### December 2022 cold weather event

- 13. Please provide a timeline beginning when the system started to experience storm related impacts through midnight December 26, 2022, in 15-minute increments, including but not limited to:
  - a. For each interstate pipeline receipt point at the Company or the Company's city gates:
    - i. The expected and measured operating pressure, and
    - ii. The tolerance and low pressure set point at each receipt point.
  - b. For each compressor station point:
    - i. The expected and measured operating pressure, and
    - ii. The tolerance and low pressure set point at each receipt point.
  - c. At the meter and relay station (or equivalent) at each electric generation asset in North and South Carolina:
    - i. The expected and measured operating pressure, and
    - ii. The tolerance and low pressure set point at each receipt point.
  - d. Any customer curtailment or outages that occurred.
    - i. If a process was put in place to curtail its interruptible customers during this time frame, please provide a discussion of the expected impact to existing gas supply and the Company's reserve margin.
    - ii. Volumes of gas bought (dts) and the respective gas price at zone 3 and 5 respectively as a response to tightened operating conditions for customers and to prevent outages or curtailments.
  - e. General map or other locational guidance showing how the weather was impacting the Company's overall system.

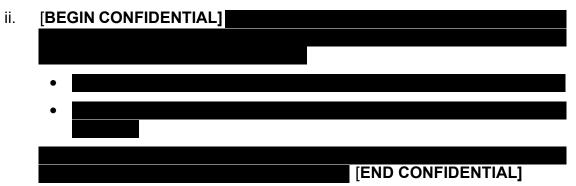
### Response:

- a. c. The Piedmont system did not experience storm-related impacts. However, please see the attachment provided herewith regarding the graphs that show expected pressures and actual pressures received into the Piedmont system, as well as the low pressure setpoints.
- d. Any customer curtailment or outages that occurred.

### Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023

i. There were no system impacts that necessitated an interruption or curtailment of gas service to Piedmont's customers.



Please see the Company's response to PS DR 2-23, which outlines all volumes of gas purchased and the respective gas prices.

e. The Piedmont system did not experience storm related impacts. Please see the attachment provided herewith for the system map.

### Name and title of responsible person:

- a. c. Adam Long, Vice President Gas Pipeline Operations
- d. Adam Long, Vice President Gas Pipeline Operations and Todd Breece,
   Manager Natural Gas Trading & Optimization and Managing Director –
   Gas Supply Optimization and Pipeline Services
- e. Adam Long, Vice President Gas Pipeline Operations

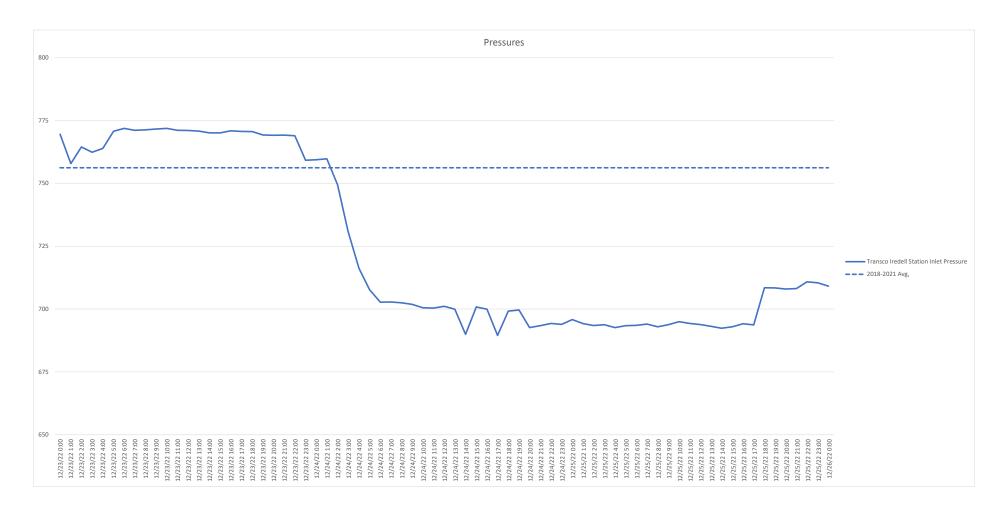
### Name and title of preparer:

- a. c. Andrew Donato, Manager Gas Control
- d. Andrew Donato, Manager Gas Control and James Manning, Senior Gas Trader
- e. Andrew Donato, Manager Gas Control

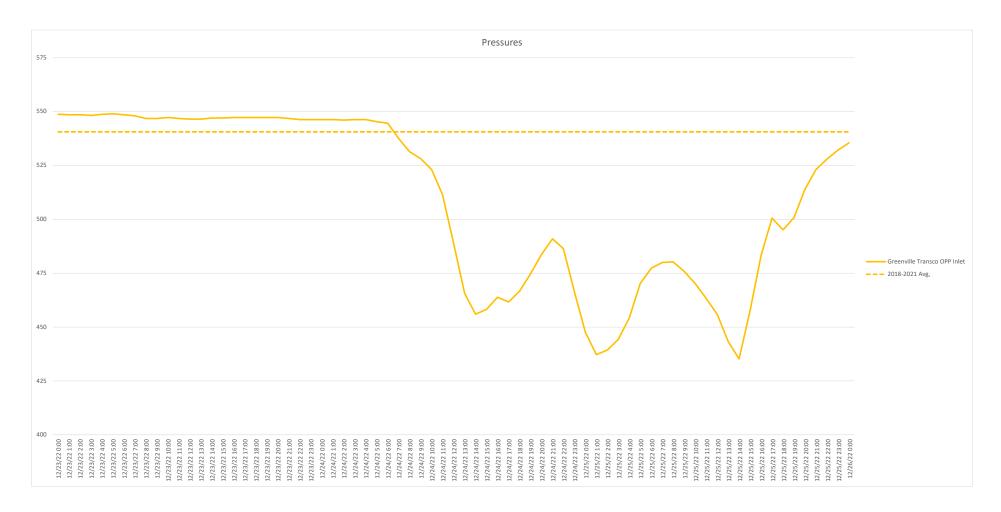
Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

Date	Transco Iredell Station Inlet Pressure	2018-2021 Aug.	Greenville Transco OPP Inlet	2018-2021 Ave.	Duke Dan River Inlet Pressure	2018-2021 Aug. Transco Inedell Station Outlet Pressure	2018-2021 Avg. Sutton CC Station Inlet Pressure	2018-2021 ME Law CC Station Inlet Brassure	2018-2021 Avg. Wadesboro Compressor Station Discharge Press	2018-2021 Aug. Cannon Sottom Transco #2 Meter Press	2019-2021 due - Kamanuilla Transco M	ater Press	2018-2021 Aug. Duke Buck Station Inlet Pressure	3018-2021	lus Spencer Buck Transm Bras	2016-2021 Aur	Duke Lincoln Transco Mater Pressure	2018-2021 Ave.
12/23/22 0:00	769.5452881	756.2507904	548,7461548	540.6225535	729.7858887	653.342095 768.3150024	741.7726864 843.3881836	822.0646 829.2532569	\$22.4698141 \$58.859275	895.6067587 700.7970581	653.2276774	732.8039551		13306 630.190		637,5771149		369 655.3486234
12/23/22 1:00	757,8490601	756.2507904	548.5005259	540.6225535	727.0947875	653.342095 754.2734985	741.7226864 846.7298071	822.0646 815.4835205	832.4698141 862.7042847	895.6067587 702.9429932	653,2376774	730.1160889	652.328164 729.82			637,5771149	747.645263	
12/23/22 2:00	764.5145874	756.2527904	548.5005259	540.6225535	725.6269531	653.342095 762.5152588	741.7326864 850.7008057	822.0646 814.87146	832.4698141 877.6033325	895.6067587 703.5560913	653.2376774	729.6499634	652.328164 728.30	7202 630.190	5154 792.5980225	637.5771149	745.932739	193 655.3486234
12/23/22 3:00	762.3925171	756.2507904	548.256897	540.6225535	726.8501587	653.342095 760.0732422	741.7326864 863.1931763	822.0646 844.2472534	832.4698141 931.432251	895.6067587 702.6364136	653.2376774	729.8717041	652.328164 728.60			637.5771149	746.66662	
12/23/22 4:00	763.9661255	756.2507904	548.7461548	540.6225535	727.5841064	653.342095 761.2942505	741.7326864 883.3028564	822.0646 866.8910522	832.4698141 951.1374512	895.6067587 702.329834	653.2376774	730.8491211	652.328164 730.44			637.5771149	747.889892	
12/23/22 5:00	770.7641602 771.9907903	756.2507904	548.9908447 548.5015750	540.6225535	723.4556885	653.342095 769.8412476	741.7326864 867.7635498	822.0646 883.1089478	832.4698141 909.8045654	895.6067587 703.8626709	653.2376774	732.5595703 737.3073095	652.328164 735.63 652.328164 380.53			637.5771149	750.825683	
12/23/22 6:00	771.8997803 771.1655884	756.2507904	548.5015259 548.012207	540.6225535	799.0925806 743.9755249	653.342095 771.0622559 653.342095 770.4517822	741.7326864 856.4899902	822.0646 888.9228516 822.0646 896.2668457	832.4698141 912.2076416 832.4698141 911.7270508	895.6067587 709.2807373 895.6067587 713.3660278	653.2376774 653.2376774	737.2022095 742.0891724	652.328164 740.53 652.328164 745.11			637.5771149	753.516845 757.920532	
12/23/22 7:00	7/1.1900884 771.3171387	756.2507904 756.7507904	546 012207 546 7890015	540.6225535 540.6225535	741.756249	653.343095 770.4517822 653.343095 770.4517822	741.732686 852.8336182 741.733686 852.8479937	822.0946 896.364812 822.0646 900.344812	832.4698141 911.72/USG8 832.4698141 913.6494751	895.6067587 744.0220947	653 2276774 653 2276774	730 1705654		32772 630.190		637.5771149	767.920542 786.421997	
12/23/22 9:00	771 6470773	756.2507904	546 7890015	SAN 6225525	736,0007373	653.342095 770.757019	741.7326864 853.4429932	822.0646 900.8568115	832.4698141 916.0525513	895.6067587 719.1906728	653.2376774	735 2474365	652.328164 739.30			637 5771149	748.623840	
12/23/22 10:00	771.9020386	756.2507904	547.2783203	540.6225535	734.4342651	653.342095 770.757019	741.7226864 853.1383057	822.0646 898.4088135	832.4698141 915.5719604	895.6067587 704.475769	653,2376774	736.4691162	652.328164 738.38		154 741.9117432	637,5771149	752.293579	
12/23/22 11:00	771.121582	756.2507904	546.7890015	540.6225535	736.8807373	653.342095 770.4517922	741.7326864 843.9975586	822.0646 884.3328857	832.4698141 913.6494751	895.6067587 699.5708008	653.2376774	739.6456909	652.328164 739.60	7646 630.190	5154 744.1176758	637.5771149	753.516845	157 655.3486234
12/23/22 12:00	771.0703125	756.2527904	546.5443115	540.6225535	730.5198975	653.342095 770.4517922	741.7326864 816.8799438	822.0646 870.8690186	832.4698141 907.4014893	895.6067587 695.8920898	653.2376774	735.2474365	652.328164 734.10	5439 630.190	5154 740.1960449	637.5771149	749.113159	92 655.3486234
12/23/22 13:00	770.8128052	756.2507904	546.5442115	540.6225535	721.9571533	653.342095 770.4517922	741.7926864 795.2468262	822.0646 838.1273193	832.4698141 903.5565796	895.6067587 690.0674438	653.2376774	727.1838379		2583 630.190		637.5771149	741.039794	
12/23/22 14:00	770.1069336	756.2507904	547.0336304	540.6225535	718.2874756	653.342095 768.3150024	741.7926864 788.2388916	822.0646 798.041626	832.4698141 894.9055176	895.6067587 681.7902832	653.2376774	722.5412598	652.328164 720.66			637.5771149	736.391479	
12/23/22 15:00	770.1110229 770.9177956	756.2507904 756.2507904	547.0336304	540.6225535	713.8837891	653.342095 768.3150024 653.342095 768.9755371	741.732664 823.8978784 741.733664 857.4049577	822.0646 787.331665	832.4698141 883.8513794 833.4698141 835.3003563	895.6067587 676.2722168 895.6067587 678.4181519	653.2376774 653.2376774	719.3646851	652.328164 716.95 652.328164 713.93			637.5771149	733.944946	
12/23/22 16:00	770.9177856 770.6843767	756.2507904 756.75073004	547.2783203 547.2783203	540.6225535 540.6225535	712.4158936	653.342095 768.9255371 653.342095 768.9255371	741.7326864 857.4040527 741.7336864 879.3418579	822.0646 829.8652564 877.0646 879.5502767	832.4698141 875.2002563 837.4698141 869.9135137	895.6067587 678.4181519 895.6067587 683.6796387	653.2376774 653.2376774	716.4324951 714.9664307	652.328164 713.93 652.328164 713.93			637.5771149	730.275268	
12/23/22 17:00	770.6193237	756.2507904 756.2507904	547.2782202	540.6225535	709.9694234 710.7141113	653.342095 768.92307739	741.7326864 891.2248535	822.0646 847.0012207	832.4698141 867.0298462	895.6067587 691.2937012	652 2276774 653 2276774	715.9964307	652 328164 714.54			637.5771149	782.721679	
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12/23/22 20:00	369 1737671	756 75073004	547.2783203	540.6225535	716.8195801	653 343095 767 399392	741 7236864 823 6380615	822.0646 818.8494873	822.4698141 922.3005371	895.6067587 697.4249268	653 222677A	723,7629395		6294 630.190		637 5771149	745 198791	
12/23/22 21:00	769.2379761	756.2507904	546.7890015	540.6225535	715.3516846	653,342095 767,399292	741.7926864 812.3096703	822.0646 803.2435303	832.4698141 919.8974609	895.6067587 697.7314453	653.2376774	725.9621582	652.328164 721.88			637,5771149	743,73089	
12/23/22 22:00	769.0048828	756.2507904	546.2996826	540.6225535	710.4587402	653.342095 767.399292	741.7926864 794.6374512	822.0646 809.9755249	832.4698141 910.7658081	895.6067587 696.8117676	653.2376774	720.3421021	652.328164 715.15	19355 630.190	5154 725.4901733	637.5771149	737.125366	562 655.3486234
12/23/22 23:00	759.2041626	756.2507904	546.2996826	540.6225535	694.9012085	653.342095 756.1049805	741.7326864 805.6063232	822.0646 823.1334229	832.4698141 929.0291748	895.6067587 694.9724121	653.2376774	703.7263184	652.328164 697.43			637.5771149	718.042846	
12/24/22 0:00	759.434082	756.2507904	546.2996826	540.6225535	673.5168457	653.342095 756.1049805	741.7926864 814.1376953	822.0646 798.041626	832.4698141 925.1842651	895.6067587 690.680542	653.2336774	682.4678955	652.328164 679.09			637.5771149	696.758422	
12/24/22 1:00	759.7839355	756.2507904	546.2996826	540.6225535	652.9663696	653.342095 756.1049805	741.7926864 814.1376953	822.0646 783.659729	832.4698141 921.3393555	895.6067587 683.6296387	653.2336774	662.4312744	652.328164 658.61			637.5771149	678.165161	
12/24/22 2:00	749.4907227 730.8312378	756.2507904	546.0550537 546.2996826	540.6225535	632.4158936	653.342095 746.3280029	741.7326864 814.4423828	822.0646 785.4957275	832.4698141 908.3627319	895.6067587 674.1262817	653.2376774	644.1051025 624.3127441	652.328164 638.44 652.328164 636.44			637.5771149	656.146789	
12/24/22 3:00	716.18396	756.2507904 756.2507904	546.2996826 546.2996826	540.6225535 540.6225535	612.5993652 600.3669434	653.34206 727.9681286 653.34206 713.2802734	741.7326864 812.3095703 741.7326864 809.5673218	822.0646 802.6315918 822.0646 797.7355957	832.4698141 899.7116699 832.4698141 898.2698364	895.6067587 662.4769897 895.6067587 650.2145996	653.2376774 653.2376774	610 3849977		2583 690.190		637.5771149	621 651367	
12/24/22 5:00	707.7054449	756.2507904	545.321106	540.6225535	611.6207896	653.342095 704.4063721	741.7326864 803.4735107	822.0646 800.1835938	832.4698141 909.3239746	895.6067587 637.0324707	653.2376774	601.0996094	652.328164 591.96			637,5771149	613 089694	
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12/24/22 8:00	702.4892578	756.2527904	531.3361597	540.6225535	591.5596313	653.342095 699.510376	741.7926864 804.0928857	822.0646 801.4075928	832.4698141 894.9055176	895.6067587 607.6027222	653.2376774	581.0629272		22296 630.190	5154 584.1269531	637.5771149	590.581054	647 655.3486234
12/24/22 9:00	701.9630371	756.2527904	528.1957397	540.6225535	586.1773682	653.342095 698.5924072	741.7326864 805.3016357	822.0646 805.6915283	832.4698141 905.4790039	895.6067587 595.9533691	653.2376774	575.1985474	652.328164 564.18			637.5771149	584.220214	
12/24/22 10:00	700.5585327	756.2507904	523.0581055	540.6225535	577.6146851	653.342095 697.3684082	741.7326864 806.2156982	822.0646 806.9155273	832.4698141 904.9984131	895.6067587 582.7713013	653.2336774	565.1801758	652.328164 552.87			637.5771149	570.764526	
12/24/22 11:00	700.4030151	756.2507904	511.3150024 488 8073475	540.6225535 540.6225535	567.3394775 555.5963135	653.342095 697.3684082	741.7326864 805.6063232	822.0546 806.9055273 877.0646 806.3035889	832.4698141 900.1922607	895.6067587 563.4580078	653.2336774 653.2336734	553.6958008 541.4783335	652.328164 540.34 653.328164 537.38		\$154 \$54.822937 \$154 \$42.1365117	637.5771149	558.532104 545.565734	
12/24/22 12:00	701.1309711 699.9647334	756.2507904	488.8073425 465.5657349	540.6225535 540.6225535	555.5963125 542.8746338	653.342095 697.6744385	741.7326864 807.4344482	822.0646 806.3035889 822.0646 804.1615601	832.4698141 900.1922607	895.6067587 539.5462646		541.4783325 578.0390675				637.5771149	\$45.565734 \$31.131469	
12/24/22 14:00	689 9776611	756.2507904 756.2507904	456.0344751	540.6225535	542.8746338 531.3763597	653.34205 686.1444092 653.34205 685.7404785	741.7326864 804.3875732 741.7326864 800.4265747	822.0646 807.8334961	832.4698141 897.7891846 832.4698141 890.0993652	895.6067587 521.7658081 895.6067587 515.0214844	653.2376774 653.2376774	515 0216553	652.328164 512.83 652.328164 499.38			637.5771149	521.121009 517.930471	
12/24/22 15:00	700.8388062	756.2507904	458.2262878	540.6225535	520,3669434	653.342095 696.1444092	741.7326864 799.5124512	822.0646 789.7796631	832.4608141 899.1381226	895.6067587 515.0214884 895.6067587 516.2476807	653.2376774	504.8258972	652.328164 496.5			637.5771149	517.920871 504.339472	
12/24/22 16:00	699 9713979	756.2507904	463 8532104	SAN 6775525	510 3363953	653 343065 665 5334307	741.7326864 797.9890137	922.0000 788.7790031 922.0646 764.9938965	832.4698141 889.6187134	895,6067587 515,6345825	652 2236274	494 9175567	652 329164 429 03		5154 491 3309021	637 5771149	492 721710	
12/24/22 17:00	689.5379639	756.2507904	461.6513672	540.6225535	501.0397644	653.342095 685.4345093	741.7326864 797.6843262	822.0646 750.3060303	832.4698141 889.6187134	895.6067587 554.8743286	653.2376776	486.0109863	652.328164 471.32	19746 630.190	1154 482.0512695	637,5771149	482.201843	133 655.3486234
12/24/22 18:00	699.184021	756.2507904	466.544342	540.6225535	493.455658	653,342095 695,2264404	741.7326864 796.1608887	822.0646 743.5740356	832.4698141 890.0993652	895.6067587 561.6186523	653.2376776	479.4135742	652.328164 464.91	1631 60.19	5154 475.2136841	637,5771149	476.819580	001 655.3486234
12/24/22 19:00	699.6690063	756.2507904	474.6177368	540.6225535	488.3180542	653.342095 694.9204102	741.7326864 797.6843262	822.0646 745.1040039	832.4698141 890.0993652	895.6067587 576.3335571	653.2376774	476.725708	652.328164 464.30				478.532104	
12/24/22 20:00	692.6135254	756.2527904	483.6697388	540.6225535	487.5841064	653.342095 688.1884766	741.7326864 799.5124512	822.0646 754.2839355	832.4698141 890.0993652	895.6067587 588.5959473	653.2376774	479.16922	652.328164 430.10			637.5771149	487.094787	
12/24/22 21:00	693.2947144	756.2507904	491.0091553	540.6225535	491.9877625	653.342095 690.3304443	741.7326864 811.7001953	822.0646 772.9498291	832.4698141 889.6187134	895.6067587 593.1943359	653.2336774	485.5222778	652.328164 477.73			637.5771149	494.923553	
12/24/22 22:00	604.2846069	756.2507904	485.3608398	540.6225535	495.1682129	653.342095 690.9425049	741.7326864 820.8409424	822.0646 793.1456299	832.4698141 890.0993652	895.6067587 587.9828491	653.2376774	489.676239	652.328164 480.79				499.816528	
12/24/22 23:00 12/25/22 0:00	693.9028931	756.2507904 756.2507904	466.2996826 447.4617615	540.6225535 540.6225535	496.3914185 495.1682129	653.34205 690.6364746 653.34205 692.4724721	741.7326864 819.0128174 741.7326864 818.4034424	822.0646 817.6254883 822.0646 829.5593262	832.4698141 889.1381226 832.4698141 894.9055176	895.6067587 564.9907837 895.6067587 529.7363281	653.2336774 653.2336774	491.3866882 490.4293018		10828 690.190 16458 690.190		637.5771149	501.529052 499.571868	
12/25/22 1:00	694.2370605	756.2507904 756.2507904	437.186554	540.6225535	492.4770508	653.342095 691.2494741	741.7326864 818.0987549	822.0646 829.8653564	832.4698141 894.9055176 832.4698141 894.9055176	895.6067587 529.539508	653.2376774	497.4770913	652.328164 475.85			637.5771149	494.523553	
12/25/22 2:00	693 5010996	756.2507904	439 3883667	SAN 6225525	487 339447	653.342095 690.3304443	741.7326864 818.0987549	822.0646 829.5593362	832.4698141 894.4248657	895.6067587 522.3789063	653.2376774	492 3457642	652 328164 430 71			637,5771149	488 817347	
12/25/22 3:00	693,7702026	756.2507904	444.2813416	540.6225535	480.7339478	653.342095 690.0244751	741.7326864 818.4034424	822.0646 830.1713867	832.4698141 895.3861084	895.6067587 526.6707764	653.2376774	475,7483215	652.328164 466.79	10064 630.190			481.957183	138 655,3486234
12/25/22 4:00	692.6468506	756.2527904	454.3119202	540.6225535	477.064209	653.342095 689.7185059	741.7326864 819.3175049	822.0646 829.8653564	832.4698141 894.4248657	895.6067587 536.7872314	653.2336776	471.1056824	652.328164 462.17	10581 690.190	5154 472.2832642	637.5771149	477.798156	667 655.3486234
12/25/22 5:00	693.3779907	756.2507904	470.2140503	540.6225535	477.5535278	653.342095 690.0244751	741.7326864 829.3175049	822.0646 829.8653564	832.4698141 894.9055176	895.6067587 553.6480713	653.2376774	469.6395874	652.328164 461.56			637.5771149	475.840972	
12/25/22 6:00	693.5739136	756.2527904	477.3088684	540.6225535	473.3945007	653.342095 689.7185059	741.7326864 829.6221924	822.0646 830.1713867	832.4698141 894.4248657	895.6067587 571.4285889	653.2376774	469.6395874	652.328164 462.13			637.5771149	479.042816	
12/25/22 7:00	694.0691528	756.2507904	480	540.6225535	474.1284485	653.342095 689.4124756	741.7326864 829.6221924	822.0646 829.2533569	832.4698141 895.3861084	895.6067587 583.0778809	653.2376774	470.6169729	652.328164 461.56			637.5771149	479.266052	
12/25/22 8:00	692.9905396	756.2507904	480.2446594	540.6225535	474.6177368	653.342095 689.4124756	741.7326864 829.6221924	822.0646 829.5593262	832.4698141 885.7738037	895.6067587 584.9172363	653.2376774	471.5943909		2196 690.190		637.5771149	481.223236	
12/25/22 9:00 12/25/22 10:00	693.760376 694.9207642	756.2507904 756.2507904	475.8409729 470.2140503	540.6225535 540.6225535	465.5657249 470.2140503	653.342095 690.0244751 653.342095 691.5544434	741.7326864 821.1456299 741.7326864 829.6221924	822.0646 828.9473877 822.0646 829.2532569	832.4698141 884.812561 832.4698141 884.812561	895.6067587 581.8516235 895.6067587 577.866333	653.2336774 653.2336774	472.5717773 472.9161316	652.328164 464.00 652.328164 465.5			637.5771149 637.5771149	482.691131	
12/25/22 11:00	694.3009033	756.2507904	463.3639221	540.6225525	465.8103943	653.342095 690.3304443	741.7326864 816.8799438	822.0646 830.477356	832.4698141 889.6187134	895.6067587 572.6547952	653.2276774	472.0830688	652.328164 464.30			637.5771149	481.712524	
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12/25/22 15:00	692.9472656	756.2507904	457.7369995	540.6225535	455.0458679	653.342095 688.1884766	741.7326864 829.3175049	822.0646 830.477356	832.4698141 890.5799561	895.6067587 544.4512329	653.2336774	455.2229614	652.328164 447.53	19917 630.190	5154 455.4334717	637.5771149	459.23489	195 655.3486234
12/25/22 16:00	694.2075806	756.2507904	483.4250793	540.6225535	451.3761597	653.342095 689.4124756	741.7326864 846.7398071	822.0646 829.2533569	832.4698141 891.5411987	895.6067587 571.7351074	653.2336774	450.8246765	652.328164 442.34		5154 449.084259	637.5771149	452.354736	655.3486234
12/25/22 17:00	693.6998901	756.2507904	500.5504761	540.6225535	451.3761597	653.342095 689.7185059	741.7326864 870.5057983	822.0646 831.0893555	832.4698141 901.1535034	895.6067587 600.8583984	653.2336774	451.902063	652.328164 443.86			637.5771149	454.801208	
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12/25/22 20:00	708.0024414	756.2507904	\$14.0061035 \$33.0581.055	540.6225535	500.3058167	653.342095 705.6303711	741.7326864 829.3723145	822.0646 876.3769531	832.4698141 885.2932129	895.6067587 609.7485962	653.2336774	499.4501953	652.328164	500 600.190		637.5771149	512.048950	
12/25/22 21:00	708.1619873 710.8816528	756.2507904 756.2507904	523.0581055 527.0530400	540.6225535 540.6225535	517.4312134 531.1009911	653.342095 706.5483398 653.342095 709.3023071	741.7326864 825.411377 741.7326864 817.4893799	822.0646 893.8188477 822.0646 846.3892212	832.4698141 884.3319702 832.4698141 885.2932129	895.6067587 620.4782104 895.6067587 629.0618896	653.2336774 653.2336774	518.5094604 531.2M3457	652.328164 516.50 652.328164 521.8	16621 630.190 18623 630.190		637.5771149	\$30.886M0	
12/25/22 22:00 12/25/22 23:00	710.8816528 710.4801025	756.2507904 756.2507904	527.9520498 532.1100074	540.6225535 540.6225535	521.1008911 522.5687866	653.342095 709.3023071 653.342095 708.9963379	741.7326864 817.4893799 741.7326864 801.0359497	822.0646 846.3892212 822.0646 830.477356	832.4698141 885.2932129 832.4698141 884.812561	895.6067587 629.0618896 895.6067587 638.258728	653.2336774 653.2336774	531.7043457 540.5009155	652.328164 523.8 652.328164 529.64				546.544311 556.085632	
12/26/22 0:00	709.117981	756.2507904	000000	540.6225535	532 5993652	653.342095 707.4663086	741.7326864 801.0359497	822.0646 823.8653564	832.4698141 880.4870605	895.6067587 647.1489868	653.2376774	549.2974854		S449 G0.19		637.5771149		577 655.3486234
,,-22 0.00												222271004					341.554.607	

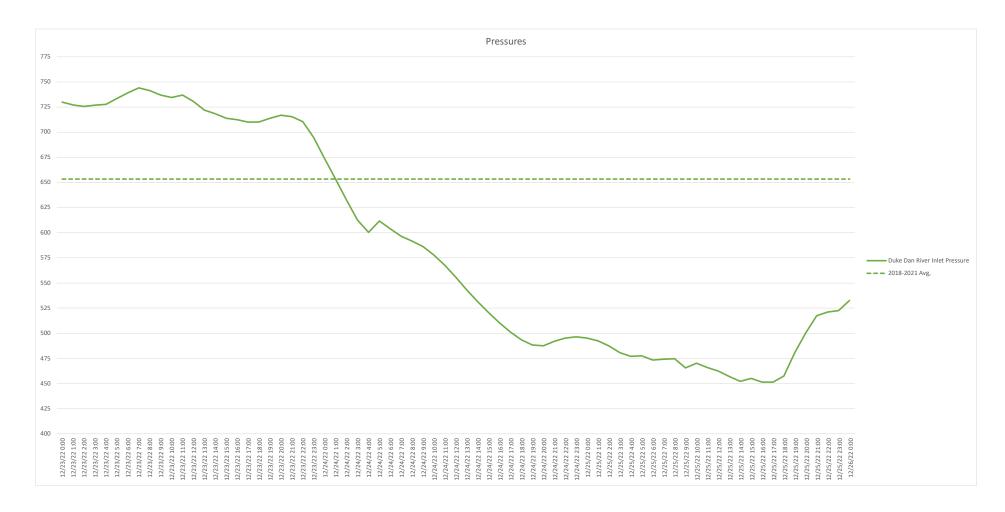
Transco Iredell



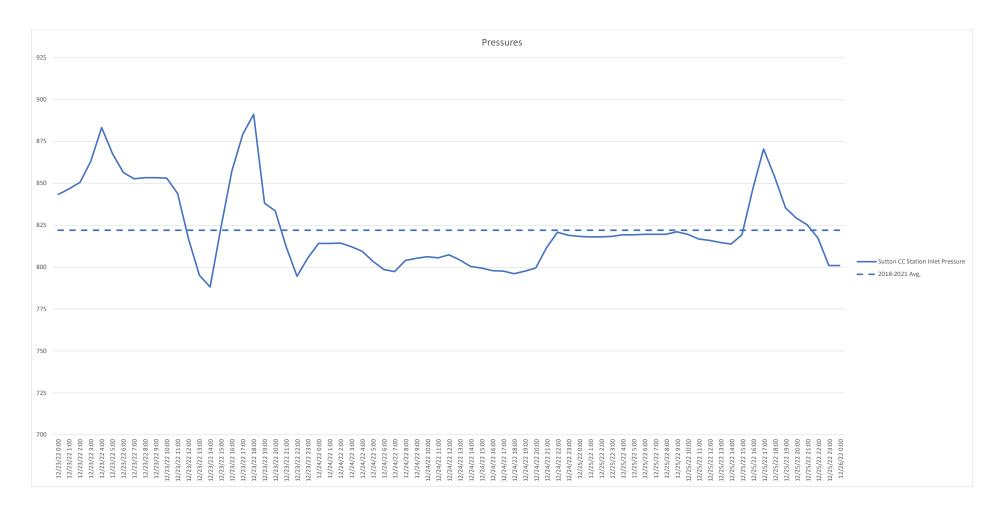
### Greenville Transco



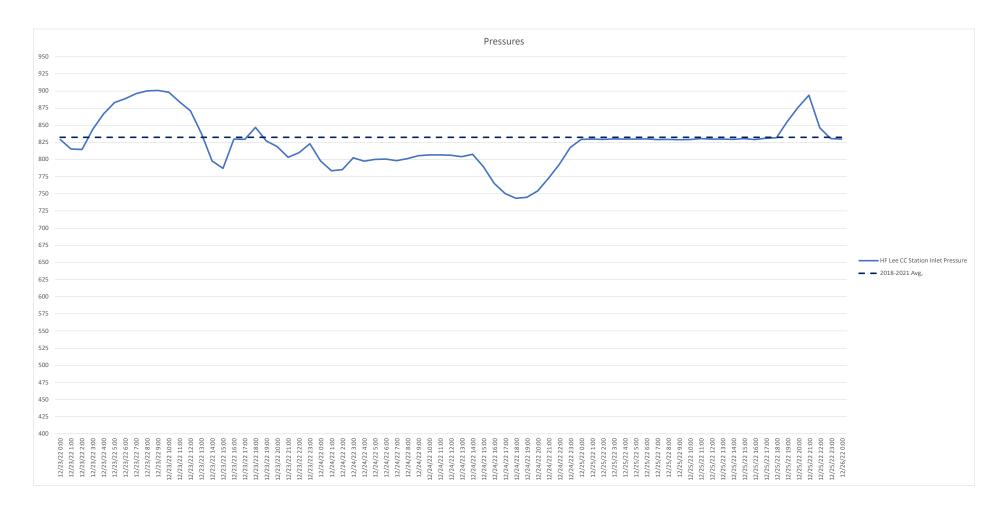
Dan River



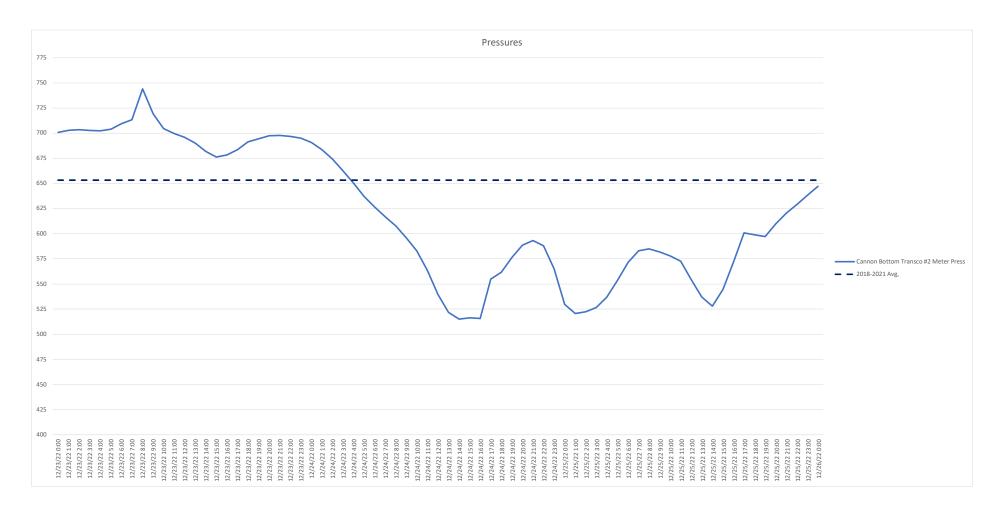
Sutton CC



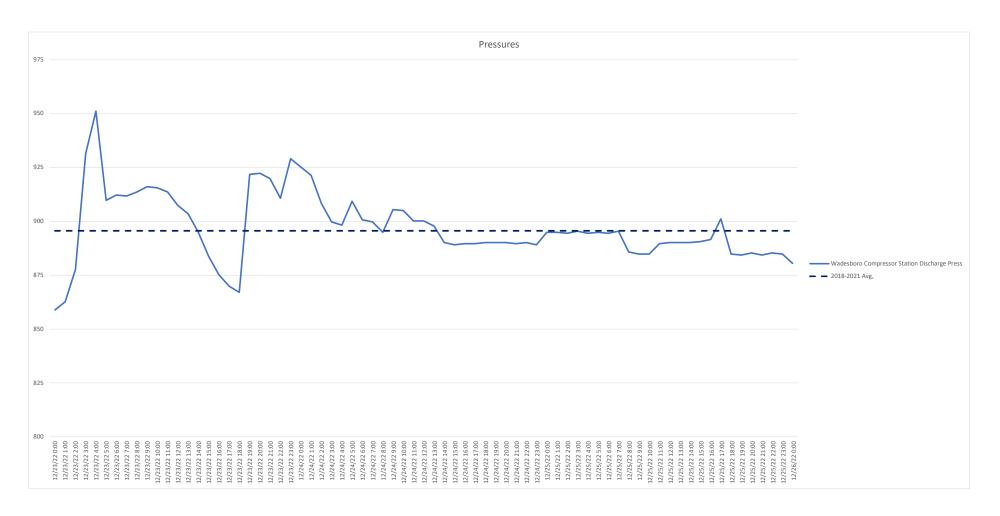
HF Lee CC



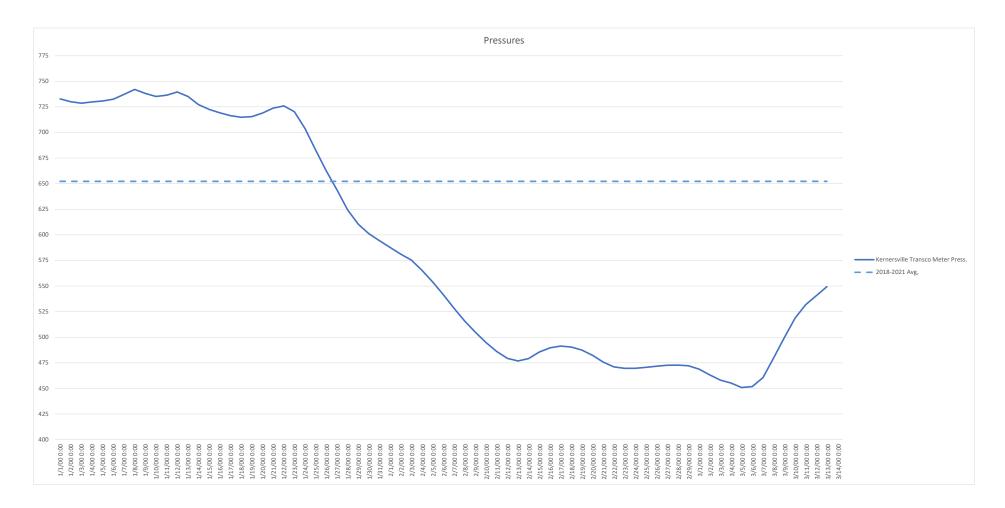
### Cannon Bottom Rd



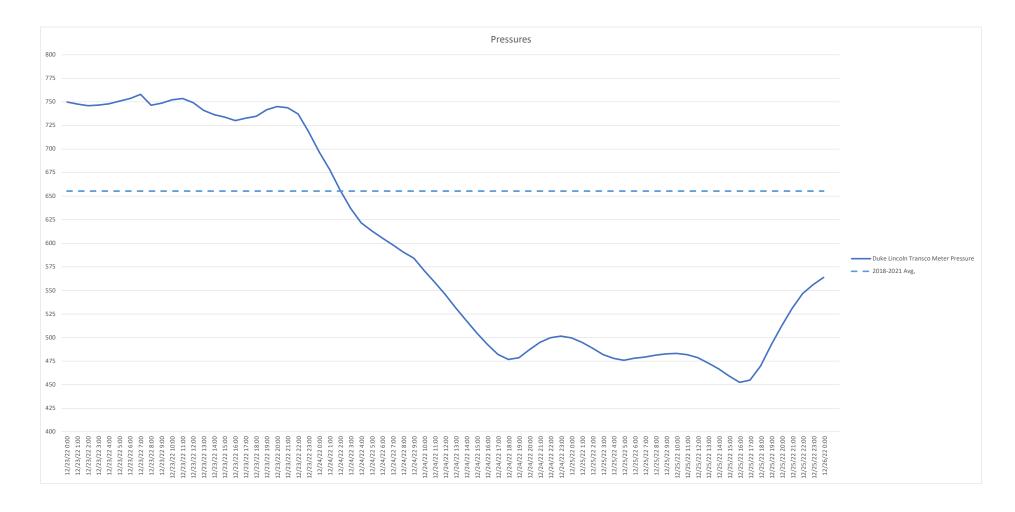
### Wadesboro Compressor



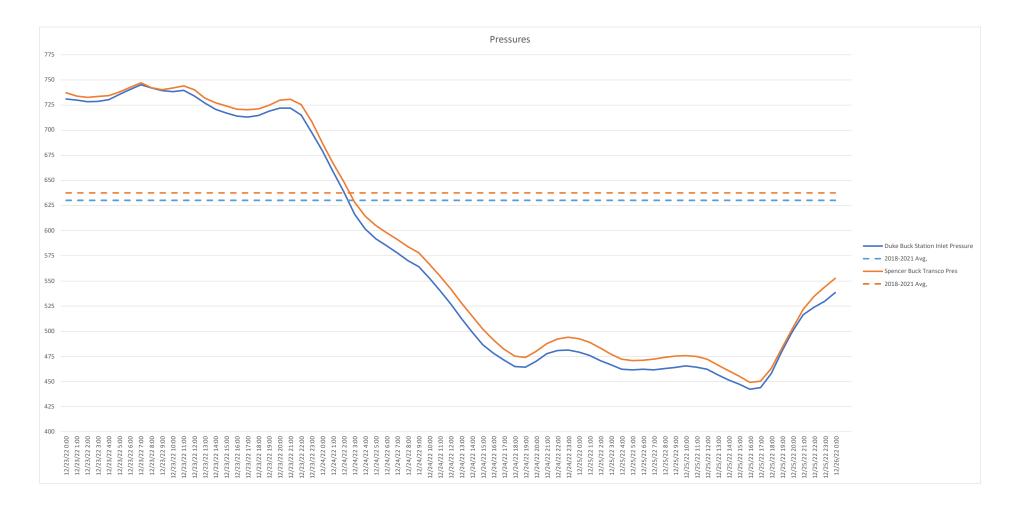
### Kernersville Transco



Lincoln Transco



Duke Buck

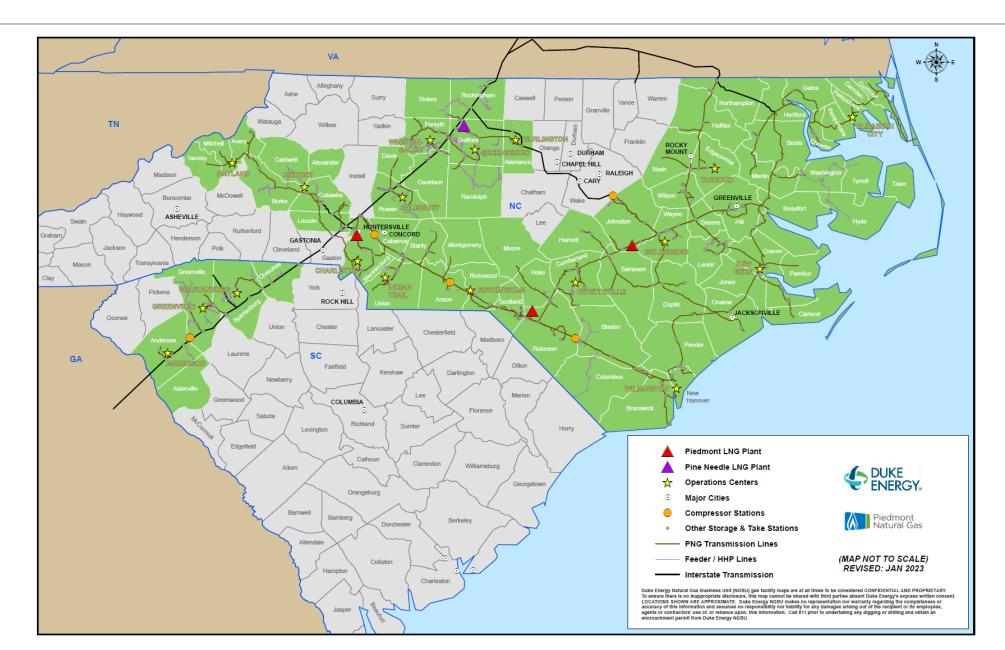


Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Data Request No. 2-13(a)-(c) Attachment

### Low Alarms

Location	Low Pressure Setpoint
Dan River Inlet Pressure	540
Spencer Buck Transco Pressure	550
Kernersville Transco Meter Pressure	500
Transco Iredell Station Inlet Pressure	600
Duke Lincoln Transco Meter Pressure	460
Greenville Transco OPP Inlet	400
Cannon Bottom Transco #2 Meter Pressure	450
Wadesboro Compressor Station Discharge Pressure	500
HF Lee CC Station Inlet Pressure	700
Sutton CC Station Inlet Pressure	700

### Piedmont Overview - Carolinas



13. Please identify the actual hourly demands observed for December 24, 2022. This response should include a timeline of the long-range load forecast, the seven-day ahead forecast, the three-day ahead forecast, and the day-ahead forecast showing the loads that the Company was anticipating prior to December 23, 2022, through December 28, 2022. In the Company's response, please distinguish between residential, commercial, and gas demand for electric generation.

**Response:** Please see the 2 CONFIDENTIAL attachments provided herewith.

CONFIDENTIAL attachment 1 of 2 includes the seven-day, three-day, and one-day ahead forecast. Please note that the Company does not forecast for power generation or differentiate between customer class when forecasting demand. The Company also does not create a separate long range forecast other than the Design Day schedule.

CONFIDENTIAL attachment 2 of 2 is the Company's Gas Month Report for December 2022, which includes Marquette's monthly forecast and shows the average, maximum, and minimum day. This file is used by the Company's Gas Trading personnel to prepare for the monthly baseload volumes.

Please see the Company's response to PS DR 2-14 for hourly demand for 12/24/2022.

Name and title of responsible person: Jeff Patton, Manager – Pipeline Services and Sarah Stabley, Managing Director – Gas Supply Optimization and Pipeline Services

Name and title of preparer: Joanna Greene, Lead Pipeline Forecast and Pipeline Services

Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

Piedmont Natural Gas Company, Inc.

Docket No. M-100, Sub 163

Public Staff Data Request No. 2

PS DR 2-13 Attachments 1 and 2
Confidential Attachments Filed Under Seal

14. Please provide graphs and supporting data (in working Excel files with working formulas intact) that illustrate the following: demand; LNG draws; gas storage; expected gas supply; and quantity of interrupted service or supply (if applicable) from December 23, 2022, through December 28, 2022, with Company service area specific information in as granular periods as possible, but no less than hourly. (Note: Individual graphs or a composite of graphs may be provided in response.)

**Response:** The Company did not have any interrupted pipeline transportation service for this period nor any other time in 2022. The Company saw a small cut of physical supply which had been purchased at Puddlefield on the Leidy Line in Transco Zone 6 in the amount of 20 dts on gas day 27. However, the Asset Manager kept the volume whole at Piedmont's City Gate. On gas day 28, there was a cut of 3,183 dts at Station 85 in Transco Zone 4. 2,309 dts were cut by the Company's supplier, Southwest, and 874 dts were cut by JP Morgan. None of the cut volumes were due to Force Majeure and all were considered "normal" cuts that the Company sees from time to time. Please see the Company's response to PS DR 2-15(c) and 2-15(d) for the expected supply. Please see the CONFIDENTIAL attachment provided herewith, which includes hourly takes and LNG withdrawals. The file also includes the daily storage withdrawals for each gas day as the Company does not have access to hourly takes from interstate storages.

Name and title of responsible person: Jeff Patton, Manager - Pipeline Services & Sarah Stabley; Managing Director – Gas Supply Optimization and Pipeline Services

Name and title of preparer: Joanna Greene, Lead Gas Forecasting and Pipeline Service

Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

Piedmont Natural Gas Company, Inc.

Docket No. M-100, Sub 163

Public Staff Data Request No. 2

### PS DR 2-14 Attachment Confidential Attachment Filed Under Seal

- 15. For the period December 23, 2022, through December 26, 2022, please provide a general timeline in 15-minute increments showing changes in, but not limited to:
  - a. Day ahead and hourly demand forecasts;
  - b. Notifications (phone calls, emails, social media, etc.) to other utilities, gas suppliers, or other regulatory agencies;
  - c. Gas purchases; gas sales; firm or interruptible purchases/sales;
  - d. Fuel source availability notifications from fuel source suppliers or shippers of fuel constraints or fuel deliverability restrictions;
  - e. Transmission system constraints;
  - f. Gas conservation notifications to customers;
  - g. Curtailment notification to interruptible customers;
  - h. Operational Flow Order (OFO) notices from Transco or any other suppliers on the distribution system;
  - i. OFO notices from Piedmont to its customers; and
  - j. Any other information that would show how the Company was informed or provided information as the situation was unfolding.

### Response:

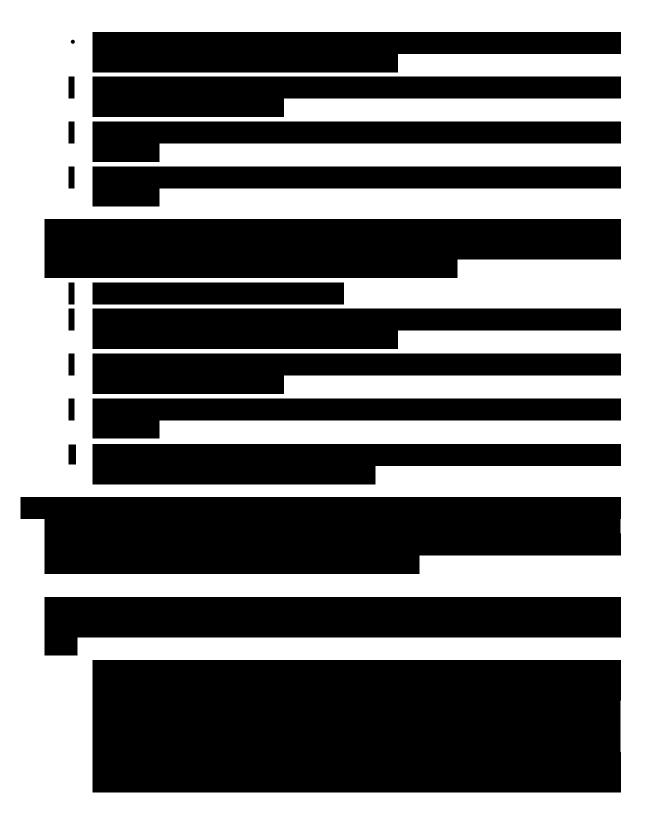
 a. Please see the Company's CONFIDENTIAL 2-15(a) attachment provided herewith. [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]

- b. Please see the Company's CONFIDENTIAL 2-15(b) attachment provided herewith regarding the timeline for communications with other utilities and gas suppliers. Also, please see the Company's response to PS DR 2-24(f) for a timeline of communications and notification to North Carolina regulatory agencies.
- c. [BEGIN CONFIDENTIAL]

Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023



Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023



### [END CONFIDENTIAL]

- e. Piedmont did not experience transmission system constraints during this period.
- f. Piedmont did not issue or otherwise have need to issue any gas conservation notices to its customers during this period of time.
- g. No such customer notifications were issued by Piedmont during this period because Piedmont did not need to interrupt or curtail natural gas service to any customers during this weather event.
- h. and i. As background, please note that the gas industry does not segment the day into 15-minute increments, as done in the electric industry. Rather, the gas

industry utilizes, for timing references, a gas day that is segmented across five standard NAESB gas scheduling cycles. Accordingly, Piedmont's response herein will provide a general timeline referencing the five standard NAESB nomination cycles, which are as follows:

- 1. Timely cycle (2pm ET, day prior to start of gas day);
- 2. Evening cycle (7pm ET, day prior to start of gas day);
- 3. Intraday 1 cycle (11am ET, 1 hour into gas day);
- 4. Intraday 2 cycle (3:30pm ET, 5.5 hours into gas day);
- 5. Intraday 3 cycle (8pm ET, 10 hours into gas day).

### Timeline:

### December 22nd – Timely (Gas Day 23)

- Transco An Operational Flow Order (OFO) was in effect at this time on Transco in zones that impacted Piedmont. Transco initiated the OFO effective December 19th. The Notice 13208004 provided to Piedmont and other customers of this Transco OFO is shown in the Company's 2-15(h) attachment provided herewith.
- Columbia An OFO was in effect at this time on Columbia in areas of their pipeline system that impacted Piedmont. Columbia initiated the OFO effective December 16th. The Notice 25856841 provided to Piedmont and other customers of this OFO is shown in the Company's 2-15(h) attachment provided herewith.
- Piedmont An Operational Order for Piedmont's transportation customers and their suppliers – aka their gas brokers and third-party agents – was in effect at this time. Piedmont initiated the Operational Order effective December 19th. The Notice 20221216 to customers of Piedmont's Operational Order is shown in the Company's 2-15(h) attachment provided herewith.

### December 22nd – Evening (Gas Day 23)

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 23rd – Intraday 1 (Gas Day 23)

- Transco no change from Timely
- Columbia no change from Timely

Piedmont – no change from Timely

### December 23rd - Timely (Gas Day 24)

- Transco Their previously issued OFO was still in effect.
- Columbia Their previously issued OFO was still in effect.
- Piedmont- The previously issued Operational Order was still in effect.

### <u>December 23rd – Intraday 2 (Gas Day 23)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 23rd – Evening (Gas Day 24)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 23rd - Intraday 3 (Gas Day 23)

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 24th – Intraday 1 (Gas Day 24)

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 24th – Timely (Gas Day 25)</u>

- Transco Their previously issued OFO was still in effect.
- Columbia Their previously issued OFO was still in effect.
- Piedmont- The previously issued Operational Order was still in effect.

### <u>December 24th – Intraday 2 (Gas Day 24)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 24th - Evening (Gas Day 25)

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 24th – Intraday 3 (Gas Day 24)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 25th – Intraday 1 (Gas Day 25)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 25th – Timely (Gas Day 26)</u>

- Transco Their previously issued OFO was still in effect.
- Columbia Their previously issued OFO was still in effect.
- Piedmont- The previously issued Operational Order was still in effect.

### <u>December 25th – Intraday 2 (Gas Day 25)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 25th – Evening (Gas Day 26)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 25th – Intraday 3 (Gas Day 25)

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### <u>December 26th – Intraday 1 (Gas Day 26)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 26th – Timely (Gas Day 27)

- Transco Their previously issued OFO was still in effect.
- Columbia Their previously issued OFO was still in effect.
- Piedmont- The previously issued Operational Order was still in effect.

### <u>December 26th – Intraday 2 (Gas Day 26)</u>

- Transco no change from Timely
- Columbia no change from Timely

Piedmont – no change from Timely

### <u>December 26th – Evening (Gas Day 27)</u>

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely

### December 26th – Intraday 3 (Gas Day 26)

- Transco no change from Timely
- Columbia no change from Timely
- Piedmont no change from Timely
  - j. Other such relevant information that was accessible and monitored by Piedmont during this time pertained to weather, such as publicly available NOAA weather updates and gas pipeline pressures. Regarding the latter, Piedmont monitored it's our own system pressures and flow rates from the Company's Control Room as the weather situation unfolded between December 23rd to December 26th. Please see the Company's response to PS DR 2-31 for system pressure timelines.

### Name and title of responsible person:

- a. Jeff Patton, Manager Pipeline Services and Sarah Stabley, Managing Director-Gas Supply Optimization and Pipeline Services
- b. Adam Long, Vice President Gas Pipeline Operations and Pia Powers, Managing Director Gas Rates & Regulatory
- c. Todd Breece, Manager Natural Gas Trading & Optimization and Sarah Stabley, Managing Director Gas Rates & Regulatory
- d. Todd Breece, Manager Natural Gas Trading & Optimization and Sarah Stabley, Managing Director --Gas Rates & Regulatory
- e. Neil Moser, General Manager Engineering, Planning, and Pipeline Integrity
- f. Adam Long, Vice President Gas Pipeline Operations
- g. Neil Moser, General Manager Engineering, Planning, and Pipeline Integrity

- requested bate bue. I estuary 17, 2020
- h. Sarah Stabley, Managing Director Gas Supply Optimization and Pipeline Services
- i. Sarah Stabley, Managing Director Gas Supply Optimization and Pipeline Services
- j. Adam Long, Vice President Gas Pipeline Operations

### Name and title of preparer:

- a. Alex Kosuda, Senior Transportation Pipeline Service Analyst
- b. Andrew Donato, Manager Gas Control and Pia Powers, Managing Director Gas Rates & Regulatory
- c. James Manning, Senior Gas Trader
- d. James Manning, Senior Gas Trader
- e. Neil Moser, General Manager—Engineering, Planning, and Pipeline Integrity
- f. Adam Long, Vice President Gas Pipeline Operations
- g. Neil Moser, General Manager—Engineering, Planning, and Pipeline Integrity
- h. Brady Gould, Manager Natural Gas Scheduling and City Gate Operations
- i. Brady Gould, Manager Natural Gas Scheduling and City Gate Operations
- j. Adam Long, Vice President Gas Pipeline Operations

Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

Piedmont Natural Gas Company, Inc.

Docket No. M-100, Sub 163

Public Staff Data Request No. 2

PS DR 2-15(a) Attachment

Confidential Attachment Filed Under Seal

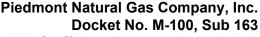
Piedmont Natural Gas Company, Inc.

Docket No. M-100, Sub 163

Public Staff Data Request No. 2

PS DR 2-15(b) Attachment

Confidential Attachment Filed Under Seal



PIEDMONT NATURAL GAS CAROLINAS Public Staff Data Request No. 2-15()

Attachment 1 de 3

### Page 1 off1



TSP: 006996219 TSP Name: PNG NCSC

**Notice Identifier:** COLD OFO STARTING MON DEC 19-20221216

**Notice Stat Desc:** 

Natural Gas

**Notice Type Desc:** Operational Flow Order

**Notice Category:** Critical **Critical Desc:** Yes

**Notice Scope: TSP SPECIFIC** 

PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC Subject:

EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER

NOTICE

Posting Date/Time: 12/16/2022 09:19:49

**Notice Eff Date/Time:** 12/16/2022 00:15:00

Notice End Date/Time:

Reqrd Rsp Desc: No

Response Date/Time:

**Prior Notice Identifier:** 

Superseded By: COLD OFO TERMINATED GD 29 -20221228

### **Notice Text:**

TO ALL NORTH CAROLINA & SOUTH CAROLINA THIRD PARTY AGENTS AND CUSTOMERS: PIEDMONT OPERATIONAL ORDER:

Due to colder temperatures and operational requirements on Piedmont's system, effective starting gas day December 19, 2022 until further notice. Customers and Third-Party Agents are required to maintain a daily short imbalance position of no greater than five (5%) percent or 1,000 dth, whichever is greater, of daily burns.

Any and all pools settling short positions greater than five (5%) percent or 1,000 dth, whichever is greater, of daily burns for days that the Short/Cold Operational Order is in effect will be considered not in compliance with this Operational Order.

Customers not complying with this Operational Order will be assessed all penalties and charges applicable to unauthorized under-run volumes as described under "Unauthorized Gas" in Piedmont's Rate Schedule 106 (NC) and Rate Schedule 206 (SC).

For any daily short imbalances greater than five (5%) percent or 1,000 dth, whichever is greater, such charges and penalties include per the tariff, a rate set forth on the Company's 'Rates and Charges' tariff sheet plus the higher of a daily and monthly commodity index price as described in the tariff in addition to your regular tariff charges under Rate Schedule 113 or 114 (Rate Schedule 213 or 214 for SC), as applicable.

In summary, Piedmont has issued a Short/Cold Operational Order only starting on gas day December 19th 2022 until further notice.

### TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC

12/19/2022

09:00:00 CST

Public Staff Data Request No. 2-15(h,i)

Attachment 2 of 3

Page 1 of 2

Notice Eff Time: Notice End Date:

Notice Eff Date:

Critical:

Notice End Time:

Notice ID: 13208004 Initiate Notice Stat Desc: OFO Notice Type Desc: 12/16/2022 Post Date:

Prior Notice:

Reqrd Rsp Desc:

No response required

07:57:20 CST

Rsp Date: Rsp Time:

Post Time:

007933021 TSP:

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC TSP Name:

### **Notice Text:**

Subject: Operational Flow Order - Imbalance

Transco has provided notice of limited flexibility to manage imbalances and recommended shippers maintain a concurrent balance of receipts and deliveries. In order to ensure maintenance of line pack, maintain safe, efficient and reliable services, manage imbalances, and handle other within-the-day volatility Transco is issuing an Operational Flow Order (OFO) as indicated below.

Monday,

**Beginning Gas Day:** December 19, 2022 9:00 AM CT

Until Further

**Ending Gas Day:** 

Notice

OFO Area(s): Zone 4, 5, 6 Type of OFO: **Imbalance** 

Due Type of Imbalance:

From Shipper **Transactions Include:** Deliveries\*

**Beginning Cycle:** Timely

Until Further **Duration:** Notice

Due

**Tolerance % Allowed** 

(or 1000 dth, Zone

whichever is greater):

From Shipper

Zone 4, 5, 6 -

5%

Affected Shipper(s) (DUNS #):\*\*\*

Affected Location(s)

(DRN #/Loc ID):\*\*\*\*

**OBA Subject to OFO:** 

If Yes, OBA **Parties (DUNS** #):\*\*\*

ΑII

No

- \* OFO based on all transactions with deliveries in affected OFO area.
- \*\*OFO based on all transactions with receipts in affected OFO area.
- \*\*\* If specific DUNS #s have been identified, only imbalances created by those shippers/OBA parties will be subject to the OFO provisions.
- \*\*\*\*If specific DRN #/Loc ID's have been identified, only imbalances created at those location(s) will be subject to the OFO provisions.

This OFO is directed to shippers consistent with Section 52 of Transco's FERC Gas Tariff General Terms and Conditions with a minimum of \$50 per dt per day penalty. This OFO will continue until further notice. Buyers with imbalances greater than the allowed tolerance will be subject to penalties specified in Section 52 of Transco's FERC Gas Tariff General Terms and Conditions.

Additional information on Operational Flow Orders is available at this link:

http://www.1line.williams.com/Transco/files/training/Critical Day.pdf

Please contact your Commercial Services Representative if you have any questions.

12:00:00 AM

12:00:00 AM

TSP Name Columbia Gas Transmission, LLC 054748041 Notice ID 25856841 Notice Type Description: Operational Flow Order Post 12/15/22 7:04:05 AM

Notice Effective

Author: Ryan Rose

Notice End

12/15/22

01/15/23

Notice Stat Desc: Initiate Prior Notice:

Critical: Y

Subject: Operational Flow Order: Receipt Points in Market Areas 26, 30, 35, 41 & 42, Eff.

Regrd Rsp Desc: No Response Required

Response

December 16, 2022

Notice Text

Pursuant to the provisions of Section 17 of the General Terms and Conditions of its FERC Gas Tariff, Columbia Gas Transmission, LLC ("TCO") is issuing an Operational Flow Order ("OFO") to Shippers under all transportation rate schedules with receipts in Market Areas 26, 30, 35, 41 and 42 to alleviate conditions which threaten the integrity of TCO's system and its ability to meet its firm service obligations.

As explained in Pre OFO (Notice ID 25856713), due to the level of high quantities of production received in Market Areas 26, 30, 35, 41 and 42, physical receipts must match or exceed scheduled receipts in order to provide reliable firm service across the TCO system. During the upcoming forecasted cold weather event, receipt points on TCO's system may experience operational issues that could result in a failure to deliver scheduled quantities. As a result, TCO is issuing this OFO to alleviate threats to its system integrity caused by underperformance at any receipt point in these marketing areas, preserve the operating performance of its pipeline system, and maintain pipeline operations at the pressures required to provide reliable firm services.

The terms of the OFO are as follows:

- 1. The Time and Date of Issuance of this OFO is Thursday, December 15, 2022, at 8:20 AM ET.
- 2. The OFO will become effective for the Gas Day Friday, December 16, 2022.
- 3. This OFO will continue in duration until Columbia issues further notice of termination of this OFO.
- 4. The Shippers impacted by this OFO are those scheduling receipts of gas in Market Areas 26, 30, 35, 41 and 42 whose physical receipts are not greater than or equal to their scheduled receipts during a Gas Day.
- 5. Pursuant to the OFO, the following actions must be taken:

During the period this OFO is in effect, receipt points must be balanced such that actual receipts into Market Areas 26, 30, 35, 41 and 42 must be greater than or equal to the scheduled receipt quantities into these areas, unless otherwise mutually agreed on a nondiscriminatory basis. Impacted shippers must align scheduled quantities with physical deliveries in Market Areas 26, 30, 35, 41 and 42 during each Gas Day, as more specifically set forth below, which may require communication with upstream operators. Shippers must remain in balance at the start of, and throughout, each Gas Day, beginning with Gas Day Friday, December 16, 2022, and until further notice. TCO will allow for a tolerance in aggregate volumes of 5% of scheduled receipt quantities or 5,000 Dth whichever is higher, which will be in effect throughout the duration of the OFO unless revised through an update to this notice. TCO will continue to monitor for underperformance and reserves the right to add additional market areas to this OFO as deemed necessary.

- 6. The justification for issuing the OFO is as set forth above.
- 7. Additional information: Shippers who do not comply with the terms of this OFO will be subject to penalties in accordance with Section 19.3 of TCO's FERC Gas Tariff, and/or an underperformance posting will be made with appropriate reductions to scheduled quantities to follow. Reductions will be made in the ID2 confirmation cycle based on EPSQ and rankings for the shortage for the current Gas Day, or any shortage from hours after the close of ID3 for the previous Gas Day. Shippers are encouraged to stay coordinated with upstream suppliers for changes in physical flow for the duration of the OFO.

If a penalty is assessed, the penalty will be based on all quantities in aggregate in violation of the OFO. Penalties will be based on the shipper's prorated share of the total underdelivered gas above the tolerance at the receipt point for that day at the higher of: 19.3(i) a price per Dth equal to three times the midpoint of the range of prices reported for "Columbia Gas, Appalachia" as published in Platts Gas Daily price survey for the days on which the OFO is issued, or 19.3(ii) a price per Dth egual to 150 percent of the highest midpoint posting for either: Mich Con City-gate, Transco, Zone 6 Non-N.Y., or Texas Eastern, M-2 Receipts as published in Platts Gas Daily price survey for the days on which the OFO is issued. Penalties under 19.3(ii) will only be assessed on days in which the daily spot price of gas exceeds three times the midpoint of the range of prices reported for "Columbia Gas, Appalachia."

Please contact your Customer Services Representative with any questions.

**Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163** Public Staff Data Request No. 2-15(h,i)

- 16. For the period December 23, 2022, through December 26, 2022, please provide a detailed list of the natural gas fueled generation units Duke Energy called on to operate/dispatch and how PNG performed with regards to gas supply and demand.
  - a. Please provide any communications that occurred between the Company's interstate pipeline suppliers/storage, Duke Energy, and PNG regarding the pressure drop on the PNG system.

**Response:** Piedmont's transportation customers include the following Duke Energy plants located within Piedmont's North Carolina service territory: Sutton, Smith Energy Center, HF Lee, Wayne County, Lincoln, Buck, Belews Creek, Marshall, Dan River, and Rockingham. During this period, Piedmont had no operational issues that impaired or impeded Piedmont's ability to provide gas service to its customers, including such gas service to Piedmont's power generation customers. Communications between Duke Energy and Piedmont were Control Room to Control Room regarding supplier pressures at Dan River, Buck, and Rockingham. Such communications were the result of Duke's desired gas pressures from Transco for power generation not being met by Transco.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

Name and title of preparer: Andrew Donato, Manager – Gas Control

Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

17. In regard to gas supply system performance, customer curtailment, and demand exceeding predicted supply, provide dates and times of meetings, emails, discussions, and other communications in which decisions were made, as well as a list of all persons participating in decision making, including their job titles.

**Response:** Please see the information below:

December 16, 2022 Time12:00-1:00 PM Winter Operations Meeting

### **Attendees**

Adam Long, Vice President - Gas Pipeline Operations
Brian Weisker, Senior Vice President - Chief Operating Officer
Sasha Weintraub, Senior Vice President and President, Natural Gas Business Unit
Sara Stabley, Managing Director Gas Supply Optimization & Pipeline Services
Neil Moser, General Manager Engineering, Planning & Pipeline Integrity
Steve Lisk, Director NG Engineering - System Planning
Andrew Donato, Manager Gas Control
Amy Presson, Vice President - Major Projects
Melton Huey, Director Gas Asset Risk Management
Alan Henderson, Director Technical Field Operations
Ryan Smith, Director LNG and Compression

Additional leadership system status meetings during the event:

12/20: 1200

12/24: 0800, 1300, 2000, 12/25: 0900 and 2000

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

Name and title of preparer: Adam Long, Vice President - Gas Pipeline Operations

Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

- 18. Please provide the following unit outage information:
  - a. A list of PNG assets that were known to be unavailable going into December 23, 2022.
  - b. A list of PNG assets that were expected to be online or available but failed or failed to respond when called upon from December 23, 2022, through December 28, 2022.
  - c. A list of PNG assets that underperformed or were constrained (gas supply below expected output) from December 23, 2022, through December 28, 2022.
    - i. A list of the amount of constrained natural gas in dts, and the dates and hours impacted for each component and/or gas purchase.

### Response:

- a. None
- b. None
- c. None

Name and title of responsible person: Todd Breece, Manager - Natural Gas Trading & Optimization

Name and title of preparer: James Manning, Senior Gas Trader

- 19. For all units/resources/programs that failed to perform, perform as expected, or perform at full nameplate potential from December 23, 2022, through December 28, 2022, please provide:
  - a. The time at which they failed/underperformed;
  - b. Period of time associated therewith;
  - c. The root cause (or most likely suspected cause) of the failed/underperforming asset;
  - d. Amount of lost gas supply at each component; and
  - e. Steps taken to mitigate such issues.

**Response:** N/A. All assets performed as expected.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

Name and title of preparer: Ryan Smith, Director - LNG and Compression

- 20. Regarding gas supply from December 23, 2022, through December 28, 2022, please describe the Company's understanding of the status of the natural gas supply and any potential impacts on its operation before and during the event period for:
  - a. Transco;
  - b. Other interstate pipeline/storage providers and suppliers/marketers.

### Response:

- a. The Company was aware of an Operational Flow Order (OFO) in effect on Transco during this period of time. The Company's understanding of the OFO in effect was that the Company would be permitted to use up to 5% more gas than the Company brought to its City Gate, with no financial repercussions. Through examination of the Company's inventory in storages, pipeline capacity, and LNG availability, it was determined that the Company would have ample supply to meet customer demand on Transco. While the OFO on Transco limited the ability to take gas off their pipeline, without bringing in supply to meet the off-take, it did not limit the Company's ability to use each of the transportation, storage, and/or LNG assets in place to meet the responsibility of serving customers.
- b. The Company was also aware of an OFO in effect on Columbia Gas Transmission during this period of time. Effective gas day 12/23/2022, the tolerance on Columbia was reduced to 2% of scheduled receipt quantities or 2,000 dth, whichever was higher. The morning of 12/24/22 at 10:33 AM EST, the Company received a notice from Columbia of an update to their OFO, due to extreme cold temperatures and underperformance events impacting the Market Areas. The notice alerted the shippers that underperformance would be met with "Reductions will be made in the ID1 confirmation cycle based on EPSQ and rankings for the shortage for the current Gas Day, or any shortage from hours after the close of ID3 for the previous Gas Day." As the extreme cold continued, Columbia continued to have operational challenges. At 7:30 PM EST, 12/24/22, Columbia issued a Force Majeure notification due to "Widespread Underperformance – Operational Challenges" to notify customers of "widespread underperformance events from receipt point operators across the [Columbia] system due to freezing of production wells. [Columbia] is actively coordinating with upstream operators to reduce nominations to align with physical flow. However, these underperformance events have created operational challenges including reduced pressures and line pack levels which could create an inability to serve." The Company is aware that OFOs impacting other pipelines are likely to be in place during a cold weather event the magnitude

of Winter Storm Elliott. The OFOs present on pipelines feeding into Transco would prevent suppliers/marketers from "shorting" those pipelines to keep more gas on Transco.

Name and title of responsible person: Todd Breece, Manager – Natural Gas Trading & Optimization and Sarah Stabley, Managing Director – Gas Supply Optimization and Pipeline Services

Name and title of preparer: James Manning, Senior Gas Trader

- 21. Please provide a detailed discussion regarding when the Company received notifications from its interstate pipeline/storage provider, suppliers/marketers, etc., of potential natural gas supply or pressure issues.
  - a. Please provide a general timeline of the notifications and what the Company did in reaction to the notifications.
  - b. Please list how the notifications were issued to the Company and the timeframe for each.
  - c. Please provide a list of all the mitigating actions required due to loss of pressure on Transco's system.
  - d. Did the Company inquire about potential spot or Z5 purchases?

**Response:** Piedmont did not receive any formal notification from its interstate pipeline/storage provider, nor from its suppliers/marketers, etc. because no pressure guarantees or obligations were impacted, and no suppliers failed to deliver gas.

- a. All such communication during this event with Transco was from the Piedmont Control Room to the Transco Control Room via phone calls on a periodic basis as Piedmont monitored pressure. There were no mitigating actions required as no pressure or flow obligations were violated.
- b. N/A. There were no such notifications to Piedmont from Transco or from Piedmont's suppliers.
- c. N/A. There were no mitigating actions required as no pressure or flow obligations were violated.

d.	[BEGIN CONFIDENTIAL]	
		[END
	CONFIDENTIALI	•

### Name and title of responsible person:

- a. Adam Long, Vice President Gas Pipeline Operations
- b. Adam Long, Vice President Gas Pipeline Operations

- c. Adam Long, Vice President Gas Pipeline Operations
- d. Todd Breece, Manager Natural Gas Trading & Optimization and Sarah Stabley, Managing Director Gas Supply Optimization and Pipeline Services

### Name and title of preparer:

- a. Andrew Donato, Manager Gas Control
- b. Andrew Donato, Manager Gas Control
- c. Andrew Donato, Manager Gas Control
- d. James Manning, Senior Gas Trader

### Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023

22. Please discuss how the Company provided its customers, including electric generation customers, notification of impending gas supply issues or curtailment.

**Response:** No such notifications were provided to Piedmont's customers because there were no impending gas supply issues to Piedmont's system that would negatively impact Piedmont's customers, nor were there any impending interruptions or curtailments to gas service for Piedmont's customers.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

Name and title of preparer: Adam Long, Vice President - Gas Pipeline Operations

23. Please provide the commodity prices being used during this period, along with supporting information from source data (values should be expressed in \$/dts).

**Response:** Please see the CONFIDENTIAL attachment provided herewith.

Commodity prices being used during this period were Gas Daily index prices, Inside FERC (IFERC) First of the Month index prices, fixed prices, and baseload prices which were calculated using New York Mercantile Exchange (NYMEX) and IFERC First of the Month index prices.

The indices referenced for purchase transactions from the publication were:

Transco, zone 1 (Platts, Gas Daily)

Transco, zone 3 (Platts, Gas Daily and IFERC's Gas Market Report)

Transco, zone 4 (Platts, Gas Daily)

Texas Eastern, ELA (Platts, Gas Daily)

Chicago city-gates (Platts, Gas Daily)

Transco, zone 6 non-N.Y. North (Platts, Gas Daily)

Columbia Gas, App. (Platts, Gas Daily)

Transco, Leidy Line receipts (Platts, IFERC's Gas Market Report)

NYMEX Henry Hub gas futures contract closings, Nov 28 - Dec 2022 Close (Platts, Gas Daily)

Sale transactions were executed at fixed prices, as well as index prices. The index price used for sales was Transco, Zone 5 del. South (Platts, Gas Daily).

Please note that approval from S&P Global Platts is required before the Company is permitted to share the applicable indices published by Platts. Such approval would be accomplished by the NC Public Staff signing a Confidentiality Agreement with S&P Global Platts.

Name and title of responsible person: Todd Breece, Manager - Natural Gas Trading & Optimization and Sarah Stabley, Managing Director - Gas Supply Optimization and Pipeline Services

Name and title of preparer: James Manning, Senior Gas Trader

Piedmont Natural Gas Company, Inc.

Docket No. M-100, Sub 163

Public Staff Data Request No. 2

### PS DR 2-23 Attachment Confidential Attachment Filed Under Seal

- 24. In regard to potential load curtailment, please provide:
  - a. A general narrative (or any written procedures) that describe the Company's process for determining when to begin its process for potential curtailments.
  - b. A description of how close the Company was to potentially performing curtailments to maintain system reliability.
    - i. Was curtailment the next feasible action to be taken at any point during from December 22, 2022, through December 28, 2022? If so, list each time this was so.
  - c. A discussion of how a system operator determines that a curtailment is needed and the process by which the operator selects the customers to curtail and outage durations.
  - d. A description of the process for notifying customers prior to curtailment.
  - e. A discussion and copies of any mass communications provided to customers regarding gas conservation and potential curtailment events.
  - f. A discussion and copies of all communications the Company had with the NCUC and NC Public Staff:
    - i. Prior to event.
    - ii. Real time during event.
    - iii. Subsequent to event, through December 28, 2022.

### Response:

- a. The two primary factors that Piedmont considers in determining if an interruption of gas service to some or all of its interruptible customers is warranted, are as follows:
  - 1. The availability of gas supply to the system;
  - 2. The system hydraulic capacity to deliver available gas supply at acceptable pressures from Piedmont's City Gate interconnection points to Piedmont's customer meters.

Specifically, Piedmont's gas supply, operations, and engineering personnel monitor customer gas usage, gas supply status and the weather outlook to assess (i.e., to forecast) the potential need for initiating an interruption of gas service to Piedmont's interruptible customers. This assessment is performed using Piedmont system modeling and real-time gas system pressure and flow information.

### Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023

Regarding factor number one listed above, in the event that Piedmont identifies that there will likely be insufficient gas supply to demand in the near term (i.e., demand in the upcoming days and/or hours ahead) by Piedmont's interruptible class of customers, Piedmont would accordingly initiate an interruption of service to customers in that class.

Regarding factor number two listed above, prior to and during high gas demand periods, Piedmont's system planning personnel utilize hydraulic modeling to evaluate potential interruptions of service while monitoring the system's performance throughout the duration of the event. If Piedmont's system modeling personnel predict unacceptably low system pressures based on forecasted weather conditions or that the system is constrained and pressures will approach critical lows, Piedmont would accordingly initiate an interruption of service to its interruptible customers.

- b. During Winter Storm Elliott, temperatures in Piedmont's service territory approached ranges where Piedmont has at times before initiated an interruption of gas service to its interruptible customers. However, Winter Storm Elliott occurred over a weekend and holiday period, which mitigated some of the gas demand that would have otherwise been experienced on Piedmont's system under those weather conditions.
  - i. Piedmont's system conditions did not reach the point, on a forecasted or actuals basis, where initiation of an interruption of service to interruptible customers was warranted. If temperatures had continued to fall and if system demands increased, Piedmont would have been closer to considering interrupting service to its interruptible customers, depending on the conditions and location of the predicted system constraints.
- c. Please see the Company's response to subpart (a) of this data request item for a discussion of how Piedmont determines that an interruption of service is warranted. When an interruption of service to customers is warranted, determining which specific interruptible customers to interrupt is based on the physical location impacting system performance and the margin rate applicable to the customer.
- d. Please see the Company's response to PS DR 2-8.
- e. No communications were needed, provided, or sent by Piedmont.
- f. Please see the following timeline of such communications through December 28, 2022, and five (5) referenced attachments herein.

- Friday, December 16, 2022 @ 10:16am: Piedmont provided notification via email to members of the NC Public Staff that Piedmont had issued an Operational Order in the Carolinas effective with the beginning of gas day Monday December 19, 2022. This Operational Order pertains to specific balancing requirements upon Piedmont's transportation customers and their agents. For North Carolina, this pertains to Piedmont's customers served under Rate Schedule 113 and 114, or related special contracts. (See attachment labeled "NC Public Staff communications-1")
- Wednesday, December 21, 2022 @ 11:46am: Piedmont provided notification via email members of the NC Public Staff that the Piedmont's Operational Order effective Monday December 19th was still in effect until further notice. (See attachment labeled "NC Public Staff communications-1")
- Wednesday, December 21, 2022 @ 11:55am: Piedmont provided notification via email to members of the NC Public Staff that Piedmont was not forecasting the need to interrupt or curtail natural gas service to any of its North Carolina customers during this cold weather event, and that Piedmont would continue to monitor this matter. (See attachment labeled "NC Public Staff communications-1")
- Wednesday, December 21, 2022 @ 1:27pm: Piedmont provided notification via email to a member of the NCUC that Piedmont was not forecasting the need to interrupt or curtail natural gas service to any of its North Carolina customers during this cold weather event, and that Piedmont would continue to monitor this matter. (See attachment labeled "NCUC communications-1")
- Thursday, December 22, 2022 @ 3:03pm: Piedmont received a question via email from a member of the NC Public Staff pertaining to Piedmont's gas service interruption plans. (See attachment labeled "NC Public Staff communications-2")
- Thursday, December 22, 2022 @ 3:13pm: Piedmont responded via email to the NC Public Staff's question pertaining to Piedmont's gas service interruption plans. (See attachment labeled "NC Public Staff communications-2")
- Saturday, December 24, mid-day through the morning of Dec 25: The NC Public Staff Executive Director inquired to Piedmont via text if Piedmont had interrupted gas service or anticipated the need to interrupt gas service during this weather event to any of its customers including power generation customers. Various texts were exchanged and one phone call occurred, whereby Piedmont communicated the ongoing status of its service to customers and its overall gas system operations, including the status of gas receipts/pressure from Transco. In summary, the communications from Piedmont explained that Piedmont's system

### Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023

performed as expected, and accordingly Piedmont did not need to interrupt service to any of its customers. (The text communications were not accessible to be attached herein)

- Saturday, December 24, 2022, mid-afternoon through the morning of Dec 25, 2022: The NCUC Chair inquired to Piedmont, via text and a subsequent phone conversation, about whether or not Piedmont had interrupted gas service or anticipated the need to interrupt gas service during this weather event to any of its customers including power generation customers. Various texts were subsequently exchanged whereby Piedmont communicated the ongoing status of its service to customers and its overall gas system operations including the status of gas receipts/pressure from Transco. In summary, the communications from Piedmont explained that Piedmont's system performed as expected, and accordingly Piedmont did not need to interrupt service to any of its customers. (See attachment labeled "NCUC communications-2")
- Wednesday, December 28, 2022 @ 8:37am: Piedmont provided notification via email to members of the NC Public Staff that Piedmont's Operational Order was being lifted effective the following day. (See attachment labeled "NC Public Staff communications-3")

### Name and title of responsible person:

- a. c. Neil Moser, GM Engineering, Planning and Pipeline Integrity
- d. f. Adam Long, Vice President Gas Pipeline Operations, and Pia Powers, Managing Director Gas Rates & Regulatory

### Name and title of preparer:

- a. c. Steve Lisk, Director Natural Gas Engineering
- d. f. Andrew Donato, Manager Gas Control and Pia Powers, Managing Director- Gas Rates & Regulatory

### Powers, Pia K

**From:** Powers, Pia K

**Sent:** Wednesday, December 21, 2022 11:55 AM

To: Mclawhorn, James; Patel, Neha; Nader, Jordan A; Boswell, Michelle; Johnson, Sonja; Johnson, Sonja

**Cc:** Hager, Laura M.; PiedmontRegulatory

Subject: RE: [External] FW: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

James, Michelle and teams,

I'll use this opportunity to also update you about another cold-weather related matter for Piedmont: the potential for interruption and/or curtailment of gas service to Piedmont's customers. Piedmont continues to monitor its system's ability to deliver gas to firm and interruptible customers notably during this weekend's anticipated cold weather event across the region. At this time, Piedmont does not forecast the need to interrupt or curtail natural gas service to any of its North Carolina customers during this cold weather event. Should circumstances in this regard change, I will keep you informed.

Thank you. And I hope that you all have a safe and enjoyable holiday season.

Pia





From: Mclawhorn, James <james.mclawhorn@psncuc.nc.gov>

Sent: Wednesday, December 21, 2022 11:51 AM

To: Hager, Laura M. <Laura.Hager@duke-energy.com>; Nader, Jordan A <jordan.nader@psncuc.nc.gov>; Boswell, Michelle <michelle.boswell@psncuc.nc.gov>

Cc: Powers, Pia K < Pia. Powers@duke-energy.com>

Subject: RE: [External] FW: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

\*\*\* CAUTION! EXTERNAL SENDER \*\*\* STOP. ASSESS. VERIFY!! Were you expecting this email? Are grammar and spelling correct? Does the content make sense? Can you verify the sender? If suspicious report it, then do not click links, open attachments or enter your ID or password. Thank you, Laura and Pia. I think this approach is best.

### **James**

\_\_\_\_\_

James S. McLawhorn
Director, Energy Division
Public Staff – North Carolina Utilities Commission
430 N. Salisbury Street, Suite 5018
4326 Mail Service Center
Raleigh, NC 27699-4300
(919) 733-2267
Electric Section
Natural Gas Section



Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

From: Hager, Laura M. < Laura. Hager@duke-energy.com >

Sent: Wednesday, December 21, 2022 11:45 AM

**To:** Nader, Jordan A < <u>jordan.nader@psncuc.nc.gov</u>>; Boswell, Michelle < <u>michelle.boswell@psncuc.nc.gov</u>>; Mclawhorn, James

<james.mclawhorn@psncuc.nc.gov>

Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163

Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Data Request No. 2-24f Attachment 1 of 5

Cc: Powers, Pia K < Pia. Powers@duke-energy.com>

Subject: [External] FW: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE Page 3 of 4

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Piedmont has historically sent these notification emails to one member of the Public Staff Energy Division (currently Neha) and one member of the Accounting division (currently Sonja). Pia and I discussed today that it may be helpful to include other individuals to ensure complete communication with Public Staff given holiday and vacation schedules.

I am forwarding you this notification that was sent to Neha and Sonja regarding an Operational Order that went into effect this past Monday December 19, 2022. Going forward I will include you on these emails as well as the email I send when an operational order is lifted.

This OFO is currently still in effect.

From: Hager, Laura M.

Sent: Friday, December 16, 2022 10:13 AM

To: Patel, Neha <neha.patel@psncuc.nc.gov>; sonja.johnson@psncuc.nc.gov

Cc: Powers, Pia K <Pia.Powers@duke-energy.com>; Couzens, Kally <Kally.Couzens@duke-energy.com>; King, Mandi J. <Mandi.King@duke-energy.com>;

PiedmontRegulatory < PiedmontRegulatory@duke-energy.com>

Subject: FW: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

Neha and Sonja – Piedmont has issued an Operational Order in the Carolinas effective with the beginning of gas day Monday December 19, 2022. I am forwarding the notification email below for your information.

From: Hargrove, Nathan D < Nathan. Hargrove@duke-energy.com>

Sent: Friday, December 16, 2022 9:54 AM

Subject: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

TO ALL NORTH CAROLINA & SOUTH CAROLINA THIRD PARTY AGENTS AND CUSTOMERS: PIEDMONT OPERATIONAL ORDER:

Due to colder temperatures and operational requirements on Piedmont's system, effective starting gas day December 19, 2022 until further notice. Customers and Third-Party Agents are required to maintain a daily short imbalance position of no greater than five (5%) percent or 1,000 dth, whichever is greater, of daily burns. Any and all pools settling short positions greater than five (5%) percent or 1,000 dth, whichever is greater, of daily burns for days that the Short/Cold Operational Order is in effect will be considered not in compliance with this Operational Order.

Customers not complying with this Operational Order will be assessed all penalties and charges applicable to unauthorized under-run volumes as described under "Unauthorized Gas" in Piedmont's Rate Schedule 106 (NC) and Rate Schedule 206 (SC).

For any daily short imbalances greater than five (5%) percent or 1,000 dth, whichever is greater, such charges and penalties include per the tariff, a rate set forth on the Company's 'Rates and Charges' tariff sheet plus the higher of a daily and monthly commodity index price as described in the tariff in addition to your regular tariff charges under Rate Schedule 113 or 114 (Rate Schedule 213 or 214 for SC), as applicable.

In summary, Piedmont has issued a Short/Cold Operational Order only starting on gas day December 19th, 2022 until further notice.

Nate Hargrove **Gas Transportation Market Analyst** 704.731.4151 nathan.hargrove@duke-energy.com





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Piedmont Natural Gas Company, Inc.
Docket No. M-100, Sub 163
Public Staff Data Request No. 2-24f Attachment 2 of 5
Page 1 of 1

Powers, Pia K

**From:** Powers, Pia K

**Sent:** Wednesday, December 21, 2022 1:27 PM

**To:** Jayasheela, Poornima

**Subject:** cold weather event this weekend

### Poornima,

Just a quick note regarding this weekend's cold weather event across the region, since this kind of weather front typically has us all especially attuned to the potential for interruption and/or curtailment of gas service to customers.

Piedmont continues to monitor its system's ability to deliver gas to firm and interruptible customers. At this time, Piedmont does not foresee the need to interrupt or curtail natural gas service to any of its South Carolina customers during this cold weather event. Should circumstances in this regard change, I will keep you informed.

Also on a separate matter, Pine Needle recently reached out to Piedmont regarding their rate case slated for 2023. I will send you an FYI email shortly sharing the communication that we received from them.

Thank you,

Pia

**Pia Powers (she/her)** | Managing Director of Gas Rates & Regulatory 4720 Piedmont Row Drive | Charlotte, NC 28210 | ☎ Mobile/Text: 704.249.6685 Pia.Powers@Duke-Energy.com





### Powers, Pia K

**From:** Powers, Pia K

**Sent:** Thursday, December 22, 2022 3:13 PM

To: Nader, Jordan A; McLawhorn, James-psncuc; Patel, Neha; Boswell, Michelle; Johnson, Sonja

**Cc:** Hager, Laura M.; PiedmontRegulatory

Subject: RE: [External] FW: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

Hi Jordan,

The quick answer here is 'yes'. At this time, I will refer you to Piedmont's filed comments, responses to Public Staff data requests and presentations in two open dockets: Docket Nos. M-100 Sub 135, and M-100 Sub 163. Certainly, Piedmont can continue to addresses any specific questions that Public Staff may still have in this regard after the event or any future point in time.

Thanks,

Pia

From: Nader, Jordan A < jordan.nader@psncuc.nc.gov>

Sent: Thursday, December 22, 2022 3:03 PM

To: Powers, Pia K <Pia.Powers@duke-energy.com>; McLawhorn, James-psncuc <james.mclawhorn@psncuc.nc.gov>; Patel, Neha <neha.patel@psncuc.nc.gov>;

Boswell, Michelle <michelle.boswell@psncuc.nc.gov>; Johnson, Sonja <sonja.johnson@psncuc.nc.gov>

Cc: Hager, Laura M. <Laura. Hager@duke-energy.com>; PiedmontRegulatory < PiedmontRegulatory@duke-energy.com>

Subject: RE: [External] FW: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

Pia,

Recognizing the potential for rapidly changing conditions with a winter storm of this magnitude, has Piedmont developed an interruption plan for IT and IS should conditions in this storm necessitate it?

Thanks,
Jordan Nader
Public Utilities Engineer
Natural Gas Section
North Carolina Utilities Commission Public Staff
919.733.0898

iMessage Sat, Dec 24 at 3:13 PM

Hey Pia - Charlotte Mitchell. Just heard from Chris. Are you available for a quick phone call?

Yes

Sat, Dec 24 at 8:57 PM

Meant to text you before I dialed, but my finger hit dial by accident

Transco delivery pressures to PNG's city gate continue to be on a downward trend. No eta on when they'll rebound

Hey No problem. I'm not in a place where I can talk right now. I appreciate the update. Is it correct to assume that this will be a bigger problem than for the

update. Is it correct to assume that this will be a bigger problem than for the Duke electric system? Or is Duke uniquely impacted?

Duke electric does not appear to be uniquely impacted here.

I'll have another update call in the morning and will text an update. Good news is that PNG continues to be able to serve all its customers (no interruptions of service to any customers) at present and forecasts no change in that regard for this weather event. Even with respect to PNG's power generation

event. Even with respect to PNG's power generation customers, we are still able at this time to redeliver the volumes that are being received off transco for them.

Ok that is good news.
Thank you again for update

Sun, Dec 25 at 9:32 AM

No change in Piedmont's status/ability to serve customers since the update I provided last night.

Ok thank you

### Powers, Pia K

From: King, Mandi J.

**Sent:** Wednesday, December 28, 2022 8:37 AM

**To:** Powers, Pia K; McLawhorn, James-psncuc; Patel, Neha; Nader, Jordan A; Boswell, Michelle; Johnson, Sonja

**Cc:** PNG Rates and Regulatory

**Subject:** FW: COLD OFO TERMINATION - NC & SC

All,

Piedmont's Operational Order is being lifted. Please see the original and termination notifications below.

Thanks, Mandi

### COLD OFO TERMINATION - NC & SC



Retention Policy inbox (90 days)

### TO ALL NORTH CAROLINA & SOUTH CAROLINA THIRD PARTY AGENTS AND CUSTOMERS:

Effective for the start of gas day December 29th (Thursday), 2022 at 10am EST Piedmont's cold Operational Order for NC & SC is being lifted.

Thanks,

Nate Hargrove
Gas Transportation Market Analyst
704.731.4151
nathan.hargrove@duke-energy.com





From: Hargrove, Nathan D < Nathan.Hargrove@duke-energy.com >

Sent: Friday, December 16, 2022 9:54 AM

Subject: PIEDMONT OPERATIONAL FLOW ORDER FOR NC & SC EFFECTIVE STARTING DECEMBER 19TH UNTIL FURTHER NOTICE

Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Data Request No. 2-24f Attachment 5 of 5 Page 2 of 2

TO ALL NORTH CAROLINA & SOUTH CAROLINA THIRD PARTY AGENTS AND CUSTOMERS: PIEDMONT OPERATIONAL ORDER:

Due to colder temperatures and operational requirements on Piedmont's system, effective starting gas day December 19, 2022 until further notice. Customers and Third-Party Agents are required to maintain a daily short imbalance position of no greater than five (5%) percent or 1,000 dth, whichever is greater, of daily burns. Any and all pools settling short positions greater than five (5%) percent or 1,000 dth, whichever is greater, of daily burns for days that the Short/Cold Operational Order is in effect will be considered not in compliance with this Operational Order.

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In summary, Piedmont has issued a Short/Cold Operational Order only starting on gas day December 19th, 2022 until further notice.

**Nate Hargrove Gas Transportation Market Analyst** 704.731.4151 nathan.hargrove@duke-energy.com





25. Please provide any notifications, request for relief, or emergency operations to or from the Department of Energy or the FERC from December 23, 2022, through December 28, 2022.

**Response:** Piedmont did not receive any notifications or requests from the Department of Energy or FERC for the duration of this event.

Name and title of responsible person: Adam Long, Vice President - Pipeline Operations

Name and title of preparer: Adam Long, Vice President - Pipeline Operations

### **Liquid Natural Gas usage**

- 26. Please provide any cost-benefit or system analysis that was performed to determine whether to withdraw from the Company's LNG plants versus curtailing interruptible customers.
  - a. Please provide the Company's calculation to determine the amount of load on the system that would have been required to begin curtailment.
  - b. Please provide the Company's calculation to determine the system pressure that would have resulted in curtailments.

**Response:** Piedmont's use of its LNG during Winter Storm Elliott was consistent with and part of the Company's firm customer gas portfolio plan. Accordingly, no cost-benefit or system analysis was performed.

The system load required to consider interruption of service to Piedmont's interruptible service customers has multiple variables including, notably, expected supplier pressure. For Winter Storm Elliott, none of those variables indicated that an interruption of service to interruptible customers would be warranted. Accordingly, no such calculations were performed.

The pressure that would have initiated an interruption of service to Piedmont's customers is different for each pressure class system and dependent on other variables for that system such as the unique system load. The low-pressure alarms downstream of supplier gates are the indication that service interruptions may be needed. Each pressure system is unique and even systems with the same pressure rating have different thresholds for interruptions.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

Name and title of preparer: Andrew Donato, Manager - Gas Control

27. Please provide any cost benefit or system analysis that was performed to determine which LNG facilities to withdraw from and at what rates.

**Response:** Piedmont's Gas Supply team called upon LNG as part of the firm customer gas portfolio for the Carolinas. The amount was split between the Company's three onsystem NC LNG facilities to ensure operational flexibility and redundancy if an issue were to arise. The total withdraw amount was selected by Gas Supply with Piedmont's Operations personnel determining the daily target for each LNG Plant based upon preexisting inventory and geographic location. The LNG plants were provided a daily target and rate was based on system conditions.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations and Sarah Stabley, Managing Director - Gas Supply Optimization and Pipeline Services

Name and title of preparer: Andrew Donato, Manager - Gas Control

- 28. Please provide the Company's hourly withdrawals and pressures from each of its LNG plants compared to their maximum and minimum withdrawal capability.
  - a. Did the pressure degradation on Transco's system impact the Company's decision with regards to the withdrawal rate from its LNG facilities?

**Response:** Please see attached log of LNG hourly flows and pressures.

a. No, Transco pressures did not impact the Company's decision with regards to the withdrawal rate from its LNG facilities.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

Name and title of preparer: Ryan Smith, Director - LNG and Compression

### Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Requests No. 2-28 Attachment Page 1 of 3

Huntersville LNG Facility 11001 McCoy Road Huntersville, NC 28078

Rated Capacity					
		Minimum			
	Maximum	(Approx)			
MMSCFD	150	24			
MSCFH	6250	1000			

	Date	Gas Day	Time	Flow (Outlet) MSCFH	Pressure (PT-19) PSIG	% Max Rated Capacity	% Min Capacity
$\vdash$	12/23/2022	GD23	10:00 AM	95.4	549.6	1.53	9.54
$\vdash$	12/23/2022	GD23	11:00 AM	3086	552.2	49.38	308.60
$\vdash$	12/23/2022	GD23	12:00 PM	3047.4	552.3	48.76	304.74
$\Box$	12/23/2022	GD23	1:00 PM	3119.8	552.9	49.92	311.98
H	12/23/2022	GD23	2:00 PM	3105	552.4	49.68	310.50
$\Box$	12/23/2022	GD23	3:00 PM	3058.4	552.5	48.93	305.84
$\Box$	12/23/2022	GD23	4:00 PM	3051.4	552.5	48.82	305.14
	12/23/2022	GD23	5:00 PM	2110	552.5	33.76	211.00
П	12/23/2022	GD23	6:00 PM	3134.6	552.2	50.15	313.46
П	12/23/2022	GD23	7:00 PM	3109.9	552.4	49.76	310.99
	12/23/2022	GD23	8:00 PM	3103.4	552.3	49.65	310.34
	12/23/2022	GD23	9:00 PM	3085.2	552.2	49.36	308.52
Ш	12/23/2022	GD23	10:00 PM	3100.8	552.2	49.61	310.08
Ш	12/23/2022	GD23	11:00 PM	3063.9	552.2	49.02	306.39
$\sqcup$	12/24/2022	GD23	12:00 AM	3094.5	552.2	49.51	309.45
$\vdash$	12/24/2022	GD23	1:00 AM	3001.3	552	48.02	300.13
$\vdash$	12/24/2022	GD23	2:00 AM	3069.5	552.3	49.11	306.95
$\vdash$	12/24/2022	GD23	3:00 AM	2993.8	552.3	47.90	299.38
$\vdash$	12/24/2022	GD23	4:00 AM	3007.3	551.2	48.12	300.73
$\vdash$	12/24/2022	GD23	5:00 AM	2994	550.3	47.90	299.40
H	12/24/2022	GD23	6:00 AM	3071.7	543.45	49.15	307.17
H	12/24/2022	GD23	7:00 AM	3170.1	533.3	50.72	317.01 317.41
H	12/24/2022 12/24/2022	GD23 GD23	8:00 AM 9:00 AM	3174.1 2838	518.9 507.5	50.79 45.41	283.80
	12/24/2022 Totals	GD23 GD23	5.00 AIVI	73095	307.5	45.41	203.80
	12/24/2022	GD23	10:00 AM	3076.8	495.2	49.23	307.68
H	12/24/2022	GD24	11:00 AM	3302.5	490.1	52.84	330.25
$\vdash$	12/24/2022	GD24	12:00 PM	3051.4	487.4	48.82	305.14
$\Box$	12/24/2022	GD24	1:00 PM	3156.4	477.6	50.50	315.64
H	12/24/2022	GD24	2:00 PM	3006.7	478.7	48.11	300.67
$\Box$	12/24/2022	GD24	3:00 PM	3057.4	485.01	48.92	305.74
	12/24/2022	GD24	4:00 PM	3048	492.04	48.77	304.80
	12/24/2022	GD24	5:00 PM	2993	494.85	47.89	299.30
	12/24/2022	GD24	6:00 PM	3062.1	496.3	48.99	306.21
	12/24/2022	GD24	7:00 PM	3039.4	494.6	48.63	303.94
	12/24/2022	GD24	8:00 PM	3072.6	490.6	49.16	307.26
	12/24/2022	GD24	9:00 PM	3043.7	484.9	48.70	304.37
$\sqcup$	12/24/2022	GD24	10:00 PM	3125.9	481.6	50.01	312.59
$\vdash$	12/24/2022	GD24	11:00 PM	3077	476.1	49.23	307.70
$\vdash$	12/25/2022	GD24	12:00 AM	3082.5	475.1	49.32	308.25
$\vdash$	12/25/2022	GD24	1:00 AM	3042.9	476.5	48.69	304.29
$\vdash$	12/25/2022	GD24	2:00 AM	2987.1	476.6	47.79	298.71
$\vdash$	12/25/2022	GD24	3:00 AM	2974	478.8	47.58	297.40
$\vdash$	12/25/2022 12/25/2022	GD24 GD24	4:00 AM 5:00 AM	3042.3 3047.3	479.6 479.8	48.68 48.76	304.23 304.73
H	12/25/2022	GD24	6:00 AM	3020.2	478.3	48.32	302.02
$\vdash$		GD24	7:00 AM	2983.5	477.3	47.74	298.35
$\vdash$	12/25/2022 12/25/2022	GD24	8:00 AM	3071	477.3	49.14	307.10
H	12/25/2022	GD24	9:00 AM	3023	465.36	48.37	302.30
	Totals	GD24	2.237	72830	.33.30	.5.57	112.00
	12/25/2022	GD25	10:00 AM	2949.6	462.62	47.19	294.96
$\sqcap$	12/25/2022	GD25	11:00 AM	2351.2	451.09	37.62	235.12
	12/25/2022	GD25	12:00 PM	2041	454.57	32.66	204.10
	12/25/2022	GD25	1:00 PM	1962.2	461.62	31.40	196.22
	12/25/2022	GD25	2:00 PM	1985.7	480.38	31.77	198.57
	12/25/2022	GD25	3:00 PM	1887.6	495.3	30.20	188.76
$\square$	12/25/2022	GD25	4:00 PM	1901	521.44	30.42	190.10
$\sqcup$	12/25/2022	GD25	5:00 PM	1956.2	531.87	31.30	195.62
$\sqcup$	12/25/2022	GD25	6:00 PM	1935.5	540.1	30.97	193.55
$\vdash$	12/25/2022	GD25	7:00 PM	1909	546.86	30.54	190.90
$\vdash$	12/25/2022	GD25	8:00 PM	1943	554.26	31.09	194.30
$\vdash$	12/25/2022	GD25	9:00 PM	2064.4	552.71	33.03	206.44
$\vdash$	12/25/2022	GD25	10:00 PM	1984.5	552.89	31.75	198.45
$\vdash$	12/25/2022	GD25	11:00 PM	2012.9	550.85	32.21	201.29
H	12/26/2022	GD25	12:00 AM	2063.1	551.01	33.01	206.31
H	12/26/2022	GD25	1:00 AM	2059	551.91	32.94	205.90
H	12/26/2022	GD25	2:00 AM 3:00 AM	2023.3	552.86 550.91	32.37	202.33
H	12/26/2022 12/26/2022	GD25 GD25	4:00 AM	2054	550.91	32.86 32.50	205.40
H	12/26/2022	GD25	5:00 AM	2031.5	550.71	32.14	200.85
$\vdash$	12/26/2022	GD25	6:00 AM	2055	550.91	32.88	205.50
H	12/26/2022	GD25	7:00 AM	1977.2	550.69	31.64	197.72
$\vdash$	12/26/2022	GD25	8:00 AM	1966	550.81	31.46	196.60
$\Box$	12/26/2022	GD25	9:00 AM	1968.9	550.85	31.50	196.89
				48553			

### Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Requests No. 2-28 Attachment Page 2 of 3

Bentonville LNG

2256 Harper House Road
Four Oaks, NC 27524

Rated Capacity				
		Minimum		
	Maximum	(Approx)		
MMSCFD	120	36		
MSCFH	5000	1500		

	D-t-	C D	<b>T</b> !	Flow (FT-7-5)	Pressure	% Max Rated	% Min
$\vdash$	Date	Gas Day GD23	Time	MSCFH	(PT-119) PSIG	Capacity	Capacity 0.00
$\vdash$	12/23/2022	GD23 GD23	10:00 AM 11:00 AM	0	638 624.8	0.00	0.00
$\vdash$	12/23/2022 12/23/2022	GD23 GD23	12:00 AM	0	617.8	0.00	0.00
	12/23/2022	GD23	1:00 PM	0	614.7	0.00	0.00
	12/23/2022	GD23	2:00 PM	0	636.1	0.00	0.00
$\vdash$	12/23/2022	GD23	3:00 PM	0	641.3	0.00	0.00
	12/23/2022	GD23	4:00 PM	0	627.1	0.00	0.00
	12/23/2022	GD23	5:00 PM	0	614.9	0.00	0.00
	12/23/2022	GD23	6:00 PM	0	607.7	0.00	0.00
$\perp$	12/23/2022	GD23	7:00 PM	0	603.6	0.00	0.00
$\vdash$	12/23/2022	GD23	8:00 PM	0	601.6	0.00	0.00
	12/23/2022	GD23	9:00 PM	0	599.6	0.00	0.00
$\vdash$	12/23/2022	GD23	10:00 PM 11:00 PM	0	598.5	0.00	0.00
$\vdash$	12/23/2022 12/24/2022	GD23 GD23	12:00 AM	0	596.5 582.3	0.00	0.00
$\vdash$	12/24/2022	GD23	1:00 AM	2698	617.2	53.96	179.87
$\vdash$	12/24/2022	GD23	2:00 AM	2688	625.4	53.76	179.20
	12/24/2022	GD23	3:00 AM	3304	628.5	66.08	220.27
	12/24/2022	GD23	4:00 AM	3566	649.2	71.32	237.73
	12/24/2022	GD23	5:00 AM	3699	658.5	73.98	246.60
	12/24/2022	GD23	6:00 AM	3768	658.5	75.36	251.20
	12/24/2022	GD23	7:00 AM	2743	639	54.86	182.87
$\vdash$	12/24/2022	GD23	8:00 AM	2577	626.6	51.54	171.80
$\perp$	12/24/2022	GD23	9:00 AM	2676	618.7	53.52	178.40
	Totals	GD23		28821			
$\vdash$	12/24/2022	GD24	10:00 AM	2139	606.6	42.78	142.60
$\vdash$	12/24/2022	GD24	11:00 AM	2865	610.6	57.30	191.00
-	12/24/2022 12/24/2022	GD24 GD24	12:00 PM 1:00 PM	2576 2615	615.7 622.8	51.52 52.30	171.73 174.33
$\vdash$	12/24/2022	GD24	2:00 PM	2989	628.9	59.78	199.27
$\vdash$	12/24/2022	GD24	3:00 PM	2315	640.1	46.30	154.33
$\vdash$	12/24/2022	GD24	4:00 PM	3179	651.2	63.58	211.93
	12/24/2022	GD24	5:00 PM	3086	657.3	61.72	205.73
	12/24/2022	GD24	6:00 PM	3144	660.3	62.88	209.60
	12/24/2022	GD24	7:00 PM	3045	661.3	60.90	203.00
$\perp$	12/24/2022	GD24	8:00 PM	3037	659.3	60.74	202.47
	12/24/2022	GD24	9:00 PM	3048	658.3	60.96	203.20
$\vdash$	12/24/2022	GD24	10:00 PM	3059	657.3	61.18	203.93
$\vdash$	12/24/2022	GD24	11:00 PM	3061	656.3	61.22	204.07
$\vdash$	12/25/2022	GD24	12:00 AM	3157	656.1	63.14	210.47
$\vdash$	12/25/2022	GD24	1:00 AM	3066	655.3	61.32	204.40
	12/25/2022 12/25/2022	GD24 GD24	2:00 AM 3:00 AM	3133 3156	655.3 655.3	62.66 #DIV/0!	208.87 210.40
$\vdash$	12/25/2022	GD24	4:00 AM	3138	654.3	62.76	209.20
	12/25/2022	GD24	5:00 AM	3074	653.2	61.48	204.93
	12/25/2022	GD24	6:00 AM	2822	647.1	56.44	188.13
	12/25/2022	GD24	7:00 AM	2507	637.9	50.14	167.13
	12/25/2022	GD24	8:00 AM	2702	629.9	54.04	180.13
	12/25/2022	GD24	9:00 AM	2606	622.9	52.12	173.73
	Totals	GD24		73617			
$\vdash$	12/25/2022	GD25	10:00 AM	2809	609.9	56.18	187.27
$\vdash$	12/25/2022	GD25	11:00 AM	2650	595.1	53.00	176.67
$\vdash$	12/25/2022	GD25	12:00 PM 1:00 PM	2615 2420	616.6	52.30	174.33
$\vdash$	12/25/2022	GD25 GD25	1:00 PM 2:00 PM	2420	626.7 633.8	48.40 48.86	161.33 162.87
$\vdash$	12/25/2022 12/25/2022	GD25	3:00 PM	2192	636.8	43.84	146.13
$\vdash$	12/25/2022	GD25	4:00 PM	2192	640.8	43.32	146.13
	12/25/2022	GD25	5:00 PM	2230	640.8	44.60	148.67
	12/25/2022	GD25	6:00 PM	2143	638.8	42.86	142.87
	12/25/2022	GD25	7:00 PM	2161	635.8	43.22	144.07
	12/25/2022	GD25	8:00 PM	2181	632.7	43.62	145.40
	12/25/2022	GD25	9:00 PM	2269	630.7	45.38	151.27
	12/25/2022	GD25	10:00 PM	2229	627.7	44.58	148.60
L	12/25/2022	GD25	11:00 PM	2293	626.7	45.86	152.87
$\vdash$	12/26/2022	GD25	12:00 AM	2249	625.7	44.98	149.93
$\vdash$	12/26/2022	GD25	1:00 AM	2302	624.7	46.04	153.47
$\vdash$	12/26/2022	GD25	2:00 AM	2284	623.7	45.68	152.27
$\vdash$	12/26/2022	GD25	3:00 AM	2216	621.6	44.32 45.88	147.73
$\vdash$	12/26/2022 12/26/2022	GD25 GD25	4:00 AM 5:00 AM	2294 2031	618.6 613.5	45.88	152.93 135.40
$\vdash$	12/26/2022	GD25	6:00 AM	1913	598.2	38.26	127.53
$\vdash$	12/26/2022	GD25	7:00 AM	1689	582.9	33.78	112.60
	12/26/2022	GD25	8:00 AM	1721	567.7	34.42	114.73
	12/26/2022	GD25	9:00 AM	1544	548.3	30.88	102.93
	Totals	GD25		50000			

### Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Requests No. 2-28 Attachment Page 3 of 3

Robeson LNG 680 Rev Bill Road Maxton, NC 28364

Rated Capacity				
	Maximum	Minimum (Approx)		
MMSCFD	200	48		
MSCFH	8333.3	2000		

				MSCFH	8333.3	2000	
		1	4		_		
				Flow	Pressure		
				(FIT-3123)	(PT-3017)	% Max Rated	% Min
$\vdash$	Date	Gas Day	Time	MSCFH	PSIG	Capacity	Capacity
$\vdash$	12/23/2022	GD23	10:00 AM	0	854.3	0.00	0.00
$\vdash$	12/23/2022	GD23	11:00 AM	0	846.8	0.00	0.00
$\vdash$	12/23/2022	GD23	12:00 PM	0	841.8	0.00	0.00
$\vdash$	12/23/2022	GD23	1:00 PM	0	841	0.00	0.00
$\vdash$	12/23/2022	GD23	2:00 PM	0	884.7 888.1	0.00	0.00
$\vdash$	12/23/2022	GD23	3:00 PM	0		0.00	0.00
$\vdash$	12/23/2022	GD23	4:00 PM	0	886.2	0.00	0.00
$\vdash$	12/23/2022 12/23/2022	GD23 GD23	5:00 PM 6:00 PM	0	874.9 839.9	0.00	0.00
$\vdash$	12/23/2022	GD23	7:00 PM	0	839.4	0.00	0.00
$\vdash$	12/23/2022	GD23	8:00 PM	0	837.2	0.00	0.00
$\vdash$	12/23/2022	GD23	9:00 PM	0	828.3	0.00	0.00
$\vdash$	12/23/2022	GD23	10:00 PM	571	820.2	6.85	28.55
$\vdash$	12/23/2022	GD23	11:00 PM	1822	820.2	21.86	91.10
$\vdash$	12/24/2022	GD23	12:00 AM	3357	836.8	40.28	167.85
$\vdash$	12/24/2022	GD23	1:00 AM	3773	843.8	45.28	188.65
$\vdash$	12/24/2022	GD23	2:00 AM	4114	845.7	49.37	205.70
$\vdash$	12/24/2022	GD23	3:00 AM	4185	842.9	50.22	209.25
$\vdash$	12/24/2022	GD23	4:00 AM	4072	847	48.86	203.60
$\vdash$	12/24/2022	GD23	5:00 AM	4194	853.4	50.33	209.70
	12/24/2022	GD23	6:00 AM	4078	847.6	48.94	203.90
$\vdash$	12/24/2022	GD23	7:00 AM	4221	845.6	50.65	211.05
	12/24/2022	GD23	8:00 AM	4162	845.1	49.94	208.10
	12/24/2022	GD23	9:00 AM	4198	850.5	50.38	209.90
	Totals	GD23		43481			
	12/24/2022	GD24	10:00 AM	3882	848.2	46.58	194.10
	12/24/2022	GD24	11:00 AM	3969	846.1	47.63	198.45
	12/24/2022	GD24	12:00 PM	3986	845.5	47.83	199.30
	12/24/2022	GD24	1:00 PM	3889	845.5	46.67	194.45
	12/24/2022	GD24	2:00 PM	3753	847.5	45.04	187.65
	12/24/2022	GD24	3:00 PM	3933	847.4	47.20	196.65
	12/24/2022	GD24	4:00 PM	3727	842.7	44.72	186.35
	12/24/2022	GD24	5:00 PM	3798	842.3	45.58	189.90
	12/24/2022	GD24	6:00 PM	3809	845	45.71	190.45
	12/24/2022	GD24	7:00 PM	3852	852.4	46.22	192.60
	12/24/2022	GD24	8:00 PM	3819	851.4	45.83	190.95
	12/24/2022	GD24	9:00 PM	3814	847.5	45.77	190.70
	12/24/2022	GD24	10:00 PM	3771	846.4	45.25	188.55
<u> </u>	12/24/2022	GD24	11:00 PM	3823	846.3	45.88	191.15
$\vdash$	12/25/2022	GD24	12:00 AM	3717	849.5	44.60	185.85
<u> </u>	12/25/2022	GD24	1:00 AM	3846	848.2	46.15	192.30
$\vdash$	12/25/2022	GD24	2:00 AM	3859	848	46.31	192.95
$\vdash$	12/25/2022	GD24	3:00 AM	4859	851.3	58.31	242.95
$\vdash$	12/25/2022	GD24	4:00 AM	4647	845.9	55.76	232.35
$\vdash$	12/25/2022	GD24	5:00 AM	4667	845.3	56.00	233.35
$\vdash$	12/25/2022	GD24	6:00 AM	4755	845.8	57.06	237.75
$\vdash$	12/25/2022	GD24	7:00 AM	4788	849.7	57.46	239.40
$\vdash$	12/25/2022	GD24	8:00 AM	4769	850.8	57.23	238.45
	12/25/2022 Totals	GD24	9:00 AM	4827 98484	850.5	57.92	241.35
	12/25/2022	GD24 GD25	10:00 454		849.1	47 50	107.00
$\vdash$	12/25/2022	GD25 GD25	10:00 AM 11:00 AM	3958 2073	849.1 848.2	47.50 24.88	197.90 103.65
$\vdash$	12/25/2022	GD25	12:00 AM	2073	857.2	24.65	103.65
$\vdash$	12/25/2022	GD25	1:00 PM	2099	873.5	25.19	104.95
$\vdash$	12/25/2022	GD25	2:00 PM	2127	873.3	25.52	106.35
$\vdash$	12/25/2022	GD25	3:00 PM	2106	871.4	25.27	105.30
	12/25/2022	GD25	4:00 PM	2097	870.5	25.16	104.85
	12/25/2022	GD25	5:00 PM	2124	868.4	25.49	106.20
$\vdash$	12/25/2022	GD25	6:00 PM	2063	866.3	24.76	103.15
$\vdash$	12/25/2022	GD25	7:00 PM	2116	853.5	25.39	105.80
	12/25/2022	GD25	8:00 PM	2030	848.8	24.36	101.50
	12/25/2022	GD25	9:00 PM	2094	845.2	25.13	104.70
	12/25/2022	GD25	10:00 PM	2080	833.9	24.96	104.00
	12/25/2022	GD25	11:00 PM	2025	825.6	24.30	101.25
	12/26/2022	GD25	12:00 AM	2073	848.3	24.88	103.65
	12/26/2022	GD25	1:00 AM	2121	850.5	25.45	106.05
	12/26/2022	GD25	2:00 AM	2107	850	25.28	105.35
	12/26/2022	GD25	3:00 AM	2096	847.4	25.15	104.80
	12/26/2022	GD25	4:00 AM	2131	845.6	25.57	106.55
	12/26/2022	GD25	5:00 AM	2102	848.4	25.22	105.10
	12/26/2022	GD25	6:00 AM	2152	850.1	25.82	107.60
	12/26/2022	GD25	7:00 AM	2109	832.5	25.31	105.45
L	12/26/2022	GD25	8:00 AM	2045	815.1	24.54	102.25
$\Box$	12/26/2022	GD25	9:00 AM	2154	831.8	25.85	107.70
	Totals	GD25		51456			

29. Please provide the conditions that would be required for the Company to justify refueling LNG plants within the winter months.

Response: The Company has a pro forma plan in place with tolerable monthly withdrawals from the LNG plants during the winter months (November through March). Historically, this pro forma plan has enabled the Company to liquify at the LNG plants during the summer months when natural gas demand and prices are typically lower. Should periods of high natural gas demand occur on Piedmont's system early in the winter season, the Company would consider withdrawing from the LNG facilities a quantity of gas greater than laid out in the pro forma LNG plan; this circumstance may then lead the Company to consider liquifying on subsequent lower demand days that winter season in order to replenish its LNG inventories for system needs that may arise during the remainder of the winter season. However, the Company historically has not refueled the LNG plants during the winter months.

Name and title of responsible person: Todd Breece, Manager - Natural Gas Trading & Optimization and Sarah Stabley, Managing Director - Gas Supply Optimization and Pipeline Services

Name and title of preparer: James Manning, Sr. Gas Trader

30. Please provide all withdrawal requests made of off-system by gas-day, volumes requested, and supplier. Please specify whether these requests were accepted and volumes delivered or if they were rejected.

### Response:

### December 23, 2022

- Requested 82,683 dths from Columbia FSS Storage, received 82,863 dths.
- Requested 70,119 dths from Hardy Storage, received 70,119 dths.
- Requested 77,475 dths from Transco GSS Storage, received 77,475 dths.
- Requested 75,869 dths from Pine Needle LNG, received 75,869 dths.

### December 24, 2022

- Requested 82,683 dths from Columbia FSS Storage, received 82,863 dths.
- Requested 70,119 dths from Hardy Storage, received 70,119 dths.
- Requested 77,475 dths from Transco GSS Storage, received 77,475 dths.
- Requested 41,752 dths from Pine Needle LNG, received 41,752 dths.
- Requested 1,528 dths from Transco ESS Storage, received 1,528 dths.
- Requested 39,069 dths from Transco WSS Storage, received 39,069 dths.

### December 25, 2022

- Requested 82,683 dths from Columbia FSS Storage, received 82,863 dths.
- Requested 70,119 dths from Hardy Storage, received 70,119 dths.
- Requested 63,367 dths from Transco GSS Storage, received 63,367 dths.
- Requested 39,069 dths from Transco WSS Storage, received 39,069 dths.

### December 26, 2022

- Requested 82,683 dths from Columbia FSS Storage, received 82,863 dths.
- Requested 70,119 dths from Hardy Storage, received 70,119 dths.
- Requested 77,475 dths from Transco GSS Storage, received 77,475 dths.
   Requested 29,498 dths from Pine Needle LNG, received 29,498 dths.
- Requested 1,528 dths from Transco ESS Storage, received 1,528 dths.

Requested 39,069 dths from Transco WSS Storage, received 39,069 dths.

**Name and title of responsible person:** Sarah Stabley, Managing Director - Ga Supply Optimization and Pipeline Services

**Name and title of preparer:** Brady Gould, Manager Natural Gas Scheduling & City Gate Operations

- 31. With regard to the Company's January 30, 2023, Winter Storm Elliott update presentation to the NCUC:
  - a. Slide 2: Please discuss the term, 'significant.....' and list all operational issues on PNG's system if not already discussed above.
  - b. Please provide the Company's system pressure sensitivity analyses upon completion of conducting operational lessons.
  - c. For each day of the event, please provide any notification received from gas producers/marketers on existing well-head conditions and all related gas supply.
  - d. At each of the Company's compressor stations, please list the following:
    - i. Location of the compressor station (show on a map).
    - ii. Operating pressure before Winter Storm Elliott and operating pressure during December 23, 2022, through December 28, 2022.
    - iii. Mitigation measures put in place to overcome the pressure differentials in order to serve:
      - i. Firm customers; and
      - ii. Interruptible customers.
    - iv. The location of the Company's vulnerable points where the Company experienced pressure drops on a map.
  - e. Slide 4: detailed discussions on lessons learned from observing the impact of Winter Storm Elliott on Midwest and Tennessee LDC operations and measures put in place for the system benefit.
  - f. Slide 8: Had Winter Storm Elliott arrived mid-week of a non-holiday work week, please discuss:
    - i. Likely curtailments;
    - ii. Natural gas demand v/s what the Company actually experienced;
    - iii. Changes in interstate pipeline/storage gas supply or onsystem LNG withdrawals.

### Response:

a. The phrasing "significant operational or other issues......" was meant to convey to the Commission that Piedmont had no operational issues that impaired or

### Piedmont Natural Gas, LLC Docket No. M-100, Sub 163 Public Staff Data Request No. 2 – Questions on Winter Storm Elliott Date Sent: February 7, 2023

Requested Date Due: February 17, 2023

impeded Piedmont's ability to deliver gas to its customers. Piedmont had only two operational issues in North Carolina: the first was the failure of a pressure transmitter at our Cabarrus Compressor Station and that failure was deemed as non-critical and was addressed the next business day. The second was a PLC code error on the odorant injection system at the Huntersville LNG Plant at start up and that was immediately addressed with no impacts.

- b. The pressure sensitivity analysis will take several months to complete and will be provided as soon as practical.
- c. Piedmont did not receive any applicable notifications from producers/marketers impacting its system supply for the Carolinas during Winter Storm Elliott.
- d. Please see the attached map and pressure trends. Piedmont experienced no pressure or flow issues during the event that required any mitigation measures to be used. Piedmont did not experience any points of pressure drop on our system that would indicate a point of vulnerability that would impact Piedmont's ability to flow gas to customers.
- e. The Company was able to observe in real-time in its Charlotte Control Room the impacts of Winter Storm Elliott to its natural gas system in TN and to its affiliate LDC systems in the Midwest (in OH and KY). Specifically, Piedmont was able to observe the impacts on upstream natural gas suppliers and their equipment during the weather event, as well as the impacts and/or benefits of the cold weather preparations undertaken pursuant to the Winter Weather Playbook to Piedmont's natural gas systems and to its Midwest affiliate LDC systems. Piedmont was able to observe that there were several equipment issues on upstream companies with their compressor stations, equipment, and supply points but neither Piedmont's nor its Midwest affiliate's respective natural gas systems experienced any equipment issues. These observations informed Piedmont that the Winter Weather Playbook actions taken prior to the storm enabled event-free operations of the Company's natural gas equipment in the very cold conditions encountered in TN and in the very cold conditions encountered in the Midwest.
- f. Had Winter Storm Elliott arrived mid-week of a non-holiday work week, natural gas demand experienced on Piedmont's system would have likely been higher.
  - i. Interruptions of service to interruptible customers would have not been forecasted or planned based on the weather information that the Company reviewed prior to the storm. Despite the actual supplier pressures

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Requested Date Due: February 17, 2023

encountered during Winter Storm Elliott, interruption of service to interruptible customers would have still been unlikely.

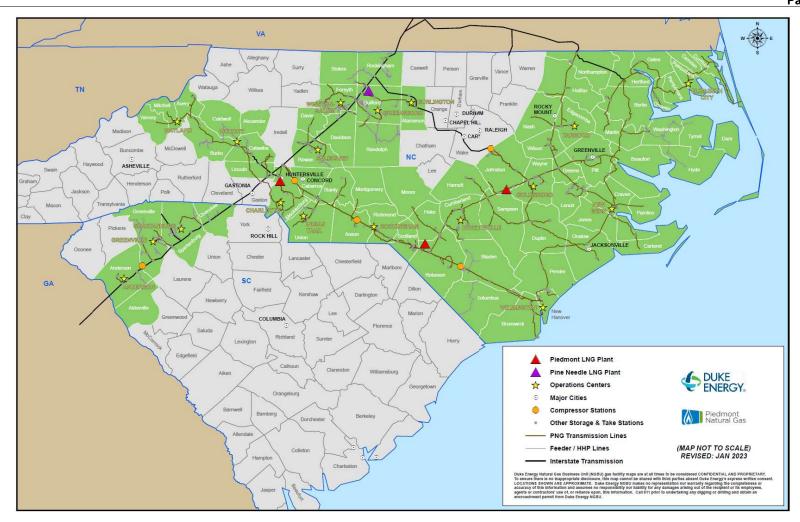
- ii. The Company's forecasted natural gas demand was in line with actual demand for Winter Storm Elliott. Had Winter Storm Elliott arrived mid-week of a non-holiday work week and schools/business had not shut down then demand would have likely been higher, but still not near levels that would warrant interruption of service to interruptible customers.
- iii. There would not have been material changes to interstate pipeline/storage gas supply or on-system LNG withdrawals for a mid-week storm. Interstate supplies were available for the Company to use and most likely would have been available for the possible increase in demand had Winter Storm Elliott arrived mid-week of a non-holiday work week.

Name and title of responsible person: Adam Long, Vice President - Gas Pipeline Operations

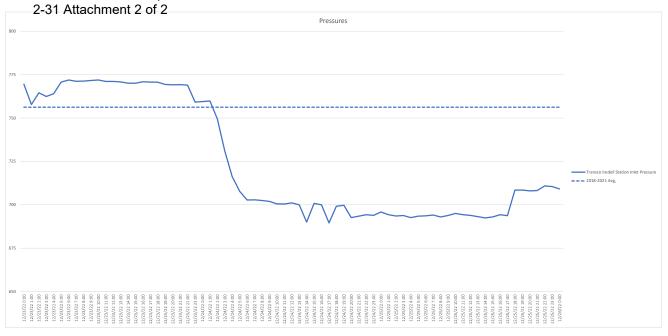
Name and title of preparer: Adam Long, Vice President - Gas Pipeline Operations

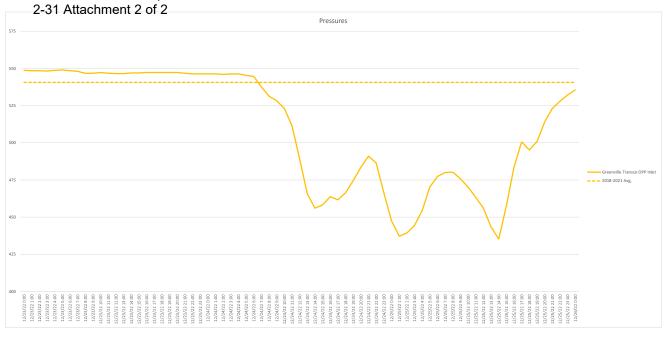
Response provided by Piedmont Natural Gas Company, Inc. on February 17, 2023.

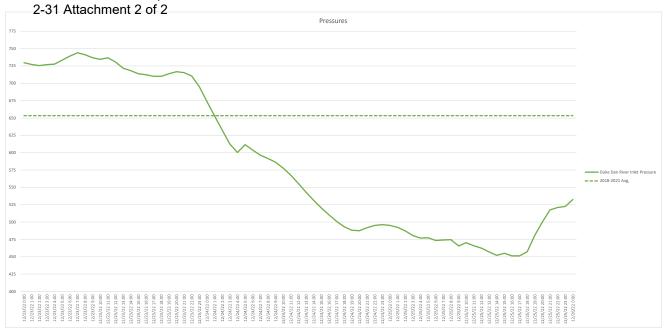
## Piedmont Overview – Carolinas

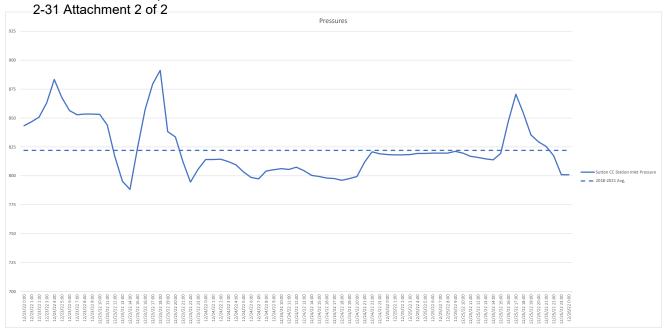


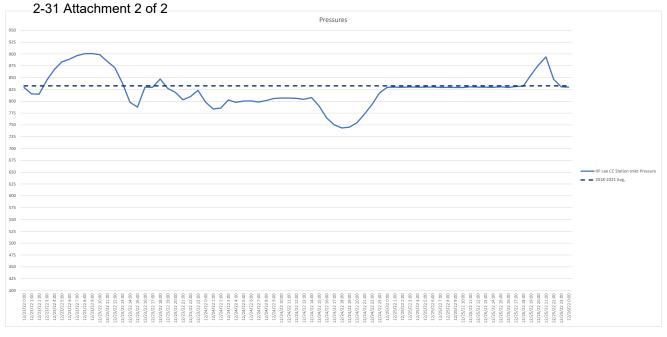
	ソース1	Attachm	ent ソ	へt ソ														
Date		$\neg$ uaciiiii		<u>VI.,</u> Z					2018 2021 Aug. Washnison Compressor Station Discharge Press				118 2021 Ave. Date Back Station Inlet Press					2018-2021 Aug.
12/21/22 0:00	NA SALESSEE	756.2527606	548746548	141422533	729.7858887	613 MODEL THE STREET	THE PERSON NAMED IN	822.065 829.2533489 873.065 879.48873789	RELATED BEFORE	BREADERS TO PRODUCE	613.2374774			3306 630.1906154	7572548826		249.8473049	
12/35/52 2:00	264.5345826	756,2567906	148.1001219	1404225535	725.6269533	653.362095 792.5112588	793.7526964 850.7009057	822.065 834.875.66	BILANNIAI ATTAKRIISI	8914067187 703.5560953	613,2179774	728.6499636	652.3255.64 728.30	7262 630.1905154	732.5980225	607.5771049	245.8327383	615.34M234
12/31/52 140	762.5826175	756.2507906	548256897	5464225535	724.8103587	653.362095 760.6752422	763.7526866 863.2932763	822.065 R64.3472536	RELAMBERS SELECTES	BREADETERT TED ATMALINE	655.2374774			3232 630.1905154	753.5786302		766.666826	
12/31/52 4:00	765 7661255	756.2527606	548746548	141422533	727.5841064	653.M2095 7612962505	THE PERSON NAMED AND POST OFFI	822.065 RM.890.0120	EDARRIA SILITALI	RELEGIZET TELEVISION	613.2374774		612.328564 730.44	0636 630.1906154	754.5137207		747 ABRADOL 700 KTRAKEN	655.3486234
12/31/32 6:00	771.8947803	7562567906	148.1001.219	1404225335	719.0425806	653.362095 775.0622559	761.7124864 856.489962	822.065 RMR.9209136	NIZ-MINISAT NIZZETNATA	ANLAGATIAN TON MALTERS	613,2174774			5165 530,1905154	712.6429947		713.5368412	
12/31/59 7:00	775.1415884	756.2507906	548.012007	546.4226535	763.8753249	653.362095 770.4517822	761.7524864 852.8536182	822.045 RW-2468457	812-8698241 911-7270908	895.6067587 753.3660078	663.2374794			0664 630 1905154	717.0588379	637.5771349	717 8001100	
12/23/52 8:00	771.8171.807	794.2507904	144.7890215	1404225535	761286038	653.362095 770.6523022 653.362095 770.5523000	TAX TRANSPARE BELLEVINGS	#22.065 900.366#12 #22.060 AND #26#110	RIAMBER SILEMONI	BREADETET THE GOODST	613.2376.774	738.1795656		3770 630.1906154 1476 630.1906154	712.1568606		746.4259975	
12/51/50 1000	775 NG20586	756,2507906	5472780205	5464225535	7544342011	653.362095 776.757010	THE PERSONS ASSESSMENT	822.045 RML4088135	EX2.4698243 935.5729604	BREADETERT TOLKFETHE	653,2379,774	736.6696142	612.326164 738.58	2955 630.1905154	761.5117432	407.0774349	712.2491795	655.5686234
12/31/59 1140	775.123582	756.2507906	144.7810015	546.4226535	756.8807575	653.362095 770.4517822	763.7524864 845.9975584	822.045 RM-3108817	EI2.609041 9134496751	8954067587 699.5708008	663.2374794	739-6436909		7646 630 1905154	7641176758	637.5771349	713.5368407	
12/51/50 1240	775.0708126	794.2507904	146.1445331	1404225535	750.6198875	613.362001 770.613.7622 613.362001 770.613.7622	THE PERSON NAMED IN	A22.045 A70.8890186	RELATION SCHOOLS	BREADERS BREADERS	613.2376.774			1439 430,1901164	715.0940449 753.8627519		249.1131100	
12/51/59 1440	730 1000536	756,2507906	\$47,6536304	5464225535	718287676	653.342095 768.3150624	763.7526864 788.2588954	822.065 798.040.626	BLANKS PRINCIPLE	BREADETERY BELTHELBED	653,2379,774	732.5432598	612.328164 730.68	1563 630.1905154	727.3058714	487.8771049	736.3%47%	655.5686234
12/25/50 1540	730.113000W	756.2567906	\$47,2596304 \$47,7780305	140422000	713.8837891	453.M2095 768.315824	THE PERSON NAMED IN	#22.045 787.510.665	RITHRES RITHRES	RMLADETER ENGINEER	613.2376.774			6758 630.1906164 4754 630.1906164	7244116825		733.94494KS	
12/25/50 1640	770.654796	756.2507906 756.2507906	547.2780205 547.2780205	141422551 141422551	712.4158954	653.362095 768.8255371 653.362095 768.8255371	761.7524866 857.8046127 761.7524866 879.3618129	822.065 829.8853166 822.065 829.5593262	RIJ MARIAT RYCZOGIAN RIZ MARIAT ROBERTHINI	RELEGISTRY EXTERNISH	653204704			4014 ES0.1905154	720.835313		730.2753486 732.7256797	
12/51/50 1800	730.6149297	756.2507906	547,2780205	540.4225535	7102141113	653.342095 769.2307739	THE PERSONS AND EDITION .	823.045 R47.0003307	RIZ-MINELES BET-SZONERSZ	BREADKTERT BREZRETOGZ	653,2379,774			9685 630.1905154	723.6786302		754.478894	
13/55/50 1940	769 2962178	756.2567906	5473780005 5473780005	140422000	713.8837891	453.M2095 767.399092	THE TRANSPORT AND ADDRESS OF THE PARTY OF TH	823.045 827.1113.890 873.045 878.849.879	RIAMBER SILEMEN	BREADERS BREADERS	613.209.794	718.8700766 718.7676000		456 630,1406154 4784 630,1406154	724.7548828 778.8008773		241.7794856	
12/25/50 2040	768 173747G 768 23787G	756.2507906 756.2507906	545.2780305 546.2890335	141422551 141422551	715.2514845	613.362091 767.399392 613.362091 767.399392	761.7526866 KILLSOW.703	822.065 REALBRANS 822.065 RELIGIOUS	#13.4698141 919.8971609	RELEGISTRY BRY JOSEPH RELEGISTRY BRY TILLARIA	653204704			6294 630.1905154 6294 630.1905154	736.6372683		745.790696	
12/51/59 33 69	769-0048828	756.2507906	546,2996826	540.4225535	716.4587402	653.342095 767.399092	763.7526866 794.6576532	822.045 808.6755248	BIG 4698241 9107919081	AND ADMITST AND ADMITST	653,2379,774		612.328164 725.15	9555 630.1905154	725.4906.733		737 1253662	
12/51/52 23400	718 204342N 718 4346N2	794.2507906 794.2507906	1462096826 1462096826	\$48.4225535 \$48.4225535	694.801.2085 673.3368617	613 M2091 718 JOHNOS 613 M2091 718 JOHNOS	761.752684 RELEDENTS 761.752684 RELEDENTS	822.065 828.1554229 822.065 798.062426	RIJARRAN KIRADRINA RIJARRAN KILADRIN	BYLADETET BYLATIALS BYLADETET BYCARDIA	653.2374774	705.7243184 682.467895	612.328544 697.43 612.328544 679.09	7595 630.1906154 3369 630.1906154	708.335313 686.7567095	487.8771049	718.0 (28467 696.7584229	655.3486234
12/36/52 1-00	719 7829505	7562567906	146,2996826	166422535	612,8663056	613.362091 716.2009001	761.732886 834.1378953	822,065 793,618729	812-889845 921-398555	ANLADATAY MILADAMY	653,2379,774			1913 630.1901.04	666.9117412	607.0771049	678.1653633	
12/54/52 2:00	749.4907227	756.2507906	546.0530537		610.4158916	653.362095 766.3280629	763.7526866 834.4623828	822.065 7WL4957275	RECORDED BORDSCIPED	8914067187 6741262627	655.2374774			4487 630.1905154	6483296389		656.1467896	
12/34/52 1400	730.8312178 730.18386	756.2507906 756.2507906	5462096826 5462096826	546422535 546422535	613.1999612	613 M2091 727 M681394 613 M2091 713 2802734	761-7924866 812-3096703 761-7924866 809-1675218	822.045 NIZ.450.0408 822.045 797.750.0407	RIJARRAN PROFINS	891.4067187 662.676887 891.4067187 650.2141896	653,2374774			5459 630.1906154 2583 630.1906154	628.4313965 614.6927546		GLASSING	
12/36/32 5:00	707 7094649	756.2567906	545,321106	140422533	611.6207886	653.362095 706.6063725	763,7526966 803,6795307	\$22,045 ASS 1835998	812.6898243 909.3239746	8914067187 637.0124797	653,2379,774	601.0996096	612.325564 591.99	6798 630,1905156	605.1479337	607.0771049	\$33.00068-G	
12/34/52 6:00	702 7523149	756.2527606	544.5875582	141422533	603.7920032	STANDON SHADON	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	822.065 800.7955900 873.065 700.55765900	EIJARRIA 9004739134	BELLOCIET COLORES	613.2374774			3179 630.1906154 2706 630.1906154	598.2445847 580.3088513		605.5045776	
12/34/00 7:00	702.8279806	754.2527406	E37.4420704	141422033	196.4124347	613.342001 699.8164063	THE PERSON AND PARTY AND P	ADDRES THE SETTINGS	RILAMBELE BOOTISSOO	BREADERS BEFARETED	413 20 4004			1396 E30 1901104	595.3068213 584.1368233		100.100.0047	
12/34/52 9-00	701.8630975	756,2507906	128.1957997	5464225535	586.1773682	653.342095 698.5924072	THE PERSONS ASSESSED.	822.065 NO. 690.1383	EX2.4698245 905.4790039	AND ADMITEST ON MICHIGAN	653,2379,774			9080 630.1906154	178.0210727		584.2302148	
12/34/52 1000	700 SUBSECT 700 AUDIOUS	756.2527606	523.2580.265 533.3330004	141422533	1774140011 14733140711	613.342091 697.3484092 613.342091 697.3484092	761.7526864 RD6.3156982 761.7526864 RD6.606232	#22.045 #06.9553275 #22.045 #06.9553275	RIJARRIA ROLPHALII	8914007187 982 7713013 8914007187 983 4880078	653,2374774		612.328544 512.87	8638 630.1906154 1852 630.1906154	144.7887575 554.820917		530 7641264 538 5322045	655.54N234
12/26/22 12:00	701.1308711	7562567906	488 8070433	166422535	155,096,535	613.362091 697.676685	THE PERSONS NOT ASSESSED.	822.065 RDL-9055889	ED-MARIAL MODINIDARY	APLADATAY SIPLAKANA	61320170			1005 630.1905154	8431348313		545.5457349	
12/24/52 1340	699.9642334	754.2527904	465.5657949	5464225535	142,876638	653.342095 696.3464092	765.7526866 804.5875752	822.065 804.140.5600	832.6898243 897.7895846	AMERICANIST STATISTICS	663.2376774	538-0390625	612.328564 512.83	1816 630.1908154	1283051392	487.8771049	531.1304697	655.3486234
12/34/52 1440 12/34/52 1500	500 8756633 200 8766047	756.2527606	4144240711	141422533	535.3763687 570.3668674	STANDON SECTIONS	THE PERSON NAMED IN COLUMN TWO	ADDRES METABORIS	ED-MERCO PRODUCTO	BREADSTRY SULGOLANIA	613.2374774	\$16.8236553 006.8238873		8825 630.1906154	515.2625122 023.5786836		517 8004712 DOL TOMATTO	
12/26/22 1600	699.8203829	7562567906	463,8530,006	1404225335	1103363953	653.362095 695.5324007	THE PROPERTY PROPERTY.	822.065 764.9958965	NI ANNIAL ANNALYSM	ANLAGOTES STLANGES	613,2174774			4004 630.1905154	493.3309623		652 7217162	
12/34/59 1700	689.5379639	756.2507906	461.6515672	546.4226535	101.0187644	653.362095 685.4345095	763.7524866 797.6845262	822,045 750,3060305	812-809041 8894187134	8954067587 554.8745286	663.2374794	486-0000663	612.328644 671.32	9746 630 1906164	483.0112495	637.5771349	442 2018433	655.3486234
12/24/52 1800	699 184001	794.2507904	494,54660	1404225535	493.435.658	653.342095 695.2364004	THE PERSONS PRESENTED	#22.045 THE STREETS	RITARRES ROOMEST	BREADERS SELECTED	613.2376.774			6531 630.1906154 6801 630.1906154	4752136841		CHANNE	
12/36/32 2000	642 4231254	7562567906	483.6697388	1404225335	487.5843044	653.362095 688.388.C08	761.7124864 799.5124512	822.065 754.2859355	RIZ ARREAS PRODRESSO	ANLAGETEZ MAJNOSEZ	613,2174774			7252 630.1905154	480.0175868		GRT ONCTANG	
12/34/59 21400	695.3947144	756.2567906	495,0095553	5464225535	495.8877825	653.342095 695.3324445 653.342095 695.4470448	NUTSURES ELECTRONICS	823.065 770.8488296	RELATED BRADEN	ANSAGETEST SHEEPASSES	613.2379.774		612.328664 477.79	\$142 £30.1905154	487.6478772		494.9233535	
12/54/59 22400	ERL DE SECTION	756,2507906	444.3036344	140422533	495.2650129	STANDON SPERMINE	THE PERSON ASSOCIATION TO	822.045 793.1458299 872.045 872.475.485	RILEMENT BROSHING	BREADETER SEE MICHIES BREADETER SEE MICHIES	653204704			9753 630.1906154 0828 630.1906154	493.3079782 494.6170998		499.8361283 DOLLARSSON	
12/35/59 8:00	695.8052979	754.2527904	447.4617915	5464225535	495.1682529	653.342095 692.4724731	THE PERSONS NEWSCOOLS	822.065 828.5583242	BLANKS PRINCIPLE	8954067587 529.7565285	663.2376774	490.6099038	612.328264 479.25	6458 630.1905154			499.3758689	655.3486234
12/25/22 1:00	694.2370405 695.5232996	756.2507906 756.2507906	437.38654	140422033	487.4770508 487.339467	653.342095 695.2484741 653.342095 695.330445	TALTIQUES ELECTRICATION TO STATE AND	822.045 829.8653166 822.045 829.5593242	ELEMENT PRODUCTS	8914007187 120.5391508 8914007187 122.5799083	613.2374774	487 A770813 482 3417542		9529 630.1905154 8367 630.1905154	483.2722778		494 NOTES	
12/25/22 3:00	645.7702006 645.7702006	756.2507906 756.2507906	4642833434	141422551 141422551	487.339447	613.362091 690.530465 613.362091 690.6266711	THE PERSONS ASSESSED ASSESSED	822.065 836.1753867	ED MARGE BACKBOOK	RELEGISTRY SOLESTING	653204704			8367 830.1905154 0164 830.1905154	477,0472055		681.8571636	
12/35/52 4:00	612.6468306	756.2507906	4543119302	540.4225535	477.064209	653.342095 689.7185059	763.7526864 828.3175249	822.065 829.8853566	RIZ-MINELES BREADBREST	8954067587 534.7872354	653,2379,774	473.1096824		0581 630.1905154	473.3832642	487.8771249	677 2981567	
12/25/22 5:00	695.37799627	794.2507904	470.3140505 477.3088884	1404225535	477.8135278	613.342001 690.62512 613.342001 689.7181019	763.7526864 824.53.75249 763.7526864 824.6222424	822.045 829.8853566 822.045 829.172.2867	ELEMENT PREDMIT	BREADERS BELLEROTES	613.2376.774			9262 630.1906154	475.8180542 473.0620559		475.8409729 475.0409729	
12/05/52 7:00	616-0615128	756,2507906		140422533	4743284485		763.7124864 K014220124	\$22,045 \$29,2533349		8914067187 181,0778809	653,2379,774	670.6309739	612.325564 651.56	9262 630.1905.54			679.2660122	
12/31/52 8:00	642 8905396	756.2507906	480.246594		4744177968	653.362095 689.4124756	763.7526864 839.6223924	822.065 829.5593242	832 A698243 885.7738037	895.4067587 584.9572363	655.2374774			2196 630.1906154	473.8926758		481 223 256	
12/35/32 9-00	648.760874 684.8777847	754.3527904	475.8408729 470.2140909	141422533	465.5457549 470.2140505	613.342091 692.2146711 613.342091 692.3146634	761.7926864 821.1456299 761.7926864 829.6222924	822.045 828.0427877 822.045 829.2533189	RIAMBE MERINE	8914007187 181.8134201 8914007187 177.888333	653,2374774			4414 630.1906154 7771 630.1906154	475.2136841 475.2020876	487.8770149	462 4911116 463 1804199	
12/35/59 1140	616.3001033	756,2567906	463.3639223	1404225535	465.8322963	653,362095 690,3304643	763.7526866 RIGHT-WASH	\$22,045 KWL477914	RELATERS REPOSETING	895.6067587 572.6547892	653,2379,774	672 0830688		6751 630.1905154	4745050024	607.0771049	681,7121246	655.36N234
13/31/39 1340	688.8736570	756.2507906	414.0340713	140.4225535	442.3853549	653.342095 689.7185059	763.7524866 RUS-9658833	822.065 829.8653566	RELAMBERED BROOMSHEED	8914067187 SS13646309	613.2374774	468.9065532		0585 630.1906154	479.3830442		418.7787639	
12/05/02 13400	695.1429678	756.2527606	443.3027649	141422533	457.0050018	STANDON SHAROUTH	THE PERSON NAMED IN COLUMN TWO	822.065 829.8853566 823.065 829.5385365	ED ARREST PRODUCTS	8914007187 127.093811 8914007187 127.8969727	613.2374774	465.286499		9082 630.1908154 6812 630.1908154	466.4226854		412 NOX2124	
12/35/52 1500	652 9472656	756.2567906	457.7348995	141422533	455.4458679	653.362095 688.3884366	763.7526866 829.3175069	822.065 NW-477956	ELL-MINELES BROADWOOLS	8954067587 544-6532509	663.2376774		612.325564 447.52	9917 630.1905154	455.4336717		419.204895	
12/05/02 1640	694.2075808	756.2527606	483.4230295	141422533	453.3763567	613 M2091 689 4124716 613 M2091 689 7181019	763.7526864 846.7598075 763.7526864 870.0027483	#22.045 #29.2533149 #22.045 #31.0893155	RILAMBEL POLICEONY RILAMBEL POLICEON	BYLADICIES STITUTED N BYLADICIES SECRETARI	653.2374774		612.328544 442.34	8955 630.1905154 2251 630.1905154	416,0012368		452.3547343 454.8552085	655.54N234
12/35/32 1800	708.4817036	7562567906	495.1650129	166422535	457,4923706	613.362091 706.2623706	763.7120864 854.0120482	822.065 KNL706.315	RIL MARIA MARIZINI	ANLAGOTIAT SPECIALISE	61320170			1536 630.1905154	463,0096621		469.724792	
12/35/50 1900	NOR ADMONIA	754.2527904	100.791201	5464225535	480.8785247	653.342095 705.8343405	THE PERSON NOT ASSESSED.	822.065 855.549G526	832.4898245 884.3328782	8954067587 5873796265	663.2376774	479-4538929	612.328264 479.86	7837 630.1905154	483.0280742	487.8771049	495.8877925	655.3486234
12/05/02 2000	706.0028416	756.2527606	1144061635	141422533	100.0018047 117.4112014	613 M2091 701 A303711 613 M2091 701 M83398	761.752684 829.8728145 761.752684 825.411577	822.065 876.8769510 822.065 895.8188477	RICHMEN BECOMES	BYLOGITET GO THEORY BYLOGITET GO CTELLOS	653,2374774		612.326564	580 630.1905154 6621 630.1905154	100 R060886 125 R15896		STEAMAGE STEAMAGE	
12/35/59 2240	730.8836538	756,2567906	127.9130495	1404225535	121.1008911	653.342095 709.3623675	763,7526866 837,6893799	\$22,045 Rel.3892212	RID ARREAD RECORDING	BYLADIZIAZ KZYDKIANY	653,2379,774	511.7041457	69.0866 90.0	8629 630.1905156	5345549213	607.0771049	546.5463335	655.36N234
12/55/59 23400	730.480305	754.2527904	532.1306674	5464225535	122.5687006	653.342095 708.9963379	THE PERSON NELECTIONS	822.065 KW-477956	RIZ-MERSES REGESTES	8954067587 658-258726	663.2376774	540.5009655	612.328264 529.64	9078 630.1906154	143.8339233	487.8771049	556-0856323	655.3486234
12/54/52 8:00	709.117981	756.2527906	635.6362663	140422533	532.599W62	653.362095 707.6663086	THE PERSON MELCONNEY	822.065 829.8653566	RELAMBLE RELATIONS	RMLOGISES 647 LABORER	663.2376774	549.2976854	612.3281.64 538.50	1449 630.1906154	613.4213331	637.0771249	548.8543477	655.5486234

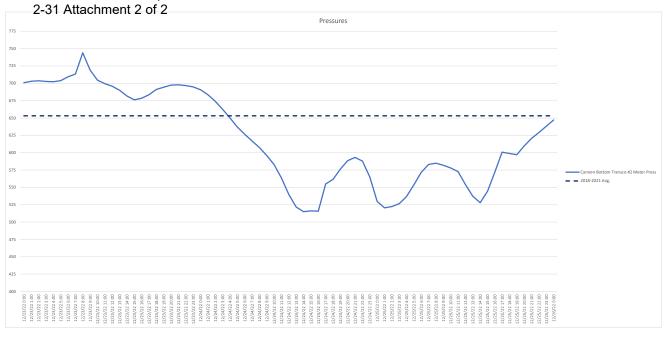


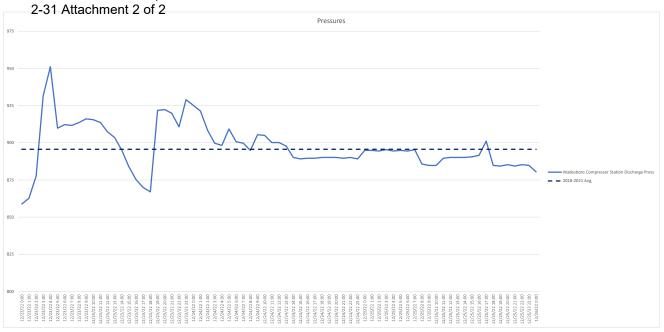


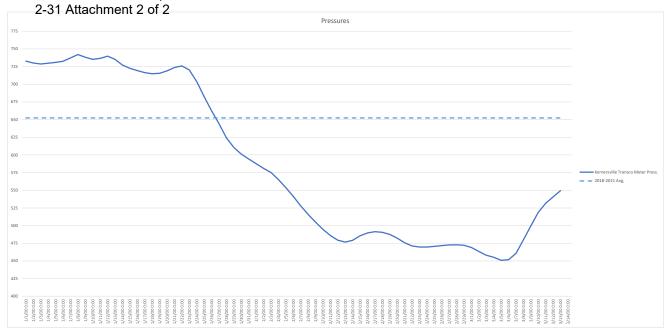


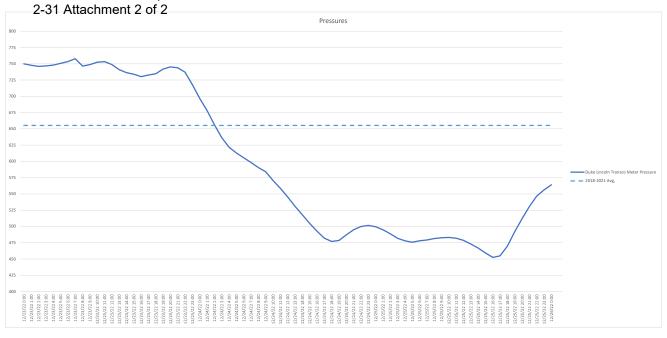


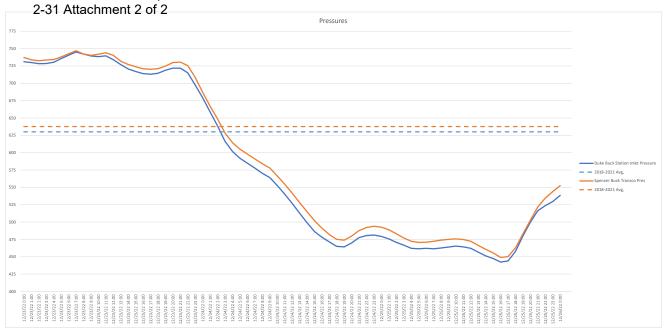












Piedmont Natural Gas Company, Inc. Docket No. M-100, Sub 163 Public Staff Data Request No. 2-13 Attachment & 2-31 Attachment 2 of 2 Location	Low Pressure Setpoint
Dan River Inlet Pressure	540
Spencer Buck Transco Pressure	550
Kernersville Transco Meter Pressure	500
Transco Iredell Station Inlet Pressure	600
Duke Lincoln Transco Meter Pressure	460
Greenville Transco OPP Inlet	400
Cannon Bottom Transco #2 Meter Pressure	450
Wadesboro Compressor Station Discharge Pressure	500
HF Lee CC Station Inlet Pressure	700
Sutton CC Station Inlet Pressure	700