determine the base load and the usage per heating degree day based on all of the newly refreshed data. Finally, the historical weather data, which included the winter of 2016-2017, was reviewed to determine the design day temperature of 8.68 degrees Fahrenheit. The Company also constructed a load duration curve to forecast the Company's firm sales market requirements for design winter weather conditions. The supply requirements were plotted in descending order of magnitude, with existing pipeline capacity and storage resources overlaid to expose any supply shortfalls. The load duration curves for the 2017 – 2018 **forecasted** design winter, as well as the **actual** 2017 – 2018 winter season are shown in **Exhibits** (**GJR-1A**) and (**GJR-1B**). The load duration curve for the 2018 – 2019 forecasted design winter season is shown in **Exhibit_** (**GJR-2**).

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Q. Please provide a walkthrough of the Winter 2017-2018 design day demand calculation.

A. Referencing the "Winter 2017 - 2018 Design Day Demand and Supply Schedule" **Exhibit_** (**GJR-4C**): the "System Design Day Firm Sendout" (line 1) is calculated as follows:

- 1) The number of heating degree days ("HDD") in the design day is multiplied by the usage per HDD as calculated in the regression analysis. This result is then added to the base load number derived from the regression.¹
- 2) Any mid-year special firm sales pick up are added (line 2) and any mid-year movements from firm sales to firm transportation are subtracted (line 3), which results in a subtotal for firm sendout that includes the net mid-year changes (line 4).
- 3) Any special contract firm sales commitment (line 5) is added resulting in the "Total Firm Design Day Demand" (line 6).
- 4) A five (5) percent reserve margin is then calculated (line 7) and is added to the "Total Firm Design Day Demand" (line 6) resulting in the "Subtotal Demand" (line 8).
- 5) The "Firm Transportation without Standby" (line 10) is represented as the total dekatherms consumed by all industrial firm transportation customers on the highest winter day usage for that customer class for the prior winter. This number is then subtracted from the "Subtotal Demand" resulting in the "Total Firm Sales Demand" (line 11) for that year.

¹ Formula: (Design Day HDDs x Usage per HDD)+Base Load = System Design Day Firm Sendout

6) Each subsequent yearly Design Day forecast is derived by multiplying
the previous year's projected firm usage by each succeeding year's
forecasted growth percentage.

- 7) The Company then constructs the load duration curve previously described in this testimony.
- Q. Has the Company made any methodology changes to its calculation of Design Day requirements for the future?
- A. No.

- Q. Has Piedmont made any changes to the design day temperature?
- A. The Company continues to calculate the design day temperature using the daily weighted average² forty year low temperature, as explained in witness Michelle Mendoza's testimony last year. This year's computation of the forty year average yielded a design day temperature of 8.68 degrees Fahrenheit, slightly changed from last year's computation of 8.67 degrees Fahrenheit. See Exhibit_(GJR-7).
- Q. Did the Company consider efficiency gains and customer conservation in its design day methodology?
- A. Because the design day methodology is based on refreshed data which represents the customer consumption over a recent period of time and eliminates old customer consumption data, the customer efficiency gains and conservation efforts are taken into consideration.

 $^{^2}$ A current weighted average of firm sales customers relative to the nine weather stations in the Carolinas.

Q. Does Piedmont believe that conservation measures utilized by customers are applicable when formulating design day calculations?

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- A. No. Piedmont and the natural gas industry have not seen evidence that conservation/reduced usage occurs during design day conditions. This past winter's cold snap, which occurred from December 30, 2017 through January 8, 2018, gave Piedmont an opportunity to refresh data and analyze our customer's behavior during extremely cold weather. We continued to observe that customers tend to conserve for the first few days of colder temperatures before turning up the thermostat. However, once adjusted to a warmer setting, customers appear to become less focused on conservation and more focused on comfort and leave the thermostat at the warmer level for a few days even as temperatures start to moderate. This pattern is illustrated in **Exhibit** (**GJR-3**). Given what we experienced during this recent cold weather event as a customer response to colder temperatures in this pattern, the Company is confident this conservative approach to design day forecasting is the most prudent approach. Our focus has been, and continues to be, to reliably serve our firm customers on a design day.
- Q. What process does Piedmont undertake to acquire firm capacity to meet its growing sales market requirements?
- A. Piedmont secures incremental capacity to meet the growth requirements of its firm sales customers consistent with its "best cost" policy, as described by Ms. Stabley in her testimony. To implement this policy, Piedmont attempts to contract for timely and cost-effective capacity that is tailored to

the demand characteristics of its market. Piedmont evaluates interstate pipeline capacity and storage offerings expected to be available at the time that it is determined that additional future firm delivery service is required or existing firm delivery service contracts are expiring. The Company attempts to match the days of service of new incremental transportation capacity to the duration of its incremental demand on the most economical basis possible. Piedmont attempts to acquire peaking services to meet projected peak day demand, storage services to meet projected seasonal demand, and year round firm transportation services to meet base load demand and provide capacity to be available for storage inventory replenishment. However, service choices are limited to those offered during the period being evaluated.

- Q. What were the design day demand requirements used by the Company for planning purposes for the review period, the baseload, the amount of heating degree days, dekatherms per heating degree day, customer growth rates and supporting calculations used to determine the design day requirement amounts?
- A. Please see Exhibits (GJR-4A), (GJR-4B) and (GJR-4C).
- Q. What are the design day demand requirements used by the Company for planning purposes for the for the next five winter seasons, the baseload, the amount of heating degree days, dekatherms per heating degree day, customer growth rates and supporting calculations used to determine the design day requirement amounts?

A. Please see Exhibits (GJR-5A), (GJR-5B) and (GJR-5C).

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- Q. Please describe how the Company plans to supply its estimated future growth requirements during the next five-year period beginning with the 2018-2019 winter season.
 - Based on current forecasted projections, Piedmont believes that it has sufficient supply and capacity rights to meet its near term customer needs until the Atlantic Coast Pipeline ("ACP") comes on-line in 2019. The most recent projects of Transco's Leidy Southeast expansion for 100,000 dts per day of year-round capacity and Transco's Virginia Southside expansion for 20,000 dts per day of year-round capacity went into service in late 2015 and 2016, with projections that it would became necessary to begin adding additional capacity beginning in 2018-2019. In 2014, the Company entered into a precedent agreement with ACP to add 160,000 dts of additional capacity utilizing its "best cost" purchasing philosophy. The ACP capacity is scheduled to go in service in November 2019. Current growth projections begin to show a capacity deficit in the 2019-2020 timeframe if the ACP capacity does not go into service as detailed in Exhibit_ (GJR-5C). Recently Piedmont announced that it intends to construct a liquefied natural gas facility in Robeson County, N.C. ("Robeson LNG"). This facility will provide peaking supply of natural gas during peak usage days. The facility is anticipated to be completed in the summer of 2021, and therefore forecasted to provide peaking support starting winter 2021-2022. capacity portfolio will be restructured to include Robeson LNG using the

1		"best cost" gas purchasing policy while taking into account the customer
2		load profile. Piedmont will continue to review short term interstate pipeline
3		and storage capacity offerings and bridging services to cover any potential
4		capacity shortfall.
5	Q.	Has the Company made any changes to capacity during the review
6		period?
7	A.	The Company did not make any changes to its capacity rights during the
8		review period.
9	Q.	Does the Company plan for a reserve margin to accommodate statistical
10		anomalies, unanticipated supply or capacity interruptions, force
11		majeure, emergency gas usage or colder-than-design weather?
12	A.	Yes, the Company computes a five percent reserve margin and arranges for
13		supply and capacity to provide delivery of the reserve margin for events
14		such as those listed above. This reserve margin is reflected in Exhibits
15		(GJR-4C) and (GJR-5C).
16	Q.	Is it possible to maintain capacity rights that exactly match Piedmont's
17		calculated design day demand plus reserve margin at all times?
18	A.	No, it is not. Capacity additions are acquired in "blocks" of additional
19		transportation, storage, or LNG capacity, as current and future needs are
20		identified, to ensure Piedmont's ability to serve its customers based on the
21		options available at that time. As a practical matter, this means that at any
22		given moment in time, Piedmont's actual capacity assets will vary
23		somewhat from its forecasted demand capacity requirements. This aspect of

- capacity planning is unavoidable but Piedmont attempts to mitigate the impact of any mismatch through bridging services, capacity release and off-system sales activities.
 - Q. Please describe the Company's interest and position on any issues before the FERC that may have a significant impact on the Company's operations and a description of the status of each proceeding described.
 - A. The Company routinely intervenes and participates in interstate natural gas pipeline proceedings before the FERC. A current summary of such proceedings in which Piedmont is a party is attached hereto as **Exhibit_ (GJR-6)**.
 - Q. Does this conclude your testimony?
- 11 A. Yes it does.

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Piedmont Natural Gas Company, Inc. Docket No. G-9, Sub 727

Index - GJR Exhibits

Exhibit Number	<u>Description</u>
GJR-1A	Winter 2017 - 2018 Forecast Load Duration Curve
GJR-1B	Winter 2017 - 2018 Actual Load Duration Curve
GJR-2	Winter 2018-2019 Forecast Load Duration Curve
GJR-3	2018 Weather Events
GJR-4A	Winter 2017 - 2018 Design Day Start Point
GJR-4B	Customer Growth - Actual and Projection for 2017-2018 planning
GJR-4C	Winter 2017 - 2018 Design Day Demand & Supply Schedule
GJR-5A	Winter 2018-2019 Design Day Start Point
GJR-5B	Customer Growth - Actual and Projection for 2018-2019 planning
GJR-5C	Winter 2018-2019 Design Day Demand & Supply Schedule
GJR-6	FERC Filings June 2017 - May 2018
GJR-7	Design Day Temperature

Exhibit__(GJR-1A)

Aug 01 2018

Winter 2017 - 2018 Load Duration Curve Design Winter - Total Carolinas

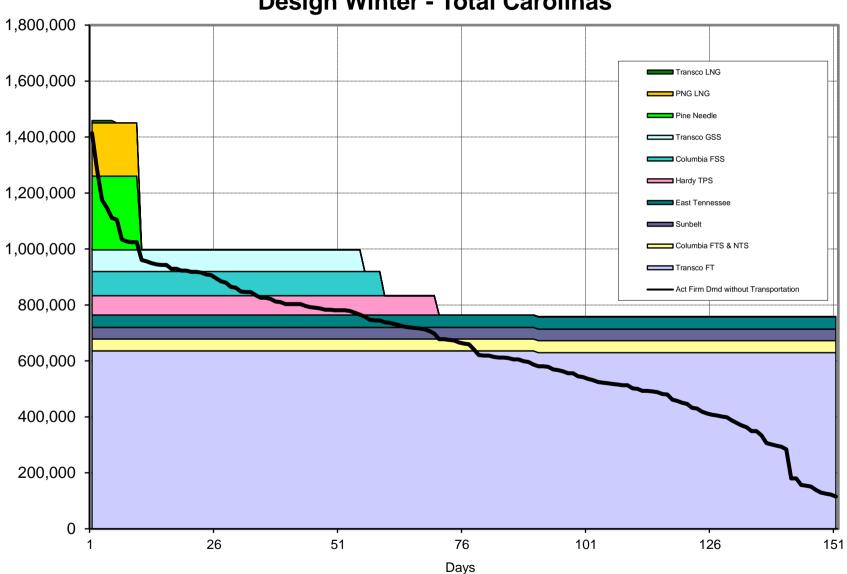
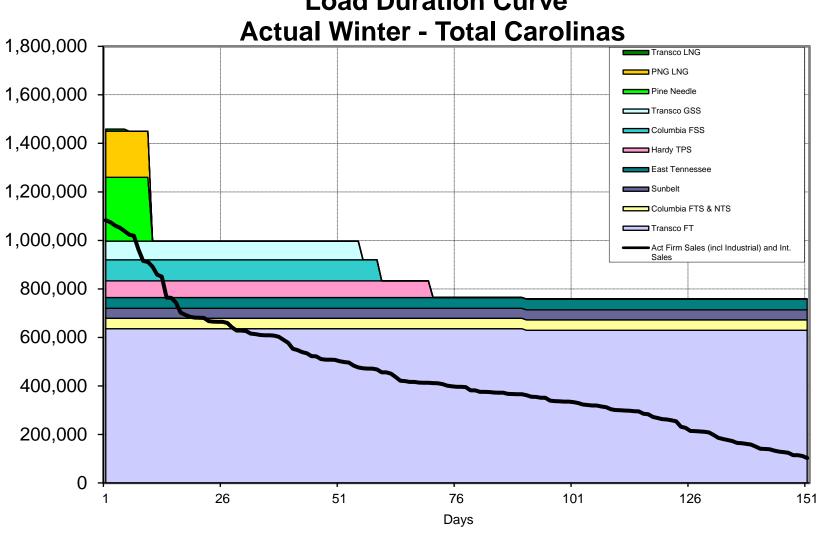


Exhibit (GJR-1B)

Piedmont Natural Gas Company, Inc. Docket No. G-9, Sub 727

ACTUAL 2017-2018

Winter 2017 - 2018 Load Duration Curve

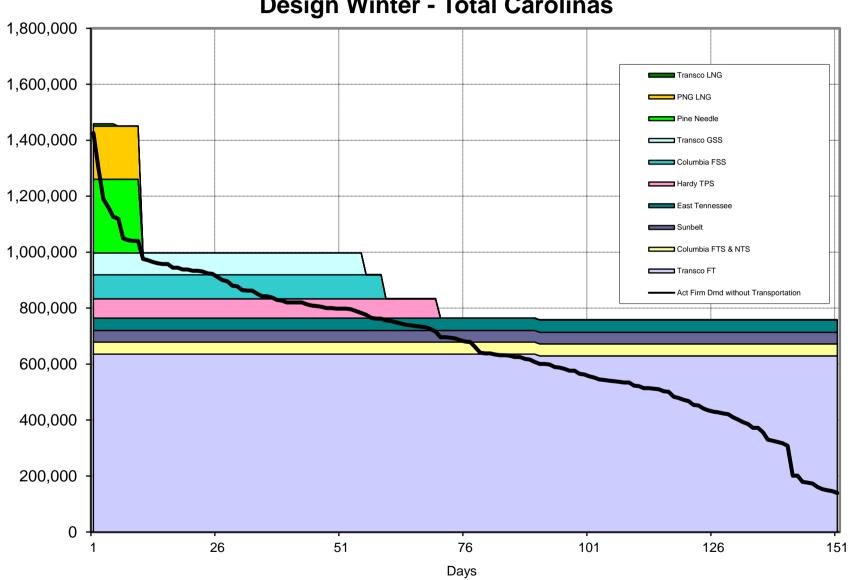


Exhibit__(GJR-2)

Aug 01 2018

Exhibit_ (GJR-2)

Winter 2018 - 2019 Load Duration Curve Design Winter - Total Carolinas



Exhibit__(GJR-3)

2017-2018 Weather Event

Carolinas: December 2017 - January 2018 Cold Snap

	Firm Sales & Firm		
	Transportation		Usage per HDD
Date	Less Base Load	HDDs	Less Base Load
12/30/2017	530,098	28.2	18,798
12/31/2017	836,623	41.3	20,257
1/1/2018	975,969	46.2	21,125
1/2/2018	1,011,608	42.0	24,086
1/3/2018	972,138	39.3	24,736
1/4/2018	1,037,719	44.5	23,320
1/5/2018	1,011,070	42.8	23,623
1/6/2018	1,015,633	44.8	22,670
1/7/2018	964,821	40.5	23,823
1/8/2018	714,357	27.8	25,696

All usage is in dekatherms.

Base load equals 164,485 dekatherms.

Exhibit__(GJR-4A)

Exhibit (GJR-4A)

Piedmont Natural Gas Company, Inc. Docket No. G-9, Sub 727

Winter 2017 - 2018 Design Day Start Point

	Total Carolinas
Baseload - Firm Sales & Firm Transport	164,485
Design Day Temperature	8.67
Design Day DDD	56.3
Difference between Actual and Design Day (DDD)	n/a
Estimated increase in FirmSIs & Trans Usage per degree day	22,482
Total Firm Sls & Tran usage for total 56.4 HDDs	1,430,909
TOTAL NEW FIRM SALES PICKED UP MID YEAR	1,055
TOTAL FIRM SALES MOVED TO TRANSPORT MID YEAR	(432)
TOTAL NET NUMBER - FIRM SALES PICKED UP	623
Firm Sales Contract Commitment - GE	333
Firm Sales Contract Commitment - City of Wilson	3,900
Firm Sales Contract Commitment - City of Rocky Mount	3,000
Total Firm Sales Contract Commitment	7,233
Prior Winter Firm Transport (Total FT DTs consumed on highest winter day)	121,043
Date of occurrence (NC)	March 15, 2017
Date of occurrence (SC)	January 9, 2017

Exhibit__(GJR-4B)

Exhibit (GJR-4B)

Piedmont Natural Gas Company, Inc. Docket No. G-9, Sub 727

Customer Growth for Winter Design Day 2017-2018

Actual Customer Count by Year as of March 31 Through 2017 Projected Customer Count by Year as of March 31 Through 2020

		TOTAL RESIDENTIAL & COMMERCIAL CUSTOMER COUNT											
	ACTUAL PROJECTION												
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	2020			
Total NC & SC	812,621	818,298	826,993	839,328	852,754	865,950	876,464	890,487	904,735	919,211			
	0.49%	0.70%	1.06%	1.49%	1.60%	1.55%	1.21%	1.60%	1.60%	1.60%			

Exhibit__(GJR-4C)

Carolinas Design Day Demand & Supply Schedule - Winter 2017 - 2018

Design Day Temperature of 8.67 Degrees (56.33 HDDs) FINAL: July 7, 2017

(All Values in Dt/d) Carolinas Demand Net Growth Rate 1 60% 1.60% 1.60% 1.60% 1 60% DEMAND Winter Period: 2017 - 18 2018 - 19 2019 - 20 2020 - 21 2021 - 22 System Design Day Firm Sendout 1,453,804 1,477,698 1,501,341 1,525,362 1,549,768 Mid Year Firm Sales Pick Up 2 1,055 Mid Year Firm Sales Deduct (move to Firm Transport) 3 (432) Subtotal Sendout plus Mid Year Pickup 1,454,427 1,477,698 1,501,341 1,525,362 1,549,768 5 Special Contract Firm Sales Commitment 7,233 7.233 7.233 7,233 7,233 Total Firm Design Day Demand 6 1,461,660 1,484,931 1,508,574 1,532,595 1,557,001 Reserve Margin on Design Day Demand (5%) 73,083 74,247 75,429 76,630 77,850 Subtotal Demand 1,534,743 1,559,177 1,584,003 1,609,225 1,634,851 9 Less: Firm Transportation Without Standby 10 (121 043 (100,000 (100,000 (100,000 (100,000 Total Firm Sales Demand 1,413,700 1,459,177 1,484,003 1,509,225 1,534,851 11 SUPPLY CAPACITY 12 13 Firm Transportation Days 14 Transco 365 301,016 301,016 301,016 301,016 301,016 FT - 1002268 15 Transco 365 6,440 6,440 6,440 6,440 6,440 FT SF '94/95/96 Transco 365 129,485 129,485 129,485 129,485 129.485 16 17 Transco 365 41,400 41,400 41,400 41,400 41,400 Sunbelt Transco VA Southside 365 20,000 20.000 20.000 20.000 20.000 18 Transco 19 Leidy 365 100,000 100,000 100,000 100,000 100,000 Columbia Gas 20 FTS 365 32,801 32,801 32,801 32.801 32,801 Columbia Gas NTS 10.000 365 10.000 10,000 10.000 10,000 21 East TN (MGT Upstream) 22 FT 365 19,578 19,578 19,578 19,578 19,578 Atlantic Coast Pipeline 23 365 160,000 160,000 160,000 Total Year Round FT 24 25 660,720 660,720 820,720 820,720 820,720 Transco 72,502 72,502 72,502 72,502 72,502 26 FT Southern Expansion 151 East TN (TETCO Upstream) FT 27 151 24,798 24,798 24,798 24,798 24,798 28 Transco FT - 1004995 90 6,314 6,314 6,314 6,314 6,314 Total Winter OnlyFT 103,614 29 103,614 103,614 103,614 103,614 Total Firm Transportation Subtotal 764,334 764,334 924,334 924,334 924,334 31 3∠ 33 Hardy Storage HSS 70 68,835 68.835 68.835 68,835 68.835 Dominion GSS 60 Columbia Gas FSS/SST 86,368 86,368 35 59 86.368 86.368 86.368 36 37 Transco **GSS Storage** 55 77,475 77,475 77,475 77,475 77,475 Total Seasonal Storage 232.678 232.678 232.678 232.678 232.678 38 39 40 Peaking Capacity 41 Piedmont LNG - Huntersville 100.000 100.000 100.000 100.000 100.000 10 Piedmont 42 LNG - Bentonville 10 90,000 90,000 90.000 90,000 90.000 Transco 43 Pine Needle 10 263,400 263,400 263,400 263,400 263,400 Transco LNG (formerly LG-A) 8.643 44 8.643 8.643 8,643 8.643 45 Peaking Supplies Total 462,043 462,043 462,043 462,043 462,043 46 Total Capacity 1,459,055 1,459,055 1,619,055 1,619,055 1,619,055 47 Surplus(Deficit) 48 45,355 135,052 109,830 84,204

^{*} Atlantic Coast Pipeline scheduled to come on line in fourth quarter 2019

Footnote 1) East TN capacity is 365 days, however the upstream TETCO capacity delivering to East TN is 151 days

Footnote 2) Beginning in FY2015, Dominion capacity removed as available capacity on design day due to non-firm backhaul from Transco Zone 6.

Exhibit__(GJR-5A)

Piedmont Natural Gas Company, Inc. Exhibit (GJR-5A)

Docket No. G-9. Sub 727

Winter 2018 - 2019 Design Day Start Point

	Total Carolinas
Baseload - Firm Sales & Firm Transport ¹	203,028
Design Day Temperature	8.68
Design Day DDD	56.3
Difference between Actual and Design Day (DDD)	n/a
Estimated increase in FirmSIs & Trans Usage per degree day	22,175
Total Firm Sls & Tran usage for total 56.3 HDDs	1,451,927
TOTAL NEW FIRM SALES PICKED UP MID YEAR	1,909
TOTAL FIRM SALES MOVED TO TRANSPORT MID YEAR	(786)
TOTAL NET NUMBER - FIRM SALES PICKED UP	1,123
Firm Sales Contract Commitment - GE	333
Firm Sales Contract Commitment - City of Wilson	3,900
Firm Sales Contract Commitment - City of Rocky Mount	3,000
Total Firm Sales Contract Commitment	7,233
Prior Winter Firm Transport (Total FT DTs consumed on highest winter day)	132,242
Date of occurrence (NC)	January 30, 2018
Date of occurrence (SC)	January 15, 2018

¹ Baseload - Firm Sales & Firm Transport increased for Winter 2018-2019 because beginning with Winter 2018-2019, winter only data will be used. Winter data is the relevant data for winter design day forecasting.

Exhibit__(GJR-5B)

Exhibit (GJR-5B)

Piedmont Natural Gas Company, Inc. Docket No. G-9, Sub 727

Total NC & SC

Customer Growth for Winter Design Day 2018-2019

Actual Customer Count by Year as of March 31 Through 2018 Projected Customer Count by Year as of March 31 Through 2021

1	
	TOTAL RESIDENTIAL & COMMERCIAL CUSTOMER COUNT

ACTUAL								PROJECTION	
<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	2021
818,298	826,993	839,328	852,754	865,950	876,464	891,091	905,348	919,834	934,551
0.70%	1.06%	1.49%	1.60%	1.55%	1.21%	1.67%	1.60%	1.60%	1.60%

Exhibit__(GJR-5C)

Carolinas Design Day Demand & Supply Schedule - Winter 2018 - 2019 Design Day Temperature of 8.68 Degrees (56.32 HDDs) FINAL R1 - 7/27/2018

Carolinas Demand Net Growth Rate 1.0160 1.0160 1.0160 (All Values in Dt/d) 1.0160 DEMAND 2018 -2019 2019 - 20 2020 - 21 2021 - 22 2022 - 23 Winter Period: System Design Day Firm Sendout

1	System Design Day Firm Se		1,475,157	1,499,901	1,523,899	1,548,282	1,573,054	
2	Mid Year Firm Sales Pick U			1,909				
3	Mid Year Firm Sales Deduc			(786)				
4		Subtotal Sendout plus Mid Year Picku	p	1,476,280	1,499,901	1,523,899	1,548,282	1,573,054
5	Special Contract Firm Sales	Commitment		7,233	7,233	7,233	7,233	7,233
6	Total Firm Design Day Dema	and		1,483,513	1,507,134	1,531,132	1,555,515	1,580,287
7	Reserve Margin on Design D	ay Demand (5%)		74,176	75,357	76,557	77,776	79,014
8	Subtotal Demand			1,557,689	1,582,491	1,607,689	1,633,290	1,659,302
9	Less:							
10	Firm Transportation Without	,		(132,242)	(123,000)	(123,000)	(123,000)	(123,000)
11	Total Firm Sales Demand	d		1,425,447	1,459,491	1,484,689	1,510,290	1,536,302
12	SUPPLY CAPACITY							
13	Firm Transportation	<u>Days</u>						
14	Transco	FT 36	5	301,016	301,016	301,016	301,016	301,016
15	Transco	FT - 1002268 36	5	6,440	6,440	6,440	6,440	6,440
16	Transco	FT SE '94/95/96 36	5	129,485	129,485	129,485	129,485	129,485
17	Transco	Sunbelt 36	5	41,400	41,400	41,400	41,400	41,400
18	Transco	VA Southside 36	5	20,000	20,000	20,000	20,000	20,000
19	Transco	Leidy 36	5	100,000	100,000	100,000	100,000	100,000
20	Columbia Gas	FTS 36	5	32,801	32,801	32,801	32,801	32,801
21	Columbia Gas	NTS 36	5	10,000	10,000	10,000	10,000	10,000
22	East TN (MGT Upstream)	FT 36	5	19,578	19,578	19,578	19,578	19,578
23	Atlantic Coast Pipeline *	FT 36	5	0	160,000	160,000	160,000	160,000
24	Total Year Round FT			660,720	820,720	820,720	820,720	820,720
26	Transco	FT Southern Expansion 15	1	72,502	72,502	72,502	72,502	72,502
27	East TN (TETCO Upstream)	FT 15	1 1	24,798	24,798	24,798	24,798	24,798
28	Transco	FT - 1004995	0	6,314	6,314	6,314	<u>6,314</u>	6,314
29	Total Winter OnlyFT			<u>103,614</u>	<u>103,614</u>	<u>103,614</u>	103,614	<u>103,614</u>
31 32	Total Firm Transportation S	ubtotal		764,334	924,334	924,334	924,334	924,334
	Hardy Storage	HSS	0	68,835	68,835	68,835	68,835	68,835
34	Dominion		0 2	0	0	0	0	0
35	Columbia Gas	FSS/SST 5	9	86,368	86,368	86,368	86,368	86,368
36	Transco	GSS Storage	5	77,475	77,475	<u>77,475</u>	77,475	77,475
38	Total Seasonal Storage			232,678	232,678	232,678	232,678	232,678
39	J			ŕ	,	· ·	•	,
40	Peaking Capacity							
41	Piedmont	LNG - Huntersville	0	100,000	100,000	100,000	100,000	100,000
42	Piedmont	LNG - Bentonville	0	90,000	90,000	90,000	90,000	90,000
43	Transco	Pine Needle	0	263,400	263,400	263,400	263,400	263,400
44	Transco	LNG (formerly LG-A)	5	8,643	8,643	8,643	8,643	8,643
45	Piedmont	LNG - Robeson TB	D 3	<u>0</u>	<u>0</u>	<u>0</u>	TBD	TBD
46 47	Peaking Supplies Total			462,043	462,043	462,043	462,043	462,043
	Total Capacity		1	1,459,055	1,619,055	1,619,055	1,619,055	1,619,055
49	• •	Surplus(Deficit)		33,608	159,564	134,366	108,765	82,753
				,	,	,	,	J_,. JU

^{*} Atlantic Coast Pipeline scheduled to come on line in fourth quarter 2019

Footnote 3) The facility is anticipated to be completed in the summer of 2021, and therefore is forecasted to provide peaking support starting winter 2021-2022. The capacity portfolio will be restructured to include Robeson LNG using the "best cost" gas purchasing policy while taking into account the customer load profile.

Footnote 1) East TN capacity is 365 days, however the upstream TETCO capacity delivering to East TN is 151 days

Footnote 2) Beginning in FY2015, Dominion capacity removed as available capacity on design day due to non-firm backhaul from Transco Zone 6.

Docket	Pipeline /	Deadline	Filed Date	Action	Description	Status of Docket
Number	Applicant	Date	1 lica Date	Addidii	· ·	Claras of Docket
CP17-450	Transcontinental Gas Pipeline	6/22/2017	5/25/2017	Intervened on 6/19/17	Transco is requesting authority to abandon in place its offshore gathering laterals extending from Brazos Block A-133A to Brazos Block 538. The gathering facilities proposed to be abandoned are located on Transco's Central Texas Gathering System in federal waters offshore Texas. Specifically, Transco proposes to abandon the CTGS West Facilities that consist of: (i) a 10.72-mile, 20-inch offshore gathering lateral extending from Brazos Block A-133A platform to the Brazos Block A-76 subsea tie-in, and (ii) a 30-mile, 20-inch offshore gathering lateral extending from the Brazos Block A-76 subsea tie-in to the Brazos Block 538 platform. Transco acknowledges that approximately 35,000 dekatherms per day currently flow on the CTGS West Facilities but that there will be no impact on upstream shippers because gas will be re-routed to an existing parallel line. Transco estimates the cost of abandoning the CTGS West Facilities to be approximately \$2.9 million. Transco states that the volume of flow has decreased to the point that the income from transportation and gathering fees can no longer support the maintenance cost or the risk of mitigating leaks in the pipelines and because of a lack of leasing activity in the vicinity there are no anticipated prospects for additional flow on the CTGS West Facilities.	On 8/2, an environmental assessment report was filed. On 8/8, an Order was issued granting Transco's 5/25 filing for abandonment.
RP17-881	Transcontinental Gas Pipeline Company, LLC	7/12/2017	6/30/2017	Intervened on 7/12/2017	Transco is filing in order to revise its Form of Service Agreement for use under Rate Schedule FT to include alternative language in Article IV, Term of Agreement, to allow the contract effective date to be determined by the date that the facilities necessary to provide service under an expansion project have been constructed and are ready for service rather than a contract effective date that is a given date, or is the later of a given date or the date that expansion project facilities are ready for service. Transco states that it seeks to make this change to reduce the need to submit non-conforming agreements and to provide an additional option to parties when setting up an effective date for an agreement.	Various motions to intervene. On 7/28, a letter order was issued accepting Transco's filing of a tariff record.
RP17-942	Transcontinental Gas Pipeline Company, LLC	8/14/2017	7/31/2017	Intervened on 8/3/2017	Transco is filing to add a new section to the GT&C's of its Tariff, Section 8 – Liability, to establish a bilateral liability provision that limits the parties' liability to direct damages, except under certain circumstances. The new section limits a party's liability to direct damages where such damages were caused by that party's negligence. This limitation is inapplicable if a party is grossly negligent, engages in willful misconduct, or acts in bad faith.	Various motions to intervene. On 8/30, a letter order was issued accepting Transco's filing to add a new liability provision to its General Terms and Conditions.
RP17-940	Transcontinental Gas Pipeline Company, LLC	8/14/2017	7/31/2017	Intervened on 8/11/2017	On June 30, 2017, Transco received a refund from Dominion Transmission, Inc. under Docket No. RP17-891-000 for service rendered to Transco under DTI's Rate Schedule GSS. Transco purchases storage service from DTI under Rate Schedule GSS in order to provide service under its Rate Schedules GSS and LSS. On July 28, 2017, Transco refunded the amount received from DTI, with interest.	Various motions to intervene.
RP17-952	Transcontinental Gas Pipeline Company, LLC	8/14/2017	8/1/2017	Intervened on 8/3/2017	Transco is filing to establish the initial recourse rates for the Atlantic Sunrise Project. The maximum total reservation rate for the project is \$0.77510 and the minimum is \$0.00307.	Various motions to intervene. On 8/30, a letter order accepting Transco's recourse rates filing was issued.

Docket Number	Pipeline / Applicant	Deadline Date	Filed Date	Action	Description	Status of Docket
RP17-953	Transcontinental Gas Pipeline Company, LLC	8/14/2017	8/1/2017	Intervened on 8/3/2017	Transco is filing to establish the initial recourse rates for Phase 1 of the Garden State Expansion Project. The maximum total reservation rate for the project is \$0.76713 and the minimum is \$0.00064.	Various motions to intervene. On 8/30, a letter order accepting Transco's recourse rates filing was issued.
CP17-490	Transcontinental Gas Pipe Line Company, LLC	10/6/2017	8/31/2017	Intervened on 10/3/17	Transco is requesting authorization to construct and operate its Rivervale South to Market Project, an expansion of Transco's interstate natural gas transmission system in New Jersey. The project will enable Transco to provide an additional 190,000 Dth/d of firm transportation capacity from the interconnection with Tennessee Gas Pipeline in River Vale, Bergen County, New Jersey (Rivervale Interconnect) to Transco's Central Manhattan Meter Station in Hudson County, New Jersey, and the Station 210 pooling point in Mercer County, New Jersey. Transco states that this project will have no adverse effects on its existing customers as the project costs, which are expected to cost approximately \$127.6 million, will be paid for through incremental rates.	An environmental assessment report was filed on 3/16/18.
RP17-991	Transcontinental Gas Pipe Line Company, LLC	9/12/2017	8/31/2017	Intervened on 9/11/2017	Transco is filing to establish the initial recourse rates for the New York Bay Expansion Project. The total reservation rate for the project is \$0.55360 (max) and \$0.00064 (min) with a commodity rate of \$0.00729.	Various motions to intervene filed. On 9/19, a letter Order was issued approving Transco's 8/31 filing to establish the intiial recourse rates for the NY Bay Expansion Project.
RP17-1021	Transcontinental Gas Pipe Line Company, LLC	9/13/2017	9/1/2017	Intervened on 9/11/2017	Transco is filing in order to revise Atlanta Gas Light Company's delivery point entitlements to reflect the increase in capacity associated with the August 1, 2017 in-service date of Transco's Dalton Expansion Project, which was approved by the Commission in Docket No. CP15-117-000.	Various motions to intervene filed. On 9/21, a letter Order was issued accepting Transco's filing to update its Delivery Point Entitlement tariff.
RP17-1103	Transcontinental Gas Pipe Line Company, LLC	10/30/2017	9/28/2017	Intervened on 10/10/17	Transco is filing to establish initial recourse rates effective November 1, 2017 for the Virginia Southside Expansion Project, in compliance with the July 7 Order in CP15-118. Transco anticipates that the Project facilities will be ready for service on or about November 1, 2017. However, because Virginia Power Services Energy Corp. (the Project Shipper) has notified Transco of its intent to begin service under the Project on December 1, 2017, the 250,000 dt/day of incremental firm transportation capacity will be available, but unsubscribed, for the month of November 2017. Subject to Commission authorization to place the Project facilities in-service, Transco will, pursuant to the terms of Section 49 of the General Terms and Conditions of Transco's tariff, make this capacity available to buyers consistent with the terms of an open season for the period beginning with the in-service date of the Project facilities (anticipated to be November 1, 2017) and ending on December 1, 2017.	On 11/16, a letter Order was issued accepting Transco's filing to establish initial recourse rates.

Docket Number	Pipeline / Applicant	Deadline Date	Filed Date	Action	Description	Status of Docket
RP17-1100	Transcontinental Gas Pipe Line Company, LLC	10/10/2017	9/28/2017	Intervened on 9/28/2017	Transco is filing to terminate and remove from Transco's Tariff the Statement of Rates and Fuel for Rate Schedule FT – Maiden Delivery Lateral. The term of the reservation surcharge ends on October 31, 2017, 20 years from the in-service date of the Maiden Project (CP97-193-000).	Various motions to intervene. On 10/30/17, a letter order was issued accepting Transco's filing.
RP17-1105	Transcontinental Gas Pipeline Company	10/10/2017	9/29/2017	Intervened on 10/6/17	Transco's Tariff requires it to file a redetermination of its fuel retention percentage applicable to Rate Schedules LG-A, LNG and LG-S to be effective each November 1. The derivation of the revised fuel retention percentage (which is proposed to be 42.90%, an increase from 28.56%) is based on Transco's actual gas required for operations ("GRO") for the period September 2014 through August 2017 plus the balance accumulated in the Deferred GRO Account at August 31, 2017.	Various motions to intervene. On 10/19/17, Transco responded to a data request. On 10/30, a letter order was issued accepting Transco's filing.
RP18-29	Transcontinental Gas Pipe Line Company, LLC	10/24/2017	10/12/2017	Intervened on 10/16/17	Pursuant to Section 54 of the General Terms and Conditions ("Section 54") of Transco's Tariff, Transco is required to distribute penalty revenue collected, excluding cash out penalty revenue, net of cost, to firm and interruptible transportation and storage buyers. Section 54 states that if the cumulative penalty revenue collected at the end of the twelve month period ending each July 31 does not exceed \$25,000, Transco shall retain the penalty revenue for distribution to the eligible buyers until the Annual Period during which the cumulative undistributed penalty revenue collected exceeds \$25,000.	Various motions to intervene.
CP18-8	Transcontinental Gas Pipeline Company, LLC	11/20/2017	10/16/2017	Intervened on 11/20/17	Transco is seeking retroactive authorization to abandon certain natural gas facilities, including gas supply metering and regulating facilities and pipeline laterals, that are located in Louisiana, Mississippi, Texas, New Jersey, and offshore Louisiana that are no longer in service. Transco is requesting this abandonment authorization to clarify the regulatory status of facilities that were previously erroneously abandoned pursuant to Transco's automatic blanket certificate authority.	On 1/31/18, an Order approving Abandonment was issued.
RP18-91	Transcontinental Gas Pipeline Company, LLC	11/13/2017	10/31/2017	Intervened on 11/13/17	Transco tracks rate changes attributable to storage services purchased from Dominion Transmission, Inc. under its Rate Schedule GSS. On September 29, 2017, Dominion filed revised tariff records in Docket No. RP17-1130-000 in order to update its Electric Power Cost Adjustment and filed revised tariff records in Docket No. RP17-1132-000 in order to update its Transportation Cost Rate Adjustment. Included in those filings are revised rates under Dominion's Rate Schedule GSS that Transco uses to render service to its customers under its Rate Schedules GSS and LSS. The Commission accepted Dominion's revised tariff records effective November 1, 2017. As such, this filing is being made pursuant to tracking provisions under Section 3 of Transco's Rate Schedule GSS and Section 4 of Transco's Rate Schedule LSS.	Various motions to intervene filed. On 11/28/17, a letter order was issued accepting Transco's filing.

Docket Number	Pipeline / Applicant	Deadline Date	Filed Date	Action	Description	Status of Docket
CP18-18	Transcontinental Gas Pipe Line Company	12/21/2017	11/15/2017	Intervened on 12/21/2017	Transco is seeking authorization to construct the Gateway Expansion Project which will involve installing 27,500 of additional horsepower at Transco's existing Station 303 located in Essex County, New Jersey; replacing the existing 12-inch-diameter header, meter skid and associated equipment with two new 6-inch-diameter ultrasonic meter skids and associated equipment at the existing Paterson Meter and Regulator (M&R) facility located in Passaic County, New Jersey; installing a 36-inch-diameter mainline block valve at the existing Roseland M&R facility located in Essex County, New Jersey; and installing one electric transformer at the existing Roseland Electric Substation located in Essex County, New Jersey. Transco states that this project will provide an additional 65,000 dekatherms per day of firm transportation. The proposed project will cost approximately \$84.63 million which will be financed initially through short-term loans and funds on hand and permanent financing will be undertaken at a later date as part of Transco's overall, long-term financing program. Transco is requesting rolled-in fuel rates for this project. In this application, Transco is also requesting approval of non-conforming provisions in agreements associated with this project. One of these provisions allows for making the effective date of the agreement to the month that follows completion of project facilities and another addresses the extension of the primary term.	Transco submitted responses to two data requests. On 3/14/18, Transco filed an Advance Notification of Auxiliary Facilities.
CP18-20	Transcontinental Gas Pipe Line Company, LLC	1/26/2018	11/15/2017	Intervened on 1/24/2018	Transco is requesting authorization to construct and operate three new heaters and related appurtenant facilities at the existing Meadow Heater facility located in the Borough of Ridgefield, Bergen County, New Jersey in order to add heater capacity to ensure efficient and reliable delivery of natural gas to Con Edison at the Central Manhattan and Manhattan delivery points in New York City. The cost of the proposed facilities is expected to be approximately \$ 32.3 million. Con Edison will reimburse Transco for all of the Project costs.	Various weekly reports filed. On 3/5/2018, a letter order was issued approving Transco's request for alternative measure.
RP16-856	Transcontinental Gas Pipe Line	12/4/2017	11/21/2017	Intervened on 12/4/2017	Transco submitted refunds to its customers for amounts collected in excess of the amounts that would have been collected under the rates approved in the October 4 Order in the WSS/WSS-OA Docket, with interest computed from the date of payment to the date of refund. The refund covers the period March 1, 2007 to April 18, 2016 and interest has been calculated through November 15, 2017.	Two motions to intervene filed.
RP18-203	Transcontinental Gas Pipe Line Company	12/12/2017	11/30/2017	Intervened on 12/11/2017	Transco is filing a revised tariff record to track rate changes attributable to storage service purchased from TETCO under its Rate Schedule X-28, the costs of which are included in the rates and charges payable under Rate Schedule S-2. On October 26, 2017, TETCO filed (and the Commission later approved) tariff records to reflect a change in its Applicable Shrinkage Adjustment in Docket No. RP18-116-000 to be effective December 1, 2017. The following rates under Rate Schedule S-2 reflect TETCO's rate changes: - Injection Charge will decrease from \$0.02995 to \$0.02955 Dth/day. - Withdrawal Charge will decrease from \$0.03958 to \$0.03888 Dth/day.	Various motions to intervene filed. On 12/22/17, a letter order was issued accepting Transco's filing.

Docket	Pipeline /	Deadline	Filed Date	A -4:	Description	Ctatus of Dealest
Number	Applicant	Date	Filed Date	Action	Description	Status of Docket
CP13-30	Transcontinental Gas Pipe Line Company, LLC	1/25/2013	12/19/2017	PNG intervened with comments on 1/25/2013	Transco filed an application for authorization to construct, install, own, operate and maintain its Virginia Southside Expansion Project (Project), an incremental expansion of Transco's existing pipeline system in its southern market area. Specifically, the Project involves the construction and operation of 91 miles of new pipeline facilities along Transco's existing South Virginia Lateral A and approximately 7 miles of Greenfield pipeline facilities; a new compressor station with two 10,915 horsepower (ISO) gas turbine-driven compressor; and the construction or modification of associated above ground and underground facilities. Further, the Project will provide 270,000 dekatherms per day (Dth/d) of incremental firm transportation service to Virginia Power Services Energy Corp., Inc. and Piedmont Natural Gas Company, Inc. Transco estimates that the proposed project will cost approximately \$275 million, net of the Grant Transco expects to receive from the Virginia Tobacco Indemnification and Community Revitalization Commission. Finally, Transco proposes to place the Project facilities into service on September 1, 2015.	On 11/17/17, FERC filed a construction inspection report.
CP18-42	Transcontinental Gas Pipe Line Company, LLC	3/15/2018	1/2/2018	Intervened on 3/15/2018	The North Carolina Utilities Commission filed a motion for an order to show cause regarding whether Transco has been operating, and is continuing to operate, its Eminence Salt Dome Storage Field, located near the Town of Seminary in Covington County, Mississippi, in accordance with the amended certificate issued in Docket No. CP11-151; and whether Transco should be allowed to assess demand charges for the amount of firm service from the Eminence Salt Dome Storage Field under Rate Schedule ESS and Rate Schedule EESWS that Transco allegedly has been and is currently unable to provide given the revised operating parameters of the Eminence Salt Dome Storage Field.	Many motions to intervene filed. Transco responded to one data request.
RP18-314	Transcontinental Gas Pipe Line Company, LLC	1/16/2018	1/2/2018	Motion to Intervene, Protest, and Request for Technical Conference on 1/16/2018	Transco is revising various of its priority of service provisions, including no-notice enhancements and clarifications, priority of service and capacity allocation revisions, pooling revisions, conforming revisions, and customer outreach.	On 3/1/18, an Order establishing a technical conference was issued. Two out of time motions to intervene filed. On 3/15, a notice of technical conference was issued.
RP18-357	Transcontinental Gas Pipe Line Company, LLC	1/30/2018	1/18/2018	Intervened on 1/19/2018	Transco is making this filing in order to address processing nominations in the event of a failure of Transco's electronic service system or of the electronic communication equipment of its shippers. Transco is proposing a provision that will use its Buyers' last confirmed nomination(s) at the time of the event for any missed nomination cycles within the Gas Day. For example, if 1Line fails immediately prior to the Intraday 1 nomination deadline, Transco will use confirmed quantities from the Evening cycle for Intraday 1 and for any remaining cycles during the outage. If no confirmed quantities for the Gas Day exist, Transco will use the last accepted nomination(s) for any missed nomination cycle(s), including any nominations submitted prior to the failure, including nominations for future days. Following the resumption of 1Line service, buyers will maintain the ability to nominate in the post cycle and to request adjustments to prior Gas Day scheduled quantities.	On 2/8/18, a letter Order was issued accepting Transco's filing.
						Various motions to intervene filed.
RP18-360	Transcontinental Gas Pipe Line Company, LLC	2/6/2018	1/25/2018	Intervened on 2/6/2018	Transco is filing in order to revise New York Facilities Group's delivery point entitlements to reflect the increase in capacity associated with the October 6, 2017 in-service date of Transco's New York Bay Expansion Project, which was approved by the Commission in Docket No. CP15-527-000.	On 2/16/18, a letter Order was issued accepting Transco's filing to update the Delivery Point Entitlement Tariff.

Docket Number	Pipeline / Applicant	Deadline Date	Filed Date	Action	Description	Status of Docket
RP18-540	Transcontinental Gas Pipe Line Company, LLC	3/13/2018	3/1/2018	Intervened on 3/12/2018	Transco is revising its fuel retention percentages applicable to transportation and storage rate schedules, to be effective April 1, 2018. The fuel retention percentages are based on the estimates of gas required for operation for the next annual period from April 2018 to March 2019 along with the balance accumulated in its deferred gas account.	Various motions to intervene filed. On 3/29/18, a letter order accepting Transco's filing of the Annual Fuel Retention Percentages was issued.
RP18-568	Transcontinental Gas Pipe Line Company, LLC	3/28/2018	3/16/2018	Intervened on 3/28/2018	Transco assesses the applicable usage charges and fuel retention on quantities transported away from the Zone 4 Pools and no usage charges or fuel retention are assessed on quantities transported into the Zone 4 Pools. At the Zone 5 Pool and the Zone 6 Pool, Transco currently applies the applicable usage charges and fuel retention once, upon transportation into the pools. This methodology is based on Transco's concern at the time this methodology was implemented, that if the usage charge and fuel retention were applied to transportation away from the Zone 5 Pool and Zone 6 Pool, the significant level of backhaul transportation out of these pools would not be subject to fuel retention because backhaul transportation is not assessed fuel on the Transco system. Because Transco now charges fuel on all applicable activity in Zones 5 and 6, Transco no longer faces the risk that fuel would not be assessed on any portion of a transportation transaction for quantities pooled at the Zone 5 Pool or Zone 6 Pool. As a result, Transco is proposing to modify the usage charges and fuel retention applicable to quantities pooled at these locations such that these costs are assessed on quantities transported away from the pools rather than on quantities transported into the pools. This method is the same as that currently applied under the Tariff at Transco's Zone 4 Pools.	On 4/17/2018, a letter order accepting Transco's filing was issued.

Exhibit__(GJR-7)

FY2018 DESIGN DAY Docket No. G-9, Sub 727

Calculated Weighted Average Temperature - 1/21/1985 - Carolinas

With 2018 Weights Across Weather Stations

High Temp	Low Temp	Avg Temp **	Weather Station	Weighting *	Weighted Avg
1	-12	-5.5	GEV	0.0038	-0.021069935
21	-8	6.5	GSO	0.2912	1.892892131
24	-5	9.5	CLT	0.3116	2.959873148
23	-8	7.5	HKY	0.0569	0.427033651
26	-4	11	GSP	0.1706	1.876850914
16	-2	7	ECG	0.0090	0.063209264
18	-1	8.5	POB	0.0531	0.451128136
18	-1	8.5	GWW	0.0833	0.707952653
27	5	16	ILM	0.0204	0.326981809
			Weighted Ave	rage Temperature	8.68

^{*} Using 2018 calculated weightings that were updated on 5/21/2018.

^{**} Average of high and low temperatures