BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission,	:	
	:	
v.	:	Docket No. R-2018-2647577
	:	
Columbia Gas of Pennsylvania, Inc.	:	

DIRECT TESTIMONY OF LAURA GREENHOLT-TASTO ON BEHALF OF THE NATURAL GAS SUPPLIER PARTIES

SUBJECTS ADDRESSED

1. **OFO/OMO Issues**
2. **Other Operational Issues**

NGS Parties Statement No. 1
June 7, 2018

I. INTRODUCTION

Q. Please state your name and business address for the record.

A. My name is Laura Greenholt-Tasto and business address is 415 Norway Street, York, PA 17403.

Q. By whom are you employed and in what capacity?

A. Shipley Choice, LLC d/b/a Shipley Energy as General Manager of Shipley Choice.

Q. For whom are you appearing in this proceeding?

A. Shipley Choice, LLC d/b/a Shipley Energy, Interstate Gas Supply, Inc. d/b/a IGS Energy, and Dominion Energy Solutions, Inc., which will be referred to collectively as the "NGS Parties" in my statement.

Q. Briefly describe your educational experience and relevant qualifications.

A. I graduated in 2007 from the University of Delaware with a Bachelor of Science in Marketing and Operations Management and minor in Economics. After graduating, I worked for Hess Corporation as a Natural Gas Logistics Analyst II for 2 years. In 2009, I was hired by Shipley Energy as an Energy Supply Analyst. In 2012, I was promoted to Manager of Natural Gas Operations. In February 2014, I became Manager of Choice Operations, overseeing all operational functions related to supply, pricing, billing, sales, and regulatory, for both natural gas and electricity product lines. I became General Manager of Shipley Choice in July 2017, with an emphasis on strategic planning for both product lines.

Q. Have you participated previously in regulatory cases?

A. Yes. I was a witness in Columbia's most recent prior rate case.

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

A. I would like to address the increasing Operational Flow Orders ("OFO") and Operational Matching Orders ("OMO") on the Columbia system, the potential that shopping customers are subsidizing sales customers supply costs via the orders, and a few operational issues.

II. TESTIMONY

Q. Can you please explain what OFOs and OMOs are?

A. OFOs and OMOs are daily delivery orders called by Columbia for suppliers and large shopping customers to ensure the utility receives the proper amount of gas for shopping customers in times of constraint. Columbia requires suppliers to deliver within a percentage of actual consumption for OMO customers and within a percentage of Maximum Daily Quantity ("MDQ") for OFO customers. The important difference in treatment is due to the fact that OMO customers are daily metered, while OFO customers are monthly metered.

Q. Can you please explain what are the typical causes of these "Orders"?

A. Utilities often call them in result of interstate pipeline orders, which are called to ensure system integrity. In general, suppliers are required to deliver volumes equal to or greater than customer consumption in periods of cold weather and high demand. On the flip side, suppliers are required to deliver volumes equal to or less than customer

consumption in periods of warm weather which causes lower demand, or when storage levels are at or near full capacity.

Q. What happens if a supplier fails to comply with an "Order"?

A. If the supplier has an aggregation pool that fails to comply, Columbia will penalize the supplier. Columbia will penalize customers directly if they are not part of an aggregation pool.

Q. Are the penalties significant?

A. Yes. If the supplier does not deliver enough gas compared to customer consumption or MDQ %, the penalty is 3 times the highest midpoint price for the respective Platts Gas Daily for the Pipeline Scheduling Point ("PSP"). For example, on January 5, 2018, the M3 midpoint was $94.925 and the average temperature in Harrisburg, PA was 10 degrees Fahrenheit. The penalty for PSP 25 (Lancaster area) would have been $284.78/Dth, or $28.478/therm. The average price on non-OFO days in January 2018 was $6.215/Dth.

Q. To avoid penalty, what does a supplier and customer need to do?

A. Because the penalty is so severe, suppliers and customers need to purchase the extra gas required to meet the OFO or OMO percentages in the Gas Daily market. In this example, the shopping customer would have to have purchased $94/Dth gas to remain in compliance and to avoid a penalty that would be far worse.

Q. What is your concern regarding the recent OFOs called?

A. The concern is that the increased frequency and duration of OFOs and OMO's coupled with the delivery percentages that Columbia requires for suppliers are effectively causing shopping customers to subsidize Columbia's supply costs for non-shopping sales customers. Columbia has stated that its "procurement practices at all times are based on activities required to serve its customers on a least cost basis." Columbia also "does not use MDQs for sales customers" in determining the supply requirements to purchase for sales customers." (see Columbia's Response to NGS Parties' Interrogatory, Set 2 No. 6 attached hereto as Exhibit LGT-1). Because of these facts, we believe that OFOs and OMOs could be used as a mechanism for the utility to reduce the its cost of gas for sales customers and allow it to reduce the price-to-compare, by avoiding the need to purchase higher priced commodity for its own sales customers, at the expense of shopping customers.

Q. What could happen with the least cost requirement and OFOs?

A. If proper controls are not in place, a utility could avoid purchasing higher priced gas when demand is high for sales customers and instead call an OFO or OMO at percentages that effectively require shopping customers to provide the expensive gas instead, thus subsidizing sales customers. Obviously, it is difficult to prove that Columbia is calling OFOs or OMOs with this intent, but regardless of Columbia's intent, if the increasing frequency of OFOs and OMOs coupled with the percentages produce the consequence, the harmful impact is the same and should be fixed.

Q. Do you believe this could be happening now? If so, what led you to believe this?

A. The percentages for OFOs and OMOs called during January 2018 were significantly higher than during the Polar Vortex of January 2014, even though the average temperatures were warmer in January 2018. Exhibit LGT-2, (attached hereto) provides an example of the data aggregated for sections a and b below.

a. The coldest day in January 2014 was 8 degrees, (*see*, Columbia's responses to NGS Parties' Interrogatories, Set 4, No. 4, and Set 1, No. 1, attached hereto as Exhibits LGT-3 and LGT-4, respectively) and the OFO percentage[1] was 78% that day for Harrisburg (PSP 25). The coldest day in January 2018 was 9 degrees per Columbia's response, and the OFO percentage was 100%. The Gas Daily Texas Eastern M-3 price for that day was $20.03. The increase in OFO requirement at $20/Dth gas has a significant financial impact on end-users and represents a 22% increase in delivery requirements for shopping customers, even though it was 1 degree warmer -- not colder.

b. Continuing with the Harrisburg PSP 25 example, the average temperature for January 2014 was 24 degrees. The average OMO was 90% and OFO was 63%. In January 2018, the average temperature was warmer, at 29 degrees, but the average OMO percentage was higher at 95% and OFO percentage also was higher at 90%. Since the average temperature for the month was warmer, you'd expect to see the OMO and OFO percentages be lower. Instead, they were 5% and 27% higher, respectively.

[1] Meaning that Suppliers had to deliver 78% of the OFO customers' MDQs, regardless of the actual usage for the customers.

c. Although Columbia's peak design day is based on -5 degrees, which was not reached during January 2018, they required suppliers to deliver 100% of customer MDQs for OFOs. I do not agree that Columbia should be permitted to determine supplier deliveries based on MDQs as a function of forecasted demand, but not to use MDQs for sales customers. Otherwise, it is not possible to know if it is a fair representation of the supply.

d. The aggregate for customer MDQs, at least for Shipley customers, was higher in January 2018 than in January 2014. This is after pulling out one large industrial customer whose plant shut down after 2014. When you compare the MDQs being higher to begin with, and the temperatures being similar or warmer, it just doesn't add up that the required deliveries should be more than what was required in the Polar Vortex of January 2014.

e. While the Price to Compare remained the same from January to June 2014, the Price to Compare lowered in April 2018 from the January-March 2018 Price to Compare, giving the appearance that Columbia benefited from or was unaffected by the higher priced gas in January 2018.

Q. How many sales customers are served by Columbia?

A. As of January 31, 2018, Columbia served 81.2% of residential customers, 46.3% of commercial customers, and 1.4% of industrial non-shopping customers on their system.

Q. What incentive would the utility have to subsidize non-shopping sales customers?

A. The worst-case scenario would be that Columbia was trying to compete with suppliers for customers. It could be that there are internal goals and management performance

requirements that encouraged it. Having suppliers deliver higher percentages for OFOs and OMOs would be a way to meet the "least cost" requirement for the large portion of residential and commercial customers they serve.

Q. Are there other contributing factors?

A. Yes. Columbia uses a regression model based on 3-5 years of historical usage and weather determine forecasted demand; which seems fair. They then use a ratio of the previous year's consumption for sales customers to overall demand as a basis for determining sales customer demand. What is unclear is if Columbia is only performing this calculation for customers currently on sales, or if they are looking at the customers on sales at the same time of the prior year. It's possible that customers migrating back and forth could drastically have different operations and load which would affect the forecast.

Q. Does the MDQ calculation impact the perception that sales customers are being subsidized?

A. Yes. The definition and formula for calculating the customer's MDQ is misleading. The MDQ, according to Columbia's tariff, "shall mean a Customer's maximum usage during a 24-hour period based on the most recent historical Customer consumption data." Suppliers use the MDQ to formulate potential exposure for the maximum that a customer can use. In determining how much volume suppliers need to deliver, Columbia bases OFO and OMO requirements as a percentage of the MDQ, which is calculated by looking at the previous 12 months highest months consumption and dividing by 25 production days in a month. The potential flaw in using only the past 12 months, is that in the

following year, MDQs can be over-stated from cold winters and can be understated from warm winters. Because Suppliers and customers use MDQs to forecast usage and potential OFO and OMO exposure, having over- or understated MDQs can be detrimental.

Q. How do you propose to address this issue?

A. From a supplier perspective, the best "fix" would be for Columbia to use the same MDQ method for sales customers that it does for shopping customers, so that Columbia is required to supply the same amount of gas to commercial and industrial customers on utility supply as the OFO/OMO percentages. That way, if Columbia is short, it will need to buy extra supply, not make suppliers make up the difference at high prices. If Columbia is long, there is no problem, but that the hedging of the utility should not impact decisions around percentages chosen for OFOs or OMOs. I also recommend that Columbia be required to provide a system-wide MDQ year over year comparison with each February annual update they send out, so we can see what the expectation is. Finally, I recommend that Columbia be required to adjust the MDQ to be based on 3-5 year history, rather than 12 months

Q. What do you propose regarding the MDQ?

A. Maximum daily quantity should be the "maximum" a customer would use. Currently, customers can actually use more than their MDQ, which is misleading when scheduling supply. A more appropriate calculation would be to use the same time period being used for forecasted demand. Columbia currently uses 3-5 years' history in determining forecasted demand for customers on their system. Columbia should base the MDQ

formula looking back at the same timeframe of 3-5 years, rather than 12 months. The option should be left open so that the MDQ can be adjusted if there's a material change in the customer's operations.

II. Other Operational Issues

Q. Are there presently other operational issues on the Columbia system that are harmful and/or problematic for Natural Gas Suppliers operating there?

A. Yes, I'd like to address the imbalance trade fees. Columbia has two options for trading, which provide a great deal of flexibility for suppliers and customers. Imbalance trades of bank transfers can be done for a $0.07/dth fee, with a maximum of $500 per trade. These are done via email and require approval from both the supplier and the customer. Gas transfers are trades done on a specific day and have a $0.07 fee with a minimum trade charge of $21. These are done electronically through the EBB and do not require approval from the customer.

Q. What change(s) would be beneficial to customers?

A. Since the "intent of the fee is to offset the administrative cost of transfer volumes between customer banks" per responses from Interrogatories, it would make sense for the trade fee be lowered to a per transaction fee that more closely reflects the administrative time required to process the trade. If it takes 15 minutes of a representative's time to do the transfer, and their hourly rate is $20-30/hour, $10 per transaction would be more than enough to cover administrative costs. Since it's a shifting of gas between customers, it shouldn't cost one customer $500 and another customer $21 to do the same type of imbalance trade process.

Imbalance trades for bank transfers currently require customer approval, which can be burdensome, since it can be difficult to get ahold of the right customer contact in time to meet the deadline. Since customers sign a gas application assigning the supplier as their agent to supply on behalf of the customer, we would like to remove this requirement to streamline the process. Also, since gas transfers do not require approval by customers, it makes sense that imbalance trades for bank transfers would not require approval either.

Q. Does this conclude your testimony?

A. Yes, thank you.

EXHIBIT LGT-1

COLUMBIA GAS OF PENNSYLVANIA INC.

R-2018-2647577

Data Requests

NGS Parties – Set 2

Question No. NGS Parties 2-006:

If Columbia serves 46.3% of the commercial customer load, what percentage of incremental gas did Columbia purchase to fulfill sales customer demand in January 2018 vs. normal demand? Was Columbia delivering the same percentages of MDQs for sales customers? Provide the relevant data to support the answer.

Response:

The Company's procurement practices at all times are based on activities required to serve its customers on a least cost basis. The Company does not differentiate nor does it have the ability to determine what customers may have been served by any particular resource whether that be baseload or incremental purchases or storage withdrawals. The Company does not use MDQs for sales customers as it must serve all of their load each and every day.

EXHIBIT LGT-2

Exhibit LGT-2

Temperature, Price, and OFO/OMO Data Comparison Harrisburg - PSP 25									
Day of Month	Avg temp 2014	Jan 2014 Prices		OMO %	OFO%	Avg temp 2018	Jan 2018 Prices	OMO%	OFO%
1	30	$	5.260			13	$ 28.455		
2	21	$	5.260			10	$ 28.455	80	82
3	12	$	18.380	80	50	21	$ 16.325	90	83
4	18	$	11.320			17	$ 45.195	100	100
5	32	$	11.320			10	$ 94.925	100	100
6	16	$	11.320	90	78	9	$ 20.030	100	100
7	8	$	43.510	90	78	17	$ 20.030	90	82
8	20	$	23.240	100	72	24	$ 20.030		
9	28	$	5.050			31	$ 3.325		
10	33	$	4.080			36	$ 3.455		
11	40	$	3.845			51	$ 3.160		
12	31	$	3.845			50	$ 3.065		
13	42	$	3.845			22	$ 15.015		
14	34	$	4.260			17	$ 15.015	100	90
15	34	$	4.515			25	$ 15.015	100	94
16	30	$	4.735			29	$ 15.015	100	95
17	33	$	4.835			18	$ 9.950	90	86
18	22	$	10.170			25	$ 7.735	90	77
19	33	$	10.170			32	$ 3.820		
20	33	$	10.170			36	$ 3.325		
21	11	$	10.170	95	55	42	$ 3.325		
22	11	$	72.795	90	57	47	$ 3.325		
23	14	$	74.250	90	57	45	$ 2.820		
24	17	$	31.705	90	55	33	$ 3.495		
25	22	$	48.895			28	$ 4.505		
26	22	$	48.895			32	$ 3.295		
27	17	$	48.895	90	65	50	$ 3.130		
28	11	$	81.295	90	65	39	$ 3.130		
29	12	$	24.945	90	65	37	$ 3.130		
30	22	$	9.945			23	$ 5.645		
31	30	$	6.095			30	$ 4.855		
Average	24	$	21.19	90	63	29	$ 13.29	95	90

EXHIBIT LGT-3

COLUMBIA GAS OF PENNSYLVANIA INC.

R-2018-2647577

Data Requests

NGS Parties – Set 4

Question No. NGS Parties 4-004:

Assuming that weather plays a factor in determining the Total Forecasted System Demand, what were the daily temperatures at the five weather stations the company uses in determining the forecasted system demand in the months of January 2014 and January 2018?

a. Bradford, PA

b. Hagerstown, MD

c. Harrisburg, PA

d. Morgantown, WV

e. Pittsburgh, PA

Response:

See Attachment A to this response for the daily temperatures at the five weather stations the company uses.

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
BFD	BRADFORD, PA.	1/1/2014	17
BFD	BRADFORD, PA.	1/2/2014	5
BFD	BRADFORD, PA.	1/3/2014	3
BFD	BRADFORD, PA.	1/4/2014	23
BFD	BRADFORD, PA.	1/5/2014	35
BFD	BRADFORD, PA.	1/6/2014	-2
BFD	BRADFORD, PA.	1/7/2014	1
BFD	BRADFORD, PA.	1/8/2014	19
BFD	BRADFORD, PA.	1/9/2014	24
BFD	BRADFORD, PA.	1/10/2014	37
BFD	BRADFORD, PA.	1/11/2014	38
BFD	BRADFORD, PA.	1/12/2014	32
BFD	BRADFORD, PA.	1/13/2014	43
BFD	BRADFORD, PA.	1/14/2014	33
BFD	BRADFORD, PA.	1/15/2014	24
BFD	BRADFORD, PA.	1/16/2014	25
BFD	BRADFORD, PA.	1/17/2014	25
BFD	BRADFORD, PA.	1/18/2014	12
BFD	BRADFORD, PA.	1/19/2014	25
BFD	BRADFORD, PA.	1/20/2014	16
BFD	BRADFORD, PA.	1/21/2014	0
BFD	BRADFORD, PA.	1/22/2014	1
BFD	BRADFORD, PA.	1/23/2014	3
BFD	BRADFORD, PA.	1/24/2014	9
BFD	BRADFORD, PA.	1/25/2014	10
BFD	BRADFORD, PA.	1/26/2014	19
BFD	BRADFORD, PA.	1/27/2014	1
BFD	BRADFORD, PA.	1/28/2014	-3
BFD	BRADFORD, PA.	1/29/2014	5
BFD	BRADFORD, PA.	1/30/2014	23
BFD	BRADFORD, PA.	1/31/2014	28
BFD	BRADFORD, PA.	1/1/2018	7
BFD	BRADFORD, PA.	1/2/2018	5
BFD	BRADFORD, PA.	1/3/2018	15
BFD	BRADFORD, PA.	1/4/2018	4
BFD	BRADFORD, PA.	1/5/2018	1
BFD	BRADFORD, PA.	1/6/2018	-3
BFD	BRADFORD, PA.	1/7/2018	19
BFD	BRADFORD, PA.	1/8/2018	31
BFD	BRADFORD, PA.	1/9/2018	22
BFD	BRADFORD, PA.	1/10/2018	35
BFD	BRADFORD, PA.	1/11/2018	51
BFD	BRADFORD, PA.	1/12/2018	29
BFD	BRADFORD, PA.	1/13/2018	1

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
BFD	BRADFORD, PA.	1/14/2018	6
BFD	BRADFORD, PA.	1/15/2018	17
BFD	BRADFORD, PA.	1/16/2018	16
BFD	BRADFORD, PA.	1/17/2018	9
BFD	BRADFORD, PA.	1/18/2018	17
BFD	BRADFORD, PA.	1/19/2018	30
BFD	BRADFORD, PA.	1/20/2018	36
BFD	BRADFORD, PA.	1/21/2018	40
BFD	BRADFORD, PA.	1/22/2018	46
BFD	BRADFORD, PA.	1/23/2018	32
BFD	BRADFORD, PA.	1/24/2018	19
BFD	BRADFORD, PA.	1/25/2018	19
BFD	BRADFORD, PA.	1/26/2018	39
BFD	BRADFORD, PA.	1/27/2018	39
BFD	BRADFORD, PA.	1/28/2018	32
BFD	BRADFORD, PA.	1/29/2018	29
BFD	BRADFORD, PA.	1/30/2018	11
BFD	BRADFORD, PA.	1/31/2018	32
HGR	HAGERSTOWN, MD	1/1/2014	32
HGR	HAGERSTOWN, MD	1/2/2014	23
HGR	HAGERSTOWN, MD	1/3/2014	13
HGR	HAGERSTOWN, MD	1/4/2014	21
HGR	HAGERSTOWN, MD	1/5/2014	32
HGR	HAGERSTOWN, MD	1/6/2014	13
HGR	HAGERSTOWN, MD	1/7/2014	13
HGR	HAGERSTOWN, MD	1/8/2014	22
HGR	HAGERSTOWN, MD	1/9/2014	31
HGR	HAGERSTOWN, MD	1/10/2014	34
HGR	HAGERSTOWN, MD	1/11/2014	42
HGR	HAGERSTOWN, MD	1/12/2014	36
HGR	HAGERSTOWN, MD	1/13/2014	46
HGR	HAGERSTOWN, MD	1/14/2014	39
HGR	HAGERSTOWN, MD	1/15/2014	35
HGR	HAGERSTOWN, MD	1/16/2014	31
HGR	HAGERSTOWN, MD	1/17/2014	34
HGR	HAGERSTOWN, MD	1/18/2014	20
HGR	HAGERSTOWN, MD	1/19/2014	33
HGR	HAGERSTOWN, MD	1/20/2014	37
HGR	HAGERSTOWN, MD	1/21/2014	12
HGR	HAGERSTOWN, MD	1/22/2014	9
HGR	HAGERSTOWN, MD	1/23/2014	11
HGR	HAGERSTOWN, MD	1/24/2014	16
HGR	HAGERSTOWN, MD	1/25/2014	22
HGR	HAGERSTOWN, MD	1/26/2014	24

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
HGR	HAGERSTOWN, MD	1/27/2014	16
HGR	HAGERSTOWN, MD	1/28/2014	9
HGR	HAGERSTOWN, MD	1/29/2014	14
HGR	HAGERSTOWN, MD	1/30/2014	24
HGR	HAGERSTOWN, MD	1/31/2014	33
HGR	HAGERSTOWN, MD	1/1/2018	14
HGR	HAGERSTOWN, MD	1/2/2018	16
HGR	HAGERSTOWN, MD	1/3/2018	23
HGR	HAGERSTOWN, MD	1/4/2018	16
HGR	HAGERSTOWN, MD	1/5/2018	10
HGR	HAGERSTOWN, MD	1/6/2018	9
HGR	HAGERSTOWN, MD	1/7/2018	19
HGR	HAGERSTOWN, MD	1/8/2018	32
HGR	HAGERSTOWN, MD	1/9/2018	36
HGR	HAGERSTOWN, MD	1/10/2018	38
HGR	HAGERSTOWN, MD	1/11/2018	57
HGR	HAGERSTOWN, MD	1/12/2018	53
HGR	HAGERSTOWN, MD	1/13/2018	20
HGR	HAGERSTOWN, MD	1/14/2018	17
HGR	HAGERSTOWN, MD	1/15/2018	25
HGR	HAGERSTOWN, MD	1/16/2018	27
HGR	HAGERSTOWN, MD	1/17/2018	17
HGR	HAGERSTOWN, MD	1/18/2018	33
HGR	HAGERSTOWN, MD	1/19/2018	41
HGR	HAGERSTOWN, MD	1/20/2018	50
HGR	HAGERSTOWN, MD	1/21/2018	50
HGR	HAGERSTOWN, MD	1/22/2018	54
HGR	HAGERSTOWN, MD	1/23/2018	46
HGR	HAGERSTOWN, MD	1/24/2018	33
HGR	HAGERSTOWN, MD	1/25/2018	29
HGR	HAGERSTOWN, MD	1/26/2018	36
HGR	HAGERSTOWN, MD	1/27/2018	53
HGR	HAGERSTOWN, MD	1/28/2018	43
HGR	HAGERSTOWN, MD	1/29/2018	38
HGR	HAGERSTOWN, MD	1/30/2018	22
HGR	HAGERSTOWN, MD	1/31/2018	35
MDT	HARRISBURG, PA.	1/1/2014	30
MDT	HARRISBURG, PA.	1/2/2014	21
MDT	HARRISBURG, PA.	1/3/2014	12
MDT	HARRISBURG, PA.	1/4/2014	18
MDT	HARRISBURG, PA.	1/5/2014	32
MDT	HARRISBURG, PA.	1/6/2014	16
MDT	HARRISBURG, PA.	1/7/2014	8
MDT	HARRISBURG, PA.	1/8/2014	20

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
MDT	HARRISBURG, PA.	1/9/2014	28
MDT	HARRISBURG, PA.	1/10/2014	33
MDT	HARRISBURG, PA.	1/11/2014	40
MDT	HARRISBURG, PA.	1/12/2014	31
MDT	HARRISBURG, PA.	1/13/2014	42
MDT	HARRISBURG, PA.	1/14/2014	34
MDT	HARRISBURG, PA.	1/15/2014	34
MDT	HARRISBURG, PA.	1/16/2014	30
MDT	HARRISBURG, PA.	1/17/2014	33
MDT	HARRISBURG, PA.	1/18/2014	22
MDT	HARRISBURG, PA.	1/19/2014	33
MDT	HARRISBURG, PA.	1/20/2014	33
MDT	HARRISBURG, PA.	1/21/2014	11
MDT	HARRISBURG, PA.	1/22/2014	11
MDT	HARRISBURG, PA.	1/23/2014	14
MDT	HARRISBURG, PA.	1/24/2014	17
MDT	HARRISBURG, PA.	1/25/2014	22
MDT	HARRISBURG, PA.	1/26/2014	22
MDT	HARRISBURG, PA.	1/27/2014	17
MDT	HARRISBURG, PA.	1/28/2014	11
MDT	HARRISBURG, PA.	1/29/2014	12
MDT	HARRISBURG, PA.	1/30/2014	22
MDT	HARRISBURG, PA.	1/31/2014	30
MDT	HARRISBURG, PA.	1/1/2018	13
MDT	HARRISBURG, PA.	1/2/2018	10
MDT	HARRISBURG, PA.	1/3/2018	21
MDT	HARRISBURG, PA.	1/4/2018	17
MDT	HARRISBURG, PA.	1/5/2018	10
MDT	HARRISBURG, PA.	1/6/2018	9
MDT	HARRISBURG, PA.	1/7/2018	17
MDT	HARRISBURG, PA.	1/8/2018	24
MDT	HARRISBURG, PA.	1/9/2018	31
MDT	HARRISBURG, PA.	1/10/2018	36
MDT	HARRISBURG, PA.	1/11/2018	51
MDT	HARRISBURG, PA.	1/12/2018	50
MDT	HARRISBURG, PA.	1/13/2018	22
MDT	HARRISBURG, PA.	1/14/2018	17
MDT	HARRISBURG, PA.	1/15/2018	25
MDT	HARRISBURG, PA.	1/16/2018	29
MDT	HARRISBURG, PA.	1/17/2018	18
MDT	HARRISBURG, PA.	1/18/2018	25
MDT	HARRISBURG, PA.	1/19/2018	32
MDT	HARRISBURG, PA.	1/20/2018	36
MDT	HARRISBURG, PA.	1/21/2018	42

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
MDT	HARRISBURG, PA.	1/22/2018	47
MDT	HARRISBURG, PA.	1/23/2018	45
MDT	HARRISBURG, PA.	1/24/2018	33
MDT	HARRISBURG, PA.	1/25/2018	28
MDT	HARRISBURG, PA.	1/26/2018	32
MDT	HARRISBURG, PA.	1/27/2018	50
MDT	HARRISBURG, PA.	1/28/2018	39
MDT	HARRISBURG, PA.	1/29/2018	37
MDT	HARRISBURG, PA.	1/30/2018	23
MDT	HARRISBURG, PA.	1/31/2018	30
MGW	MORGANTOWN, WV.	1/1/2014	35
MGW	MORGANTOWN, WV.	1/2/2014	20
MGW	MORGANTOWN, WV.	1/3/2014	10
MGW	MORGANTOWN, WV.	1/4/2014	32
MGW	MORGANTOWN, WV.	1/5/2014	45
MGW	MORGANTOWN, WV.	1/6/2014	3
MGW	MORGANTOWN, WV.	1/7/2014	5
MGW	MORGANTOWN, WV.	1/8/2014	25
MGW	MORGANTOWN, WV.	1/9/2014	34
MGW	MORGANTOWN, WV.	1/10/2014	53
MGW	MORGANTOWN, WV.	1/11/2014	44
MGW	MORGANTOWN, WV.	1/12/2014	41
MGW	MORGANTOWN, WV.	1/13/2014	49
MGW	MORGANTOWN, WV.	1/14/2014	40
MGW	MORGANTOWN, WV.	1/15/2014	29
MGW	MORGANTOWN, WV.	1/16/2014	32
MGW	MORGANTOWN, WV.	1/17/2014	27
MGW	MORGANTOWN, WV.	1/18/2014	21
MGW	MORGANTOWN, WV.	1/19/2014	33
MGW	MORGANTOWN, WV.	1/20/2014	32
MGW	MORGANTOWN, WV.	1/21/2014	9
MGW	MORGANTOWN, WV.	1/22/2014	10
MGW	MORGANTOWN, WV.	1/23/2014	6
MGW	MORGANTOWN, WV.	1/24/2014	16
MGW	MORGANTOWN, WV.	1/25/2014	18
MGW	MORGANTOWN, WV.	1/26/2014	32
MGW	MORGANTOWN, WV.	1/27/2014	8
MGW	MORGANTOWN, WV.	1/28/2014	1
MGW	MORGANTOWN, WV.	1/29/2014	8
MGW	MORGANTOWN, WV.	1/30/2014	30
MGW	MORGANTOWN, WV.	1/31/2014	35
MGW	MORGANTOWN, WV.	1/1/2018	7
MGW	MORGANTOWN, WV.	1/2/2018	7
MGW	MORGANTOWN, WV.	1/3/2018	19

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
MGW	MORGANTOWN, WV.	1/4/2018	9
MGW	MORGANTOWN, WV.	1/5/2018	6
MGW	MORGANTOWN, WV.	1/6/2018	4
MGW	MORGANTOWN, WV.	1/7/2018	29
MGW	MORGANTOWN, WV.	1/8/2018	34
MGW	MORGANTOWN, WV.	1/9/2018	32
MGW	MORGANTOWN, WV.	1/10/2018	50
MGW	MORGANTOWN, WV.	1/11/2018	60
MGW	MORGANTOWN, WV.	1/12/2018	38
MGW	MORGANTOWN, WV.	1/13/2018	14
MGW	MORGANTOWN, WV.	1/14/2018	15
MGW	MORGANTOWN, WV.	1/15/2018	31
MGW	MORGANTOWN, WV.	1/16/2018	18
MGW	MORGANTOWN, WV.	1/17/2018	10
MGW	MORGANTOWN, WV.	1/18/2018	25
MGW	MORGANTOWN, WV.	1/19/2018	37
MGW	MORGANTOWN, WV.	1/20/2018	46
MGW	MORGANTOWN, WV.	1/21/2018	52
MGW	MORGANTOWN, WV.	1/22/2018	58
MGW	MORGANTOWN, WV.	1/23/2018	39
MGW	MORGANTOWN, WV.	1/24/2018	29
MGW	MORGANTOWN, WV.	1/25/2018	27
MGW	MORGANTOWN, WV.	1/26/2018	48
MGW	MORGANTOWN, WV.	1/27/2018	52
MGW	MORGANTOWN, WV.	1/28/2018	37
MGW	MORGANTOWN, WV.	1/29/2018	33
MGW	MORGANTOWN, WV.	1/30/2018	17
MGW	MORGANTOWN, WV.	1/31/2018	45
PIT	PITTSBURGH, PA.	1/1/2014	29
PIT	PITTSBURGH, PA.	1/2/2014	17
PIT	PITTSBURGH, PA.	1/3/2014	11
PIT	PITTSBURGH, PA.	1/4/2014	29
PIT	PITTSBURGH, PA.	1/5/2014	38
PIT	PITTSBURGH, PA.	1/6/2014	0
PIT	PITTSBURGH, PA.	1/7/2014	3
PIT	PITTSBURGH, PA.	1/8/2014	21
PIT	PITTSBURGH, PA.	1/9/2014	31
PIT	PITTSBURGH, PA.	1/10/2014	45
PIT	PITTSBURGH, PA.	1/11/2014	42
PIT	PITTSBURGH, PA.	1/12/2014	34
PIT	PITTSBURGH, PA.	1/13/2014	47
PIT	PITTSBURGH, PA.	1/14/2014	38
PIT	PITTSBURGH, PA.	1/15/2014	26
PIT	PITTSBURGH, PA.	1/16/2014	31

Airport ID	Station Location	Date	Gas Day Average Temperature (F°)
PIT	PITTSBURGH, PA.	1/17/2014	26
PIT	PITTSBURGH, PA.	1/18/2014	17
PIT	PITTSBURGH, PA.	1/19/2014	32
PIT	PITTSBURGH, PA.	1/20/2014	27
PIT	PITTSBURGH, PA.	1/21/2014	7
PIT	PITTSBURGH, PA.	1/22/2014	9
PIT	PITTSBURGH, PA.	1/23/2014	7
PIT	PITTSBURGH, PA.	1/24/2014	15
PIT	PITTSBURGH, PA.	1/25/2014	17
PIT	PITTSBURGH, PA.	1/26/2014	26
PIT	PITTSBURGH, PA.	1/27/2014	5
PIT	PITTSBURGH, PA.	1/28/2014	2
PIT	PITTSBURGH, PA.	1/29/2014	10
PIT	PITTSBURGH, PA.	1/30/2014	29
PIT	PITTSBURGH, PA.	1/31/2014	34
PIT	PITTSBURGH, PA.	1/1/2018	8
PIT	PITTSBURGH, PA.	1/2/2018	7
PIT	PITTSBURGH, PA.	1/3/2018	18
PIT	PITTSBURGH, PA.	1/4/2018	7
PIT	PITTSBURGH, PA.	1/5/2018	3
PIT	PITTSBURGH, PA.	1/6/2018	3
PIT	PITTSBURGH, PA.	1/7/2018	25
PIT	PITTSBURGH, PA.	1/8/2018	33
PIT	PITTSBURGH, PA.	1/9/2018	29
PIT	PITTSBURGH, PA.	1/10/2018	42
PIT	PITTSBURGH, PA.	1/11/2018	55
PIT	PITTSBURGH, PA.	1/12/2018	28
PIT	PITTSBURGH, PA.	1/13/2018	8
PIT	PITTSBURGH, PA.	1/14/2018	10
PIT	PITTSBURGH, PA.	1/15/2018	24
PIT	PITTSBURGH, PA.	1/16/2018	12
PIT	PITTSBURGH, PA.	1/17/2018	10
PIT	PITTSBURGH, PA.	1/18/2018	23
PIT	PITTSBURGH, PA.	1/19/2018	35
PIT	PITTSBURGH, PA.	1/20/2018	42
PIT	PITTSBURGH, PA.	1/21/2018	46
PIT	PITTSBURGH, PA.	1/22/2018	54
PIT	PITTSBURGH, PA.	1/23/2018	36
PIT	PITTSBURGH, PA.	1/24/2018	27
PIT	PITTSBURGH, PA.	1/25/2018	26
PIT	PITTSBURGH, PA.	1/26/2018	45
PIT	PITTSBURGH, PA.	1/27/2018	44
PIT	PITTSBURGH, PA.	1/28/2018	36
PIT	PITTSBURGH, PA.	1/29/2018	31

Airport ID	Station Location	Date	Gas Day Average Temperature (F')
PIT	PITTSBURGH, PA.	1/30/2018	15
PIT	PITTSBURGH, PA.	1/31/2018	40

EXHIBIT LGT-4

COLUMBIA GAS OF PENNSYLVANIA INC.

R-2018-2647577

Data Requests

NGS Parties – Set 1

Question No. NGS Parties 1-001:

How many operational flow orders and/or operational matching orders did Columbia impose:

a. For the period March 1, 2017 to March 1, 2018?

b. For the period November 1, 2013 to March 1, 2017?

c. For each event listed in response to a & b, provide the following:

i. the reason for the event including the identity of interstate pipelines that were involved;
ii. the impacted delivery points including any impacted interstate pipelines;
iii. the duration of the event; and
iv. whether any penalties to Columbia or any active suppliers resulted from said event.

Response:

a. & b. Please see the following table[1]:

[1] Please note that the column referring to days with Choice PSP Restrictions refers to the number of days CHOICE NGS were provided a maximum identified volume for delivery to Columbia's city gates with the remainder delivered to the Transit point for Columbia set up by Columbia Gas Transmission, LLC ("CPG"). This did not alter the CHOICE NGS delivery requirements to Columbia and was set forth to enable Columbia to maintain compliance with CPG's operational orders limiting city gate over nominations.

Dates			Number of Days with Pipeline Orders	Number of Days with CPA OMO	Number of Days with CPA OFO	Number of Days with Choice PSP Restrictions
Nov-13	Mar-14		47	38	38	0
Nov-14	Mar-15		48	44	44	18
Nov-15	Mar-16		53	39	39	30
Nov-16	Mar-17		77	27	27	0
Nov-17	Mar-18		59	32	32	0
Summer 2014			123	123	123	123
Summer 2015			214	0	0	169
Summer 2016			214	9	9	21
Summer 2017			214	39	39	33

c. Please see Attachment A to this response. Note that prior to January 2017 the company did not track pipeline flow orders for pipelines other than Columbia Gas Transmission.