

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Joint Motion to )  
Modify the December 2, 2009 Opinion )  
and Order and the September 7, 2011 ) Case No. 12-2637-GA-EXM  
Second Opinion and Order in Case No. )  
08-1344-GA-EXM. )

---

---

**PREPARED DIRECT TESTIMONY OF  
MICHAEL D. ANDERSON  
ON BEHALF OF COLUMBIA GAS OF OHIO, INC.**

---

---

Stephen B. Seiple, Asst. General Counsel  
(Counsel of Record)  
Brooke E. Leslie, Counsel  
200 Civic Center Drive  
P. O. Box 117  
Columbus, Ohio 43216-0117  
Telephone: (614) 460-4648  
(614) 460-5558  
Fax: (614) 460-6986  
Email: sseiple@nisource.com  
bleslie@nisource.com

Daniel R. Conway  
Eric B. Gallon  
Mark S. Stemm  
Porter Wright Morris & Arthur LLP  
Huntington Center  
41 South High Street  
Columbus, Ohio 43215  
Telephone: (614) 227-2270  
(614) 227-2190  
(614) 227-2092  
Fax: (614) 227-2100  
Email: dconway@porterwright.com  
egallon@porterwright.com  
mstemm@porterwright.com

**November 12, 2012**

Attorneys for  
**COLUMBIA GAS OF OHIO, INC.**

**PREPARED DIRECT TESTIMONY OF MICHAEL D. ANDERSON**

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

2   A: My name is Michael D. Anderson. My business address is Post Office Box  
3   117, 200 Civic Center Drive, Columbus, Ohio 43216-0117.  
4

5   **Q: By whom are you employed and in what capacity?**

6   A: I am employed by NiSource Corporate Services. My current title is Director,  
7   Supply Development.  
8

9   **Q: What are your responsibilities as Director, Supply Development?**

10   A: As Director, Supply Development, my principal responsibilities include ne-  
11   gotiation of pipeline capacity contracts; participation in FERC related mat-  
12   ters and evaluation, analysis and development of potential non-traditional  
13   supply options including such diverse items as landfill gas projects and  
14   commercial opportunities to connect developing shale gas resources to the  
15   Columbia's distribution system. I also provide internal education to  
16   NiSource employees and external audiences on the impacts of new supply  
17   resources, principally those derived from shale formations. These services  
18   and responsibilities are performed on behalf of Columbia and Columbia's  
19   local distribution affiliates in Kentucky, Pennsylvania, Maryland, Virginia  
20   and Massachusetts.  
21

22   **Q: What is your educational background?**

23   A: I received a Bachelor of Science degree in Fuels Engineering from the Uni-  
24   versity of Utah in 1978. The Fuels Engineering curriculum consisted pri-  
25   marily of Chemical Engineering studies with specific emphasis on engi-  
26   neering analysis of conventional and synthetic fuel resources.  
27

28   **Q: Please briefly describe your professional experience.**

29   A: I have been employed by Columbia since 1990, initially as Manager of Sup-  
30   ply Planning, advancing to Manager of Economic Analysis in 1993. On May  
31   1, 1997, I was promoted to Director, Supply Planning and on May 1, 2010  
32   named Director, Supply Development. From 1982 through 1990 I was em-  
33   ployed as Petroleum Engineer, Engineering Manager and Manager of Gas  
34   Supply for various subsidiaries of Texas Eastern Corporation ("Texas East-  
35   ern"). In the engineering positions I was responsible for the drilling and  
36   production department of Texas Eastern's Rocky Mountain exploration and  
37   production operations, with direct responsibilities including economic anal-  
38   ysis, justification and management of drilling prospects, production opera-

1 tions and in-field gas gathering/treating projects. In the position of Manager  
2 of Gas Supply I was responsible for the analysis and negotiation of new gas  
3 supplies for system supply use and the renegotiation of existing gas supply  
4 contracts to reduce contractual obligations to purchase gas supplies for sys-  
5 tem supply use under take-or-pay contracts. From 1978 until 1982 I was em-  
6 ployed by Marathon Oil and J. M. Huber Corporation as a Petroleum Engi-  
7 neer in the Permian Basin of West Texas and Southeast New Mexico.

8  
9 **Q: What is the purpose of your testimony in this proceeding?**

10 A: My testimony will discuss Columbia's distribution network, Columbia's  
11 capacity portfolio, CHOICE/SCO Balancing services and fee, Columbia's  
12 Off-System Sales and Capacity Release Incentive program and Shale gas  
13 issues. Additionally, I will briefly discuss Columbia's Design Peak Day  
14 demand and capacity balance, the allocation procedure employed by Co-  
15 lumbia for capacity assignment to CHOICE and SCO suppliers, and the  
16 Stipulation timeline.

17  
18 **COLUMBIA'S DISTRIBUTION NETWORK**

19  
20 **Q: Please describe Columbia's distribution network.**

21 A: Columbia's distribution network consists of several hundred, often isolated  
22 distribution systems spread out over Columbia's 60 Ohio county service ter-  
23 ritory. These distribution systems are served by over 840 separate points of  
24 delivery ("POD") from upstream interstate pipeline companies often with a  
25 single POD serving a single distribution system. In addition to the identified  
26 PODs, Columbia also provides service to over 10,000 mainline tap customer  
27 locations throughout Ohio.

28  
29 **Q: How does Columbia's distribution network compare to other Ohio LDCs?**

30 A: Columbia's distribution network is significantly more complex. For exam-  
31 ple, Dominion East Ohio Gas ("DEOG"), the next largest Ohio LDC, receives  
32 service from interstate pipelines from approximately 35 PODs while Vectren  
33 Energy Delivery of Ohio ("Vectren") receives service from interstate pipe-  
34 lines at approximately 12 PODs. The number of PODs with interstate pipe-  
35 lines that Columbia must manage exceeds the total of Vectren and DEOG by  
36 a factor of almost 18. In addition, Columbia, Vectren and DEOG receive ser-  
37 vice from Columbia Gas Transmission, LLC ("TCO"). Both Vectren and  
38 DEOG receive service through a single Pipeline Scheduling Point ("PSP")  
39 while Columbia must manage the receipts of service through twelve PSPs.  
40 Columbia's supply pipeline configuration and geographic spread add a lev-

1 el of complexity to its operations. This conclusion is supported in the Liberty  
2 Consulting Group's "Final Report, Management/Performance Audit, Co-  
3 lumbia Gas of Ohio, Inc., Case No. 08-221-GA-GCR".<sup>1</sup> Columbia's broad  
4 service territory, including a dozen market areas<sup>2</sup> and a large number of re-  
5 ceipt points, and the integration of the Columbia system with the TCO pipe-  
6 line create a more complex operating environment compared to most LDCs.  
7 Liberty Consulting Group agreed with this characterization of mine as well.  
8

9 **Q: Does Columbia own any high-pressure transmission lines that intercon-**  
10 **nect these wide-spread distribution systems?**

11 A: No.  
12

13 **Q: Earlier you stated that most of these isolated distribution systems are con-**  
14 **connected to only a single POD and therefore a single pipeline, are all these**  
15 **isolated distribution systems connected to the same pipeline?**

16 A: No. However, the vast majority are connected to TCO.  
17

18 **Q: For those distribution systems or markets connected to TCO do they have**  
19 **alternative upstream pipeline options?**

20 A: For the vast majority of those markets no alternate pipeline options exist.  
21

22 **Q: In what markets does Columbia have alternate pipeline options?**

23 A: Alternate pipeline options presently exist for Columbia's Maumee market  
24 which serves the west side of Toledo; portions of the south side of Colum-  
25 bia's Columbus market; portions of Columbia's Parma market; portions of  
26 Columbia's Findlay market; and Columbia's markets in Fostoria, Oberlin,  
27 and Norwalk. I should note that Columbia has several markets or portions  
28 of markets where service from TCO is not available. These markets general-  
29 ly do not have alternatives to the service utilized to provide supplies to these  
30 markets. These markets generally are served through either Columbia's con-  
31 tract with Gatherco or with supplies delivered from DEOG either through  
32 direct purchase by Columbia or under an exchange agreement with DEOG.  
33

34 **Q: Please describe those alternative pipeline options.**

35 A: For the Maumee market Columbia has the ability to receive gas from ANR  
36 Pipeline Company ("ANR") and Panhandle Eastern Pipe Line Company, LP

---

<sup>1</sup> Final Report, Management/Performance Audit, Columbia Gas of Ohio, Inc., Case No. 08-221-GA-GCR", Liberty Consulting Group at III-11.

<sup>2</sup> Market Areas are referred to as Pipeline Scheduling Points or PSPs in Columbia's tariff and Program Outline

1 ("Panhandle"). Columbia presently contracts for capacity to serve this mar-  
2 ket from Panhandle. For the Columbus market Columbia has the ability to  
3 receive gas from Dominion Transmission, Inc. ("DTI") and Texas Eastern  
4 Transmission, LP. ("Texas Eastern"). Columbia does not currently contract  
5 for capacity from either of these pipelines. For the Parma market Columbia  
6 has the ability to receive gas from North Coast Gas Transmission, LLC.  
7 ("North Coast") at two PODs. Columbia presently contracts for capacity  
8 from North Coast at both these locations. For the Findlay, Fostoria, Oberlin  
9 and Norwalk markets Columbia has the ability to receive gas from North  
10 Coast. Columbia presently contracts for service from North Coast in all these  
11 markets.

12  
13 **Q: Does Columbia have any other non-pipeline capacity resources?**

14 A: Yes, Columbia has: (a) a peaking contract provided by J. P. Morgan Ventures  
15 Energy Corporation which provides service to our Parma market, (b) a full  
16 requirements contract with Gatherco, Inc. that serves numerous Columbia  
17 markets, (c) local gas supply contracts with Producer's Gas Sales, Inc. ("Pro-  
18 ducer's") that serve portions of Columbia's markets in Coshocton, Za-  
19 nesville and Newark and (d) numerous local gas contracts with small gas  
20 producers.

21  
22 **Q: Please describe the purchases and exchange agreement with DEOG.**

23 A: Columbia purchases supplies delivered by DEOG into its Brewster market.  
24 While portions of this market are served by TCO, it is cheaper for Columbia  
25 to acquire supplies delivered by DEOG rather than invest capital into its dis-  
26 tribution system and increase capacity on TCO to serve this portion of the  
27 Brewster market. The exchange agreement between Columbia and DEOG  
28 enable both parties to serve certain markets in a manner than minimizes  
29 costs for both. Under this agreement DEOG will deliver supplies into certain  
30 Columbia markets and Columbia will deliver supplies into certain DEOG  
31 markets. This "exchange" of deliveries is performed on a volumetric basis  
32 and enables both companies to avoid constructing additional distribution  
33 facilities to markets that are removed from the respective company's exist-  
34 ing distribution system.

35  
36 **Q: Please describe Columbia's agreement with Gatherco.**

37 A: Columbia's agreement with Gatherco provides service to a large number of  
38 markets served off of gathering and small transmission lines that Gatherco  
39 purchased from TCO approximately 15 years ago. The contract with Gather-  
40 co provides service through approximately 80 PODs and is considered a

1 “full requirements” contract. Stated differently, this contract with Gatherco  
2 is a no-notice contract that serves all Columbia customer demand behind  
3 each POD each day of the year without prior scheduling. A large portion of  
4 the supply Gatherco utilizes to provide service to Columbia comes from lo-  
5 cal gas supplies.

6

7 **Q: Are the PODs at which Gatherco provides service to Columbia included**  
8 **in the 840 PODs noted earlier?**

9 A: No, they are in addition to these PODs.

10

11 **Q: Please describe Columbia’s agreement with Producer’s.**

12 A: On a monthly basis Columbia nominates a volume to be delivered by Pro-  
13 ducers to interconnections between Producer’s and Columbia in Coshocton,  
14 Newark and Zanesville. Without these supplies Columbia would need to  
15 spend capital to expand/uprate its distribution system in these markets and  
16 increase upstream capacity on TCO.

17

18

#### COLUMBIA’S CAPACITY PORTFOLIO

19

20 **Q: Please describe briefly Columbia’s capacity portfolio.**

21 A: Attachment A provides a current listing of Columbia’s capacity portfolio.

22

23 **Q: Please describe the importance of the TCO capacity to Columbia.**

24 A: The TCO capacity is critical to the provision of reliable, economic service to  
25 Columbia’s customers. As I noted earlier, TCO capacity provides the only  
26 available service to the vast majority of Columbia’s markets. Furthermore,  
27 given the large number of PODs, diverse service territory and the tempera-  
28 ture-sensitive demand of the vast majority of customers that Columbia con-  
29 tracts for capacity to serve; the TCO capacity provides the most efficient, cost  
30 effective means to serve its customers. Additionally, Columbia retains the  
31 ultimate responsibility through its role as supplier of last resort. Given the  
32 items noted above among others, Columbia is not able to reliably provide  
33 this vital service without contracting for this capacity.

34

35 **Q: Please describe Maximum Daily Delivery Obligations and Daily Delivery**  
36 **Quantities.**

37 A: Maximum Daily Delivery Obligations (“MDDO”) define the maximum  
38 quantity of gas that the upstream pipeline must deliver, upon demand, to  
39 any POD on any day that an operational restriction has not been issued by  
40 that pipeline. Columbia manages the allocation of its MDDOs based on the

1 total size of its downstream market behind each POD. Such allocation sim-  
2 plifies the ability of Columbia and its shippers to manage the daily delivery  
3 of gas scheduled at 12 PSPs to over 840 interstate pipeline PODs. Daily De-  
4 livery Quantities ("DDQ") define the upstream pipeline's delivery obliga-  
5 tion to an individual POD on all days including days when the pipeline has  
6 issued operational restrictions. DDQs are critical to the design of upstream  
7 facilities serving individual PODs to ensure that firm service can be main-  
8 tained.

9

10 **Q: Please describe the relationship between MDDOs and DDQ with Co-**  
11 **lumbia's contracts with TCO.**

12 A: Reaching back to the Federal Energy Regulatory Commission's ("FERC")  
13 restructuring of the interstate pipeline system under Order 636, TCO's  
14 transportation service contracts, both Firm Transportation Service ("FTS")  
15 and Storage Service Transportation ("SST"), were allocated MDDO and  
16 DDQ levels in excess of their daily contract entitlements. These excess  
17 MDDO and DDQ levels are grand fathered to Columbia's existing FTS and  
18 SST contracts. Any reduction in these contracts results in a proportional re-  
19 duction in these grandfathered MDDO and DDQ rights and system flexibil-  
20 ity.

21

22 **Q: Are replacement contracts granted these grand fathered MDDO and DDQ**  
23 **rights?**

24 A: To the extent that Columbia extends or renews its existing FTS and SST con-  
25 tracts the grandfathered MDDO and DDQ rights stay intact. However, if Co-  
26 lumbia terminates capacity under these contracts and either: (a) later recon-  
27 tracts for the capacity, or, (b) other parties contract for the capacity, the  
28 grandfathered MDDO and DDQ rights are lost. If no one recontracts for this  
29 capacity then the MDDO and DDQ rights are no longer in force and the con-  
30 tractual obligation of the pipeline to provide associated firm service are ter-  
31 minated.

32

33 **Q: Why are these grandfathered MDDO and DDQ important?**

34 A: They are critical on a number of levels to the operation of Columbia's distri-  
35 bution system and for the services Columbia offers to its customers and their  
36 suppliers. Below I have listed a few of those areas in which grandfathered  
37 MDDOs and DDQs play a critical role:

38 a. Ability to manage delivery of supplies to individual PODs that are  
39 scheduled at the PSP level. Suppliers for CHOICE, SCO and Transporta-  
40 tion Service ("TS") customers all must schedule gas to the PSP in which



1 their customers reside. This is a far simpler, more efficient and lower cost  
2 option then scheduling to individual PODs.

3 b. Ability to manage shifting customer demands. Customer demands be-  
4 hind individual PODs are constantly changing driven by a number of  
5 factors including conservation efforts, addition or deletion of building  
6 stock, etc. The grandfathered MDDOs and DDQs enable Columbia to ef-  
7 ficiently manage this dynamic. Given Columbia's wide-spread service  
8 territory, the large number of PODs and the dynamic nature of customer  
9 demand. These grandfathered MDDOs and DDQs enable Columbia to  
10 keep pipeline entitlements at levels essentially equivalent to its design  
11 peak day demand to assure reliability of service.

12 c. The grandfathered MDDOs and DDQs enable Columbia to operate  
13 CHOICE and SCO programs on a level playing field basis. Without these  
14 grandfathered MDDOs and DDQs, the assignment of capacity to  
15 CHOICE and SCO suppliers would be significantly different and would  
16 vary by PSP. An assignment of capacity that varies by PSP would in-  
17 crease complexity, reduce operational efficiency and increase costs for  
18 both SCO and CHOICE customers. Grandfathered MDDOs and DDQs  
19 provide Columbia the ability, through the inherent additional system  
20 flexibility they provide, to assign capacity by capacity type, i.e. FTS and  
21 storage, on an equal basis to all PSPs making the delivery and manage-  
22 ment of supplies under the CHOICE and SCO programs more efficient  
23 and therefore less expensive.

24 d. The grandfathered MDDOs and DDQs enable Columbia to provide a  
25 uniform balancing service to CHOICE and SCO suppliers in all PSPs.

26 e. The grandfathered MDDOs and DDQs enable Columbia's TS customers  
27 and their suppliers the added flexibility to acquire their capacity needs at  
28 the PSP level and not to specific PODs. They also enable Columbia to  
29 provide an interruptible banking and balancing service to all PODs. The-  
30 se services provide TS customers with a lower cost alternative regarding  
31 the acquisition of their energy supplies keeping their costs lower and  
32 preserving jobs and economic activity for the benefit of all Ohioans. It  
33 should be noted that Columbia does not acquire nor retain capacity to  
34 provide this interruptible banking and balancing service. The service is  
35 provided on a day-to-day basis from the temporarily unused component  
36 of the no-notice capacity Columbia retains to provide balancing services  
37 to CHOICE and SCO suppliers. On days when Columbia anticipates that  
38 it will not have the ability to balance TS customers' supply and demand  
39 it will restrict the interruptible banking and balancing service as needed.

40 f. Columbia's ability to serve as supplier of last resort.

1  
2 **Q: Please describe the importance of Columbia's capacity with Columbia**  
3 **Gulf?**

4 A: On a contractual basis the Columbia Gulf capacity provides a majority of the  
5 supplies delivered to Columbia's CHOICE and SCO customers. However,  
6 more importantly, on a physical basis a majority of the gas that is consumed  
7 by Columbia's customers originates in the Gulf Coast region and is trans-  
8 ported by Columbia Gulf to TCO and on TCO into Ohio.  
9

10 **Q: Please describe in more detail how supplies are physically delivered to**  
11 **Columbia's customers.**

12 A: As noted earlier the vast majority of Columbia's markets are served by TCO  
13 with approximately 92%<sup>3</sup> of all supplies received by Columbia delivered to  
14 its distribution system by TCO. The majority of the gas supplies consumed  
15 by Columbia customers are received by TCO from Columbia Gulf. These  
16 supplies provide the primary source of gas injected into TCO's southern  
17 Ohio storage fields. Additionally, these supplies coupled with supplies re-  
18 ceived by TCO at Lebanon, from Rockies Express ("REX") at Fairfield and at  
19 Maumee are utilized to fill Columbia's northern Ohio storage fields. In the  
20 winter these storage supplies provide a significant percentage of the physi-  
21 cal supplies consumed by Columbia's customers. Without supplies deliv-  
22 ered by Columbia Gulf, TCO would not be able to fill the Ohio storage fields  
23 that are critical to Columbia's ability to provide reliable service to its cus-  
24 tomers. This criticality is cited by the fact that Columbia's daily storage de-  
25 livery rights under TCO's FSS Rate Schedule represent 74% of the supply  
26 needed to meet Columbia's design peak day demand; which rights cannot  
27 be placed at risk due to the inability to fill Ohio storage fields.  
28

29 **Q: Can Appalachian Basin shale gas be used in lieu of Columbia Gulf deliv-**  
30 **ered supplies?**

31 A: With the possible limited exception of small Columbia markets in the Ohio  
32 River valley area, shale gas supplies do not physically flow on TCO's system  
33 to a point where they can be delivered into the majority of Columbia's mar-  
34 kets, including injection into storage.  
35

36 **Q: TCO has recently closed an open season on their Westside Expansion Pro-**  
37 **ject. Please describe this project.**

---

<sup>3</sup> Based on twelve months ending July 2012.

1 A: The Westside Expansion Project consists of modifications to the TCO system  
2 that will enable Marcellus Shale gas supplies produced in southwest Penn-  
3 sylvania and northern West Virginia to be transported to the Gulf Coast re-  
4 gion.  
5

6 **Q: Can Columbia rely on these supplies to displace Columbia Gulf?**

7 A: No, it is our understanding that the Westside Expansion shippers have a  
8 contractual right to ship gas from their receipt points in Pennsylvania and  
9 West Virginia to the Gulf Coast region. In fact, TCO has announced that it  
10 plans on physically reconfiguring one of the Columbia Gulf pipelines in as-  
11 sociation with the Westside Expansion Project to send gas south. Thus, Co-  
12 lumbia cannot assume that these supplies would be available to purchase at  
13 Leach, KY<sup>4</sup> when the shippers have the contractual ability to deliver these  
14 supplies to the Gulf Coast. I will address shale gas issues in further detail  
15 later in my testimony.  
16

17 **Q: How does the extension of Columbia's interstate pipeline contracts impact**  
18 **competition?**

19 A: I do not believe that the renewal of Columbia's interstate pipeline capacity  
20 contracts has any adverse impact upon competition, to the contrary Colum-  
21 bia's renewal enhances competition through lowering barriers to entry, re-  
22 ducing supplier uncertainty, and preserving reliability. As discussed herein  
23 Columbia's capacity is critical to the preservation of service to Columbia's  
24 customers. While consumer advocates typically represent only a single class  
25 of customers, or a portion of a single class, Columbia must manage and op-  
26 erate a system for the benefit of all customers. I have discussed how Colum-  
27 bia's capacity portfolio does just that. In the vast majority of Columbia's  
28 markets this capacity portfolio provides the only available service. Shale gas  
29 supplies cannot provide an alternative to these markets. The interstate ca-  
30 pacity Columbia holds are contracted for at or below FERC approved rates.  
31 Renewal of the contracts at the levels specified in the Stipulation is necessary  
32 for Columbia to maintain service reliability across its highly complex, wide-  
33 spread service territory.  
34

35 **Q: In its Comments filed in this docket OPAE claims that interstate pipelines**  
36 **were the first component of the natural gas supply system to be dereg-**  
37 **ulated. Do you agree with this assertion?**

---

<sup>4</sup> Leach, KY is the name of the primary interconnection between Columbia Gulf and TCO.

1 A: No I do not. Interstate pipelines remain heavily regulated by FERC. While  
2 FERC may have removed the interstate pipelines' prior commodity sales re-  
3 sponsibility, that is not deregulation. The only component of the natural gas  
4 supply system that is deregulated is the production component of the sys-  
5 tem.

6  
7 **Q: Is Columbia proposing any changes to any of the contracts in the Joint**  
8 **Stipulation and Recommendation filed in this case?**

9 A: Yes, Columbia will be terminating the peaking contract provided by J. P.  
10 Morgan Ventures Energy Corporation and a portion of the North Coast con-  
11 tract along the associated Crossroads Pipeline Company ("Crossroads") ca-  
12 pacity that serves Columbia's Findlay, Fostoria, Oberlin and Norwalk mar-  
13 kets. Additionally, Columbia has proposed to reduce its contract quantity on  
14 Columbia Gulf effective April 1, 2016 by 25%.

15  
16 **Q: Why is Columbia terminating or reducing these capacity volumes?**

17 A: Columbia is terminating the J.P. Morgan and North Coast/Crossroads capac-  
18 ities for several reasons. The primary reason is to bring Columbia's city gate  
19 capacity portfolio in line with its design peak day forecast. Additionally, the  
20 capacity Columbia is terminating provides capacity that is not operationally  
21 required; other capacity exists in these same markets. Furthermore, these  
22 contracts are less operationally efficient, or in other words are more costly  
23 per Dth of seasonal/annual capacity and/or are more expensive than com-  
24 peting alternatives. Columbia is proposing to reduce its Columbia Gulf Con-  
25 tract by 25% in 2016 as a means to test whether Appalachian Basin shale gas  
26 supplies can be relied upon to meet the physical needs of Columbia's cus-  
27 tomers. As I note later in my testimony this is not currently a reality.

28  
29 **Q: Has Columbia conducted any recent evaluations of alternate pipeline ca-**  
30 **capacity options to serve its existing service territory?**

31 A: Yes, pursuant to the Joint Stipulation and Recommendation in Case No. 08-  
32 221-GA-GCR and Case No. 07-221-GA-FOR Columbia performed an analy-  
33 sis of potential pipeline capacity and peaking options for markets that have  
34 a firm design day demand of 50,000 Dth or greater. In this analysis Colum-  
35 bia identified five PODs that served markets with firm design day demand  
36 of 50,000 Dth or greater that are accessible by alternate pipelines and evalu-  
37 ated potential service options from five interstate pipelines with the ability  
38 to serve these locations. Additionally, Columbia expanded this evaluation  
39 beyond that required by the Joint Stipulation and Recommendation in Case  
40 No. 08-221-GA-GCR and Case No. 07-221-GA-FOR to include a number of

1 smaller markets that a facilities analysis indicated were within a reasonable  
2 distance to consider for this evaluation. This expanded analysis added a  
3 sixth interstate pipeline into the evaluation. Additionally, Columbia evalu-  
4 ated potential peaking options for service to eleven markets with firm de-  
5 sign day demand of 50,000 Dth or greater.

6  
7 **Q: Please describe briefly how Columbia performed this analysis.**

8 **A:** Columbia evaluated the firm service options by first performing an analysis  
9 based on 100% load factor utilization and using that as a screening tool. This  
10 is a valid screening tool as options that are not competitive on a 100% load  
11 factor basis are generally less competitive at lower load factors. These evalu-  
12 ations were compared against Columbia's primary service options of Co-  
13 lumbia Gulf/TCO for firm transportation service and Columbia Gulf/ TCO  
14 FTS/TCO FSS-SST for storage. This initial screening evaluation indicated  
15 three FTS options and one storage option were possibly lower cost alterna-  
16 tives to Columbia's existing services. Columbia next evaluated what, if any,  
17 capital costs would be necessary to connect the respective pipeline to the  
18 corresponding Columbia market. Including these capital costs eliminated  
19 one of the FTS options from further consideration. Of the remaining options,  
20 one of the FTS options was competitive against Columba's existing service  
21 from Panhandle and will be further evaluated upon termination of the Pan-  
22 handle contracts. The remaining two options were for service from DTI into  
23 Columbia's Southern Supply Line feeding the southern portion of the Co-  
24 lumbus market. Columbia then approached DTI to seek a proposal for ser-  
25 vice into this location, but was informed by DTI that it had no available ca-  
26 pacity at that location.

## 27 28 PEAK DAY FORECAST AND SUPPLY BALANCE

29  
30 **Q: Earlier you noted that Columbia was terminating a portion of its capacity**  
31 **portfolio to bring its portfolio in line with its design peak day demand.**  
32 **Please provide a brief overview of Columbia's design peak day demand.**

33 **A:** Annually, Columbia develops a document known as its Peak Day Forecast  
34 for supply planning and operational purposes. This forecast analyses cus-  
35 tomer demands and forecasts design day demand for both firm and non-  
36 firm customers five years into the future.

37  
38 **Q: What is the significance between firm and non-firm customers?**

39 **A:** From a capacity planning perspective the demand of firm customers serves  
40 as the basis for Columbia's contracts for capacity/firm city gate resources to

1 ensure reliable service. This is service to residential and small commercial  
2 and industrial customers who do not qualify for, or chose to take service  
3 under the Company's TS program. With the exception of requests for Co-  
4 lumbia to provide Backup Service, Columbia does not contract for capacity  
5 to serve non-firm demand. Non-firm customers are those larger commercial  
6 and industrial customers and those customers that have been grandfathered  
7 into Columbia's TS program.  
8

9 **Q: What is Columbia's current forecast of design peak day demand?**

10 A: Columbia's most recent Peak Day Forecast projects design peak day de-  
11 mand for the 2013-14 winter of 1,948,900 Dth. This is comprised of 1,922,400  
12 Dth of firm demand and 26,500 Dth of Backup Service requests.  
13

14 **Q: How does this forecast compare to Columbia's capacity portfolio for the**  
15 **2013-14 winter season?**

16 A: As noted in the Stipulation, Columbia anticipates having a total of 1,940,214  
17 Dth of firm peak day capacity and firm city gate supply. However, Colum-  
18 bia plans on using 11,500 Dth for assignment to TS customers leaving  
19 1,928,714 Dth to provide the aforementioned Backup Service requests and  
20 for utilization in the CHOICE/SCO programs. I will discuss the assignment  
21 of capacity to CHOICE and SCO suppliers later in my testimony.  
22

23 **Q: Does Columbia's latest Peak Day Forecast indicate Columbia has excess**  
24 **capacity?**

25 A: No. On the contrary, Columbia latest Peak Day Forecast shows firm demand  
26 that slightly exceeds its available firm capacity entitlements by 20,186 Dth or  
27 1.05%.  
28

29 **Q: Is Columbia's capacity portfolio, as set forth in the Stipulation, necessary**  
30 **to provide service?**

31 A: Yes. As noted above, all the capacity is needed to meet projected demands.  
32 As for the price of the capacity, all of the capacity that Columbia contracts  
33 for from interstate pipelines is priced either at or below the maximum FERC  
34 authorized tariff rates. Thus, the rates for this capacity have been approved  
35 by the FERC. To the extent other parties may claim that the SCO is a market-  
36 based rate established through an open auction process that has been very  
37 successful in providing Ohioans with a low-priced option for natural gas  
38 this success has been achieved with essentially the same capacity portfolio as  
39 Columbia sets forth in this case. Accordingly, it supports the reasonableness  
40 of that capacity portfolio.

1  
2 **Q: How does Columbia forecast the design peak day demand to change in**  
3 **the future?**

4 A: Columbia's Peak Day Forecast projects design day demand through the  
5 winter of 2016-17. The most recent Peak Day Forecast shows slight growth  
6 in design peak day demand of approximately 0.5% annually.  
7

8 **Q: Has Columbia's peak day forecasting process been reviewed by any out-**  
9 **side party?**

10 A: Yes, Columbia's peak day forecasting process has been reviewed by numer-  
11 ous outside parties including the auditors hired by the Commission to per-  
12 form past GCR Management Performance Audits.  
13

14 **Q: What have been the findings of these auditors?**

15 A: Generally the auditors have found Columbia's process to be rigorous and  
16 consistent with industry practice. In its "Report on the Manage-  
17 ment/Performance Audit of the Gas Purchasing Practices and Policies of Co-  
18 lumbia Gas of Ohio", in Case No. 05-221-GA-GCR, McFadden Consulting  
19 Group, Inc. stated, "The Company's peak day demand forecasting is highly  
20 developed."<sup>5</sup> Furthermore, McFadden found "The peak day forecast is rea-  
21 sonable and consistent with industry practice" and "The Company has de-  
22 veloped models that accurately forecast its demand requirements." In Co-  
23 lumbia's last GCR audit in Case No. 08-221-GA-GCR, the Auditor, The Lib-  
24 erty Consulting Group, suggested a few minor changes to Columbia's pro-  
25 cess. However, upon detailed review by Columbia much of those suggested  
26 changes were found to be long standing Columbia practices.  
27

## 28 CAPACITY ALLOCATION PROCESS

29  
30 **Q: Please describe the capacity allocation process Columbia utilizes to as-**  
31 **sign capacity to CHOICE and SCO suppliers.**

32 A: After Columbia retains adequate storage to provide necessary system bal-  
33 ancing services for the CHOICE and SCO suppliers, Columbia's allocation  
34 process assigns a "slice of the pie" to all CHOICE and SCO suppliers on a  
35 "level playing field" basis. More succinctly, Columbia assigns FTS and  
36 storage capacity<sup>6</sup> on an equal percent of design peak day demand basis  
37 across all 12 PSPs. Additionally, Columbia assigns a "slice of the pie"

---

<sup>5</sup> Report at ES-5.

<sup>6</sup> Storage refers to both storage capacity and the related transportation capacity to Columbia city gates.

1 within each PSP. For example, the percentage of storage and FTS assigned  
2 to suppliers in the Toledo PSP is identical to that assigned suppliers in the  
3 Columbus PSP however, suppliers in the Toledo PSP are assigned a com-  
4 bination of Panhandle and TCO storage and FTS capacity while suppliers  
5 in Columbus are assigned only TCO storage and FTS. This process pro-  
6 vides consistency across Columbia's wide-spread service territory and  
7 recognizes the operational requirements of each PSP to assure service reli-  
8 ability to CHOICE and SCO customers.

9

10 **Q: Is this process designed to maximize assignment to CHOICE and SCO**  
11 **suppliers?**

12 A: Yes. Consistent with the level playing field approach Columbia maximizes  
13 assignment to suppliers.

14

15 **Q: Is there any capacity Columbia is not able to assign to CHOICE and**  
16 **SCO suppliers under this process?**

17 A: Yes. Consistent with the Commission's directions to Columbia, North  
18 Coast and Staff in Case No. 08-1344-GA-EXM, Columbia will retain all  
19 remaining North Coast capacity and treat it as operationally required ef-  
20 fective April 1, 2013. Additionally, in two PSPs the amount of TCO FTS  
21 capacity that requires the upstream delivery by Tennessee Gas Pipeline  
22 Company, L.L.C. ("TGP") exceeds that available for assignment in all  
23 PSPs to achieve a level playing field. Thus, Columbia retains the TCO/TGP  
24 capacity that exceeds the amount it is able to assign on a level playing  
25 field basis. Columbia incorporates both the North Coast and TCO/TGP  
26 capacities as part of the peaking service it provides all CHOICE and SCO  
27 suppliers equally.

28

29 **Q: Is this capacity excess capacity?**

30 A: No. While Columbia is not able to directly assign the operationally re-  
31 tained capacity to CHOICE and SCO suppliers, Columbia utilizes that ca-  
32 pacity to the benefit of all CHOICE and SCO suppliers equally by incorpo-  
33 rating the capacity into the peaking service Columbia provides all  
34 CHOICE and SCO suppliers and to supplement supplier provided sup-  
35 plies as needed to maintain system reliability.

36

37 **Q: Can you please provide an example of how Columbia provides such**  
38 **system reliability maintenance?**

39 A: Yes. TCO requires that deliveries be made from TGP at Dungannon in or-  
40 der for TCO to be able to meet its firm delivery obligations to Columbia in



1 portions of Columbia's service territory in northeast Ohio. The delivery  
2 obligation from TGP is temperature sensitive and Columbia provides  
3 CHOICE and SCO suppliers with customers in this area a Supply Curve  
4 that defines the minimum delivery requirement of each supplier as tem-  
5 peratures decline during the winter season. Once the supply requirement  
6 into TCO from TGP exceeds the aggregate requirement of the Supply  
7 Curves provided to the CHOICE and SCO suppliers, Columbia provides  
8 additional supplies via the retained capacity in order to assure system re-  
9 liability in this area of its service territory.

10  
11 **Q: Are there any other components of Columbia's capacity portfolio that**  
12 **Columbia is not able to assign CHOICE and SCO suppliers?**

13 A: Yes. Columbia is not able to assign, either through contractual terms or  
14 practical means, the local gas supplies Columbia purchases from Gather-  
15 co, Producer's, and various small producers and city-gate purchases it  
16 makes for the Brewster market.

17  
18 **Q: Is Columbia proposing any changes to the allocation process in the**  
19 **case?**

20 A: While the mechanics of the allocation process is identical to that approved  
21 by the Commission in Case No. 08-1344-GA-EXM actual assignment will  
22 change slightly due to changes in Columbia's capacity portfolio.

23  
24 **Q: What are the advantages of this assignment mechanism?**

25 A: The advantages are numerous and include, among others:  
26 • Maintains service reliability for all Columbia customers;  
27 • Provides a consistent and level playing field between CHOICE and  
28 SCO suppliers;  
29 • Minimizes operational complexities;  
30 • Creates stability and certainty for all market participants;  
31 • Lowers barriers to entry to potential new suppliers; and  
32 • Minimizes potential supplier stranded costs from capacity that Suppli-  
33 ers would need to acquire and hold not knowing what their demand  
34 requirements may be month to month.

35  
36 **BALANCING SERVICE**

37  
38 **Q: Please describe the balancing service Columbia provides CHOICE and**  
39 **SCO suppliers.**

1 A: As system operator Columbia is required to balance the amount of gas de-  
2 livered by all suppliers with the actual consumption of all customers  
3 across all its markets. CHOICE and SCO suppliers are required to deliver  
4 gas supplies for their customers based on the Demand Curves<sup>7</sup> provided  
5 by Columbia. While these Demand Curves represent expected customer  
6 consumption at a particular temperature they are based on a regression  
7 analysis of monthly demand vs. temperature. Since many factors can and  
8 do influence customer demand Columbia must retain no-notice service to  
9 manage the differences between supplies delivered by the suppliers and  
10 actual customer demand. To do this Columbia retains TCO and Panhan-  
11 dle storage capacity.

12  
13 **Q: Are other balancing services available to balance differences in demand**  
14 **and supply at Columbia's city gates?**

15 A: No.

16  
17 **Q: Does Columbia provide any other services to CHOICE and SCO suppli-**  
18 **ers from this retained capacity?**

19 A: Yes. Columbia provides a peaking service with this capacity and those  
20 other assets Columbia retains to maintain system reliability including the  
21 operationally retained capacity, the supply obligation into the Brewster  
22 market and the local gas resources.

23  
24 **Q: How does this peaking service work?**

25 A: Columbia determines annually the amount of capacity and other re-  
26 sources it will retain at the same time it determines the amount of capacity  
27 to be assigned CHOICE and SCO suppliers under its capacity assignment  
28 mechanism. Columbia then determines the percentage of design firm day  
29 demand represented by these retained assets and develops the supplier  
30 Demand Curves wherein on a percentage basis the suppliers' obligation to  
31 deliver supplies to Columbia flattens out when the delivery obligation is  
32 equal to 100% of their customers' design day demand less the calculated  
33 peaking service percentage. When temperatures fall below that point on  
34 the Demand Curve where it flattens out, Columbia supplements the  
35 CHOICE and SCO supplier deliveries through the peaking service to meet  
36 customer demand.

37  

---

<sup>7</sup> The Demand Curves provided by Columbia show increasing demand during the months of Oc-  
tober through April and a levelized daily demand for each of the months of May through Sep-  
tember.

1 **Q: Does Columbia provide any other services with this retained capacity?**

2 A: Yes. As I noted earlier, Columbia provides an interruptible banking and  
3 balancing service to its TS customers. Columbia provides this interruptible  
4 service utilizing that portion of the balancing capabilities derived from the  
5 retained no-notice storage service that is not needed to meet the daily bal-  
6 ancing requirements of CHOICE and SCO customers. When Columbia an-  
7 ticipates that it will utilize all the capabilities of the retained no-notice  
8 storage service to satisfy CHOICE and SCO customer supply imbalances,  
9 it may issue an order restricting the availability of this service to TS cus-  
10 tomer's and their suppliers. Such restrictions are based on and imple-  
11 mented pursuant to a specific process agreed to by Columbia and the Co-  
12 lumbia Customer Coalition pursuant to the terms of a Joint Stipulation  
13 and Recommendation approved by the Commission in Case No. 01-2607-  
14 GA-CSS on April 1, 2003. This process has continued and remains un-  
15 changed.

16  
17 **Q: In the Joint Motion filed in this case Columbia has proposed changing**  
18 **the rate for the balancing service. Please describe why Columbia is pro-**  
19 **posing this change.**

20 A: Columbia is proposing this change to more accurately reflect the costs of  
21 the storage capacity Columbia retains to provide this service.

22  
23 **Q: In the Joint Motion filed in this case Columbia is proposing to change**  
24 **how the balancing fee is charged. Please describe why Columbia is pro-**  
25 **posing this change.**

26 A. The balancing fee is presently being charged the CHOICE and SCO sup-  
27 pliers. The Stipulation proposes to instead charge the balancing fee direct-  
28 ly to customers. This change is being proposed to provide consistency  
29 with the method utilized by DEOG as part of its auction process and to  
30 create greater transparency for customers as it relates to the actual cost of  
31 providing gas commodity service by their supplier.

32  
33 **Q: Was Columbia influenced by other parties in arriving at its decision to**  
34 **propose moving the balancing fee from being charged suppliers to bill-**  
35 **ing customers directly?**

36 A: Yes. During the course of Stakeholder discussions that ultimately led to  
37 the drafting of the proposed Stipulation, both the Staff and OCC ques-  
38 tioned Columbia regarding the difference between the latest Retail Price  
39 Adjustment levels of DEOG and Columbia. In response to that challenge  
40 Columbia identified two major, and several minor, factors that influence

1 that difference. The two major factors that comprise over two-thirds of the  
2 difference are the on-system storage of DEOG and the fact that DEOG  
3 charges its balancing fee to customers while Columbia presently charges  
4 suppliers. This inquiry by Staff and OCC, as well as Columbia's desire to  
5 create a more transparent commodity cost service, led to the proposed  
6 change contained in the Stipulation.

7  
8 **Q: Is there any possibility that customers will be charged twice for the**  
9 **same balancing fee—once, as part of their current contracts that include**  
10 **the balancing service, and then a second time as a direct charge from Co-**  
11 **lumbia?**

12  
13 **A:** As the balancing fee applies to SCO service, Columbia is proposing to im-  
14 plement this change effective April 1, 2013 after the end of the current  
15 SCO period. Thus, SCO customers should not be charged twice for this  
16 service given the competitive bidding process utilized to determine the  
17 SCO suppliers. The SCO auction that will be implemented concurrent  
18 with this change will specifically have the balancing fee removed from the  
19 SCO suppliers' responsibility. Furthermore, the SCO auction provides a  
20 strong competitive alternative to CHOICE and Governmental Aggregator  
21 offers. Making the proposed change will further promote that competition  
22 by providing a strong signal to CHOICE and Governmental Aggregation  
23 suppliers to reduce their prices to compete with the SCO auction or risk  
24 losing their customers to the SCO program; a situation OCC and OPAE  
25 should favor based on comments in their Memorandum Contra.

## 26 27 SHALE GAS ISSUES

28  
29 **Q: Please describe Columbia's involvement associated with the develop-**  
30 **ment of shale gas resources in the Appalachian Basin.**

31  
32 **A:** For the last several years Columbia has met with and maintains contact  
33 with a number of producers active in developing shale gas supplies first,  
34 from the Marcellus Shale in Pennsylvania and West Virginia and more re-  
35 cently from the Utica Shale in Ohio and Pennsylvania. Additionally, Co-  
36 lumbia has met with and maintains contact with several mid-stream oper-  
37 ators as well as a number of interstate pipeline organizations developing  
38 infrastructure to handle this growing resource. Furthermore, Columbia  
39 stays abreast of infrastructure developments, industry activities and re-  
40 views announced projects for possible utilization by Columbia.

1  
2 **Q: How is the development of shale gas resources in the Appalachian Basin different than the traditional development Columbia deals with?**

3  
4 A: The differences are numerous and significant. For example, traditional  
5 Appalachian production that Columbia has experience with typically is  
6 low volume, low pressure whereas gas production from shale<sup>8</sup> is high  
7 volume, high pressure. Traditional Appalachian production typically oc-  
8 curred from single wells drilled on individual well pads whereas modern  
9 shale practices increasingly utilize a single well pad to drill multiple wells.  
10 Gathering systems for traditional Appalachian production often utilize  
11 low pressure lines whereas new gathering systems being developed for  
12 shale production are often high pressure systems, some approaching 1,000  
13 p.s.i.g. operating pressures.

14  
15 **Q: What impediments does Columbia face in attempting to deliver shale gas supplies directly to its distribution system?**

16  
17 A: Columbia faces numerous obstacles, including but not limited to:  
18 a. Gas quality: Gas resources currently being targeted by producers in  
19 the Utica Shale in eastern Ohio and the Marcellus Shale in southwest  
20 Pennsylvania have a high Btu level and high natural gas liquids<sup>9</sup> con-  
21 tent.  
22 b. Wellhead volumes: Columbia's markets that are closest in proximity to  
23 present drilling activity, as well as future activity trends communicat-  
24 ed by the producers, tend to be very small, isolated and temperature-  
25 sensitive markets. These markets are generally incapable of absorbing  
26 the output of a single shale well, let alone multiple wells from a single  
27 well pad.  
28 c. High pressures: Traditional Appalachian production is typically intro-  
29 duced into Columbia medium pressure distribution systems without  
30 posing unacceptable operating risks. Connecting a shale well with its  
31 much higher producing pressures into such a system poses unaccepta-  
32 ble safety risks.

---

<sup>8</sup> Discussions of shale gas production relate to gas produced from shale formations utilizing the modern practices of horizontal drilling and multiple hydraulic frac treatments. Traditional Appalachian production has included small volumes of production from shale formations utilizing more traditional vertical wells with smaller hydraulic frac treatments, if used at all.

<sup>9</sup> Natural gas liquids refer to hydrocarbon elements in a raw gas stream that are either recoverable as liquids through processing equipment located on the well site, i.e. filters or separators, or as liquids in a natural gas processing plant, typically elements such as propane, butanes, etc.

- d. Producer Economics: Producers seek to maximize their economic return. This factor drives a desire to achieve 100% sale of the wells maximum efficient production level and recovery of valuable natural gas liquids for sale in liquid form. Neither of these objectives are obtainable by direct delivery to Columbia.
- e. Safety: Above all else, Columbia must assure that its distribution systems are safe. Delivering natural gas supplies that create inherent risks to these systems must be avoided. High Btu shale supplies that contain large volumes of liquefiable hydrocarbons such as propane, butanes, etc. create such risks.

**Q: Please describe in general the gas qualities of Appalachian Basin shale gas.**

A: While several shale intervals are of interest to producers in the Appalachian Basin, the two of greatest present interest are the Marcellus and Utica Shales. Both of these shale formations have regions that are generically described as “dry gas” and “wet gas” areas. Additionally, the Utica Shale is believed to have a region that is primarily oil-prone. Oil-production from such areas is typically accompanied with “wet” gas. Dry gas is generally defined as gas that with minimal processing, typically involving only the removal of excess water vapor, can be introduced into interstate pipelines or local distribution systems. This gas is often referred to as “pipeline quality”. Wet gas is generally defined as gas with higher btu levels and with higher levels of natural gas liquids. This gas must be processed through a natural gas processing facility to remove higher chain hydrocarbons such as propane, butanes, etc. before they can be safely introduced into an interstate pipeline or local distribution system.

**Q: Why must higher chain hydrocarbons such as propane, butanes, etc. be removed from the raw gas stream?**

A: Higher chain hydrocarbons are removed from raw gas streams for two primary reasons. First, for operational and safety reasons these higher chain hydrocarbon constituents are removed in natural gas processing plants to prevent them from dropping out of the gas phase as liquids which can create operational and safety issues in pipeline and distribution systems. Second, higher chain hydrocarbons are removed for economic reasons. Generally, the value of constituents such as propane, butanes, etc. is greater in the liquid phase than in the gaseous phase. Removing these constituents and selling them as liquids enhances the producer’s economics.

1  
2 **Q: Is it common practice for a natural gas distribution system to be directly**  
3 **connected to a natural gas processing facility?**

4 A: In Columbia's experience it is not common practice for a natural gas dis-  
5 tribution system to be directly connected to a natural gas processing facili-  
6 ty. However, in locations where an LDC may have sufficiently large near-  
7 by markets or the ability to move gas through large volume, high pressure  
8 LDC facilities to such markets and/or on-system storage, direct connec-  
9 tions may be manageable.

10  
11 **Q: In a situation where an LDC could connect directly to a natural gas pro-**  
12 **cessing facility is it advisable for that facility to be relied upon as a sole**  
13 **source of supply?**

14 A: No. As with any processing facility an upset to its process is possible at  
15 any time and such an upset could result in the loss of supply from that fa-  
16 cility placing service to customers at risk.

17  
18 **Q: Earlier you noted that TCO had recently closed an open season on its**  
19 **Westside Expansion project, is Columbia aware of any other projects**  
20 **that would move gas west from the Marcellus/Utica region?**

21 A: Yes, Columbia is aware of at least four other potential projects that have  
22 been offered to industry participants. These four projects are Texas East-  
23 ern's OPEN and TEAM 2014 Projects, TCO's Utica "Quick Link" Project  
24 and a joint venture project between Spectra Energy Corp, DTE Energy and  
25 Enbridge, Inc. called the NEXUS Gas Transmission Project. In addition,  
26 Rockies Express has discussed the possibility of reversing portions of its  
27 system to move gas east to west, but has not yet offered this as an option.

28  
29 **Q: Please describe briefly each of these projects.**

30 A: Texas Eastern's OPEN Project was initially announced as a potential pro-  
31 ject including AEP and Chesapeake Natural Gas to move up to 800  
32 MMcf/day of gas from locations in eastern Ohio to Texas Eastern's main  
33 west to east system near Clarington, Ohio. Texas Eastern's TEAM 2014  
34 Project is designed to move up to 600 MMcf/day combined both eastward  
35 and westward on Texas Eastern' system from receipt points in southwest  
36 Pennsylvania. The project is in the pre-certification phase at FERC and has  
37 a present planned in service date of November 1, 2014. TCO's Utica  
38 "Quick Link" Project is designed to move Utica supplies from the tail gate  
39 of planned processing plants in central Harrison County, Ohio to new in-  
40 terconnections with DTL, REX, TCO and Texas Eastern. The NEXUS Pro-

1       ject is a proposed pipeline originating in northeastern Ohio that will trav-  
2       erse northern Ohio and move into Michigan where it will interconnect  
3       with the Vector pipeline to move gas into Michigan and Ontario, Canada  
4       markets.  
5

6       **Q:    Has Columbia reviewed these pipelines for possible service?**

7       **A:**    Yes, Columbia has met with the sponsors of each of these projects with an  
8       eye towards evaluating whether they might be future alternatives to its  
9       existing portfolio.  
10

11       Texas Eastern's OPEN Project: This project was designed to move up-  
12       wards of 800 MMcf/day of processed Utica gas supplies to Texas Eastern's  
13       mainline facilities. The 100% load factor demand cost was estimated to be  
14       approximately \$0.40 per Dth for delivery into Texas Eastern's mainline.  
15       Because Columbia would require both OPEN and Texas Eastern mainline  
16       capacity to replace Columbia Gulf's approximate \$0.14 per Dth 100% load  
17       factor rate this project is not considered a viable replacement to Columbia  
18       Gulf. Additionally, this pipeline would have very limited city gate access  
19       to Columbia's markets and is more expensive than present alternatives.  
20       Texas Eastern is presently negotiating with potential shippers. The present  
21       in service date is estimated to be November 1, 2015.  
22

23       Texas Eastern's TEAM 2014 Project: This project is designed to move up to  
24       a total of 600 MMcf/day to markets both to the east and to the west of the  
25       primary receipt points in southwest Pennsylvania. This project is designed  
26       to primarily move Marcellus Shale gas production. The 100% load factor  
27       demand rate for this project is estimated to be \$0.35 per Dth. Given the  
28       higher cost and reduced flexibility inherent in this project relative to Co-  
29       lumbia Gulf this project is not considered a viable replacement to Colum-  
30       bia Gulf. Additionally, this pipeline would have very limited city gate ac-  
31       cess to Columbia's markets and is more expensive than present alterna-  
32       tives. The planned in service date of this project is November 1, 2014.  
33

34       TCO's Utica "Quick Link" Project: This project was designed to move up  
35       to 500 MMcf/day initially with expansion capability from natural gas pro-  
36       cessing plants in northeastern Ohio to new interconnections with DTI,  
37       REX, Texas Eastern and TCO's existing system. This pipeline is similar in  
38       design to a "header" system enabling gas to be moved to multiple pipe-  
39       lines. TCO held a non-binding open season, but has been unable to obtain  
40       sufficient firm support to move forward on the project at this time. The



original announced in service date of November 1, 2015 has been delayed by at least one year. The 100% load factor demand rate for this project is estimated to be approximately \$0.30 per Dth depending on which pipeline interconnections were sought by potential shippers. Similar to Texas Eastern's OPEN Project additional downstream capacity on DTI, REX and Texas Eastern would be required to replace Columbia Gulf supplies utilizing this project. Thus, these options are not considered to be viable replacements to Columbia Gulf. Deliveries into TCO from the Utica "Quick Link" project were limited by the receipt capabilities of the TCO pipelines this project could interconnect with thus requiring additional investment and construction on TCO for this project to replace Columbia Gulf. Given these uncertainties and projected costs a Utica "Quick Link" connection into TCO is not considered a viable replace to Columbia Gulf or TCO.

NEXUS Gas Transmission Project: This project as presently configured is designed to move up to 1 Bcf/day of Utica sourced supplies from the tail gates of proposed processing facilities in northeastern Ohio to targeted markets in the upper Midwest and eastern Canada. Columbia has been informed by the NEXUS sponsors that the 100% load factor demand rate for this project for delivery to Michigan and Ontario markets is estimated to be in the range of \$0.75 – \$0.85 Dth. The NEXUS sponsors indicated that they were interested in possibly developing a rate structure that would provide a slightly lower rate for Ohio deliveries, but that they were not prepared to provide such a rate until they had been able to more fully assess the market demand for this service in their targeted markets. Additionally, NEXUS is very early in the routing stage of this project and was not able to provide Columbia with even a rough estimate of where the pipeline route may end up being located. Given the northern Ohio location of this proposed project and its costs (even at a 50% reduction to its target markets) this project is not seen as a viable replacement to Columbia Gulf or TCO.

**Q: Given that only small volumes of Shale gas can presently be delivered to Columbia's distribution system, have Columbia's customers been able to take advantage of the reduction in prices driven by the increase in Appalachian Basin shale gas?**

**A:** Yes they have. While Columbia customers have not been able to directly consume meaningful volumes of Appalachian Basin produced shale gas they have directly benefited through reduced prices in the market place driven by in the increase in natural gas production on both regional and

1 national levels. A decrease that is primarily attributable to growing shale  
2 gas production nationwide. Under the SCO program the price SCO cus-  
3 tomers pay is the sum of the NYMEX closing price plus the auction de-  
4 rived Retail Price Adjustment. Since January 2006, the point in time often  
5 referred to when assessing the impact of increases in shale gas production,  
6 natural gas production in the lower 48 United States, as reported by the  
7 Energy Information Administration ("EIA"), has increased by over 32%.  
8 During that same period the average annual NYMEX monthly closing  
9 price has declined from \$6.226 per Dth in 2006 to an average for the first  
10 eleven months of 2012 of \$3.945 per Dth. Without question Columbia's  
11 customers have benefited from the regional and national growth in shale  
12 gas production. Attachment B is a graph of U.S. dry gas production by  
13 month as reported by EIA and the corresponding NYMEX monthly clos-  
14 ing prices.

15  
16 **Q: Does the introduction of shale gas create uncertainty about how the in-**  
17 **terstate capacity is best used?**

18 A: No, if anything it may create additional flexibility from the utilization of  
19 Columbia's existing portfolio. It will take several years to fully assess the  
20 full impacts of shale gas on Ohio markets, and until all market partici-  
21 pants can assess these impacts it makes sense not to make long-term inter-  
22 state pipeline capacity decisions that could adversely impact the reliability  
23 to Columbia's customers and Columbia's ability to make best use of all  
24 pipeline capacity available to it. Columbia needs to maintain flexibility  
25 without sacrificing reliability. This means that it is not wise to enter into  
26 longer term arrangements and Columbia's contracting approach does not  
27 create uncertainty.

28  
29 **Q: Do you have any comments regarding the flexibility provided by re-**  
30 **newing the upstream interstate pipeline contracts as set forth in the**  
31 **Stipulation?**

32 A: Yes I do. First, it is important to identify upstream interstate pipeline con-  
33 tracts into two categories. For purposes of this answer upstream contracts  
34 can be categorized as: (a) those with pipelines that deliver gas directly to  
35 Columbia's city gates, and, (b) those with pipelines that deliver gas to  
36 those pipelines in category (a). For Columbia the interstate pipeline capac-  
37 ity contracts in its capacity portfolio that fall into category (a) are provided  
38 by Panhandle and TCO. Those pipelines that fall into category (b) are Co-  
39 lumbia Gulf, TGP and Trunkline. As I noted earlier in this testimony, gas  
40 supplies delivered by Columbia Gulf are critical to Columbia's ability to

1 provide reliable service to its firm customers. TGP deliveries provide a  
2 similar benefit, but to a much smaller population of customers. Yet another  
3 benefit provided by this Columbia Gulf capacity is its ability to provide  
4 additional flexibility that would not be available if it were not a part of  
5 Columbia's capacity portfolio. This flexibility is derived from the opportunity  
6 to access multiple sources of supply/supply basins available to the  
7 Columbia Gulf system. Some parties may argue that shale gas that is not  
8 deliverable to Ohio customers is somehow more flexible. Furthermore, if  
9 you assume that Columbia did not have the upstream Columbia Gulf capacity  
10 and that Appalachian Basin shale supplies were physically available  
11 to meet the reliability needs of Columbia's customer's, flexibility  
12 would still be reduced because the Appalachian Basin shale supplies have  
13 a more limited range of availability than supplies available to Columbia  
14 Gulf.

15  
16 **Q: The Stipulation refers to the renewal of some interstate pipeline contracts for a five year period. Do you consider this five-year period to be long-term?**

17  
18  
19 **A:** No. Five years is not considered long term with respect to contracting for  
20 interstate pipeline capacity. The means of moving Appalachian Basin  
21 shale gas resources to locations on the interstate grid that can successfully  
22 be utilized by Columbia to ensure reliable service to its firm, residential  
23 and small commercial customers will require new pipeline capacity which  
24 must be constructed; and that the developers of that new capacity require  
25 contracting parties to enter into 10-year, 15-year or even 20-year contracts  
26 to make the investment necessary to develop such capacity.

27  
28 **Q: In a Memorandum Contra filed by OCC and OPAE in this proceeding, they make the following statement, "Five years ago gas prices were approximately \$7.25 per Mcf according to the New York Mercantile Exchange ("NYMEX") compared to today's price of approximately \$3.25 per Mcf. Much of that price decline is attributable to a combination of decreased industrial demand due to the economic downturn and the introduction of Appalachian shale gas into the marketplace." Do you have any comments regarding this statement?**

29  
30  
31  
32  
33  
34  
35  
36 **A:** Yes, I do. First, over the last five years industrial consumption of natural  
37 gas has increased year over year, with the exception of 2009, and as of  
38 2011 (which is the last full year of industrial consumption reported by Energy  
39 Information Administration ("EIA")) is at its highest level since 2004.  
40 Additionally, industrial consumption for the first 8 months of 2012 ex-

ceeds that of the same period in 2011. Furthermore, total U.S. consumption of natural gas has grown annually over the last five years with the exception of a slight 1.6% decline in 2009, and as of 2011 stood at its highest reported annual level ever. Similar to the consumption growth for industrial demand in 2012, total U.S. consumption for the first 8 months of 2012 exceeds that of 2011. Turning to OCC and OPAE's claims of the impact of Appalachian shale gas, as shown on Attachment B, the growth in lower 48 U.S. production started in 2006. Yet, according to the EIA, as late as 2008, total shale gas production combined from Ohio, Pennsylvania and West Virginia totaled 1 Bcf, less than 0.05% of the total U.S. shale gas reported by EIA for that year. Moving forward to 2009 and 2010, the last years that shale volumes have been reported by the EIA, the three-state total was 76 Bcf and 476 Bcf, respectively. By 2010 Appalachian shale volumes had grown to 8.9 % of U.S. total shale production. In my opinion, this contribution from Appalachian shale cannot properly be characterized as being responsible for "much of that price decline". While NYMEX prices during 2012 have continued to decline, much of this decline is attributable to the record warmth experienced during the winter of 2011-12. While Appalachian shale production has grown rapidly in 2012 characterization of that growth as being responsible for "much of that price decline" over the last five years is wrong and a gross over simplification of the complex issues involved in establishing natural gas price as represented by NYMEX. To somehow use these misrepresentations against contracting for capacity needed to ensure reliable service would not be prudent.

**Q: Does Columbia's renewal of upstream interstate capacity have the effect of closing the door on any immediate investment that would provide for shale gas opportunities in Ohio during the next five years?**

**A:** No. Obviously, producers are not going to immediately stop all drilling activities because Columbia has renewed its contracts. Interstate pipeline companies with announced infrastructure projects are not going to immediately stop pursuing producers to support development of those projects because Columbia has renewed its contracts. Companies developing natural gas processing facilities are not going to immediately stop building those plant, some in the middle of constructing those facilities, just because Columbia has renewed it interstate pipeline contracts. Columbia's renewal of its interstate pipeline contracts will have no perceptible impact on the development of shale resources in Ohio. As I have previously explained, the benefits of shale production have already accrued to Ohioans and will continue to accrue with assured reliability and there will be no

1 loss of flexibility attributable to Columbia renewing its upstream inter-  
2 state pipeline contracts.

3  
4 **Q: Do the interstate pipeline capacity contract provisions of the Stipulation**  
5 **build in flexibility to address changes to the natural gas market in Ohio**  
6 **due to the introduction of shale gas?**

7 A: Yes. As I have previously demonstrated, the Stipulation preserves flexibil-  
8 ity and assures continued reliability of service. The Stipulation recognizes  
9 that the shale industry in Ohio is in its infancy, a fact supported by delays  
10 in the development of two of the four announced interstate pipeline pro-  
11 jects with the potential ability to move shale gas to locations that can reli-  
12 ably be used by Columbia to assure service to its firm, residential and  
13 small commercial customers. The Stipulation recognizes that constructing  
14 new interstate pipeline capacity is a costly and time consuming process,  
15 costs that can yield rates that are multiples of Columbia's legacy contracts  
16 and timelines that can be delayed by various factors.

17  
18 **OFF-SYSTEM SALES AND CAPACITY RELEASE**

19  
20 **Q: Please describe what comprise off-system sales and capacity release ac-**  
21 **tivities.**

22 A: Columbia's Off System Sales ("OSS") activities take place only after it has  
23 assured service reliability to its firm customers. Once this assurance has  
24 been accomplished, Columbia's traders identify opportunities using the  
25 available capacity and gas supply resources and make contacts with its  
26 industry trading partners to determine if interest exists to execute a trans-  
27 action. Similarly, each month Columbia analyzes what transportation ca-  
28 pacity may be needed to assure service reliability to its firm customers.  
29 Once the level of capacity has been determined that is needed to assure  
30 service reliability, Columbia solicits bids through electronic communica-  
31 tion means with potential buyers of capacity available for temporary re-  
32 lease. Should acceptable bids be forwarded, Columbia releases the subject  
33 capacity through the capacity release process approved by FERC for each  
34 interstate pipeline.

35  
36 **Q: In their Memorandum Contra filed in this case, OCC and OPAE claim**  
37 **that customers will be giving up \$60 million in off-system sales transac-**  
38 **tions revenues to Columbia, and will be required to pay for upstream**  
39 **interstate pipeline capacity that may not be needed but will instead be**  
40 **used to generate the of-system sales. Do you agree with this statement?**

1 A: No. First, as I have previously demonstrated Columbia does not have ex-  
2 cess or unneeded capacity and thus, customers are not paying for and Co-  
3 lumbia cannot generate off-system sales from excess or unneeded capaci-  
4 ty. The capacity Columbia retains under the CHOICE/SCO capacity as-  
5 signment mechanism is only that capacity it must retain to manage system  
6 operations. All other capacity is assigned to CHOICE and SCO suppliers.  
7 Furthermore, customers are not giving up anything. In fact, they will con-  
8 tinue to benefit from Columbia's off-systems sales and capacity release ac-  
9 tivities. Off-system sales are generated through the actions and efforts of  
10 Columbia. The sharing mechanism in the Joint Motion, which is substan-  
11 tially identical to that contained in the 08-1344-GA-EXM case stipulation,  
12 incents Columbia and recognizes its efforts, and rewards customers along  
13 with a share of Columbia's success.

14  
15 **Q: Are off-system sales revenues generated by Columbia achieved by us-**  
16 **ing capacity that customers pay for?**

17 A: No. Columbia contracts for this capacity and through the assignment of  
18 capacity to suppliers assign certain cost responsibility to suppliers. Co-  
19 lumbia and suppliers recover these costs through the provision of services  
20 to customers. The recovery of costs through the provision of services does  
21 not create a unilateral entitlement to other revenues generated by these as-  
22 sets. Columbia and its Stakeholders have a very long history of develop-  
23 ing settlements as to how such other revenues are shared between Co-  
24 lumbia and its customers.

25  
26 **Q: Is the mechanism for sharing off-system sales and marketed capacity**  
27 **release revenue different under the Stipulation filed in this case?**

28 A: The sharing mechanism proposed under the Stipulation in this case is  
29 identical to that approved by the Commission in Case No. 08-1344-GA-  
30 GCR with one exception. That exception is that the potential revenue that  
31 Columbia may retain is reduced from an annual average of \$14 million  
32 (\$42 million over three years) to \$12 million (\$60 million over five years).

33  
34 **Q: Under the Stipulation, do customers receive any benefits from the off-**  
35 **system sales sharing mechanism?**

36 A: Yes. Nothing in the Stipulation filed in this case changes the quid-pro-quo  
37 that existed when the mechanism was originally established. All of the  
38 customer benefits contained in the Stipulation in the 08-1344-GA-EXM  
39 case remain in the current proposed Stipulation.

1  
2 **Q: Does the introduction of shale gas increase the likelihood that Colum-**  
3 **bia's capacity contracts might include excess capacity?**

4 A: No. Columbia does not have excess capacity. There are only two ways that  
5 shale gas can provide an alternative to Columbia's portfolio: First, the  
6 shale gas could be directly connected to Columbia's distribution system.  
7 But, as I have observed, shale gas being developed in Ohio cannot be di-  
8 rectly connected to Columbia's distribution system for reliability, econom-  
9 ic, utilization and safety concerns. Once processed this gas must be trans-  
10 ported to Columbia's wide-spread service territory, available to be used in  
11 a temperature-sensitive manner and be made available for injection into  
12 storage, something that cannot be done without Columbia's existing port-  
13 folio of city gate capacity. Second, the shale gas could replace an upstream  
14 capacity resource, i.e. Columbia Gulf or TGP capacity. But, here again as I  
15 noted above, currently announced projects are not cost-effective, reliable  
16 alternatives to Columbia Gulf. Nor do they provide the flexibility provid-  
17 ed by Columbia Gulf. Certainly the possibility exists that future projects  
18 may be proposed that can overcome some of these present hurdles. How-  
19 ever, from a timing stand point they would not be available until near the  
20 end of the five-year period proposed by the Stipulation. Furthermore, any  
21 alternative to Columbia Gulf must have the flexibility to facilitate storage  
22 injection capacity thus preserving the critical operational accessibility to  
23 storage supplies.

24  
25 **Q: In their Memorandum Contra filed in this docket, OCC and OPAE have**  
26 **expressed a concern that any excess capacity is assigned to marketers**  
27 **such that it matches the Choice/SCO suppliers' customer groups. Be-**  
28 **cause the capacity is allocated on a pro-rata basis based on the suppliers**  
29 **served load, no supplier is put at a competitive disadvantage by holding**  
30 **excess capacity. The OCC and OPAE then opine that the suppliers mere-**  
31 **ly pass the costs of any excess capacity on to their customers." Do you**  
32 **agree with the OCC and OPAE?**

33 A: No. As I have noted, the OCC/OPAE position that Columbia may have  
34 excess capacity is incorrect. However, in any event, OCC and OPAE con-  
35 tradict themselves. On the one hand OCC and OPAE appear to believe  
36 that Columbia may have excess capacity to generate off-system sales. On  
37 the other hand the OCC and OPAE appear to claim that Columbia allo-  
38 cates excess capacity pro-rata to serve suppliers served load. Neither is  
39 correct. Columbia does not hold excess capacity. And thus suppliers do  
40 not "merely pass the cost of any excess capacity on to their customers" as

1 no excess capacity exists. By Columbia assigning suppliers capacity that  
2 matches the Choice/SCO suppliers' customer groups need, suppliers, par-  
3 ticularly SCO suppliers, are not placed in a position of having to acquire  
4 capacity that they don't know if they will need. This is driven by the fact  
5 that SCO suppliers do not know the level of their customers month to  
6 month, driven by natural changes in customer levels, but more important-  
7 ly by what actions CHOICE suppliers may take that affect those levels. By  
8 Columbia assigning capacity this uncertainty is largely eliminated and  
9 costs to customers, particularly SCO customers are minimized.

### 11 STIPULATION TIMELINE

13 **Q: Why are the Stipulating parties requesting that the Commission act up-**  
14 **on the Stipulation by the end of December 2012?**

15 **A:** While Columbia has already renewed many of its interstate pipeline con-  
16 tracts for the five-year period contemplated by the Stipulation, Columbia  
17 also must act on North Coast and Tennessee contracts that are a part of its  
18 capacity portfolio. Additionally, critical elements that are prerequisites to  
19 conducting the SCO auction to be effective April 1, 2013 must be resolved  
20 by the end of 2012. Columbia and potential SCO suppliers have a number  
21 of requirements that must be ruled upon by the Commission prior to  
22 holding the SCO auction. These requirements include, but are not limited  
23 to, items such as whether changes to the Balancing Fee are approved,  
24 changes to the capacity allocation formula, and application of the \$.10 per  
25 Dth SCO supplier fee. Columbia must know this outcome in order to pro-  
26 vide potential suppliers accurate educational materials to perform re-  
27 quired credit checks, as well as enable the potential suppliers to make ap-  
28 plication to participate and develop their bidding strategy. If the Stipula-  
29 tion is not acted upon by the end of December 2012, there will be a great  
30 deal of uncertainty in the next SCO auction because some of the terms and  
31 conditions affecting the auction will be undetermined. Absent an order by  
32 year end, this uncertainty will lead to reduced transparency and clarity for  
33 the suppliers as they prepare for the next SCO auction. Such increased un-  
34 certainty and reduced clarity leads to the possibility of higher RPA prices  
35 due to the unknowns.

37 **Q: Does this conclude your Prepared Direct Testimony?**

38 **A:** Yes it does.



### CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Prepared Direct Testimony of Michael D. Anderson was served upon all parties of record by electronic mail this 12<sup>th</sup> day of November, 2012.

/s/ Stephen B. Seiple

Stephen B. Seiple

Attorney for

**COLUMBIA GAS OF OHIO, INC.**

### **SERVICE LIST**

Stephen Reilly  
Assistant Attorney General  
Public Utilities Section  
180 East Broad Street, 6<sup>th</sup> Floor  
Columbus, OH 43215-3793  
stephen.reilly@puc.state.oh.us

Barth E. Royer  
Bell & Royer Co., LPA  
33 South Grant Avenue  
Columbus, OH 43215-3927  
barthroyer@aol.com

Dane Stinson  
Bailey Cavalieri LLC  
10 West Broad St., Suite 2100  
Columbus, OH 43215  
dane.stinson@baileycavalieri.com

M. Howard Petricoff  
Vorys, Sater, Seymour and Pease LLP  
52 East Gay Street  
P.O. Box 1008  
Columbus, OH 43216-1008  
mhpetricoff@vorys.com

Larry S. Sauer  
Joseph P. Serio  
Office of the Ohio Consumers' Counsel  
10 West Broad St., Suite 1800  
Columbus, OH 43215-3485  
sauer@occ.state.oh.us  
serio@occ.state.oh.us

Dave Rinebolt  
Colleen L. Mooney  
Ohio Partners for Affordable Energy  
231 West Lima Street  
P.O. Box 1793  
Findlay, OH 45839-1793  
drinebolt@ohiopartners.org  
cmooney@ohiopartners.org

A. Brian McIntosh  
McIntosh & McIntosh  
1136 Saint Gregory Street, Suite 100  
Cincinnati, OH 45202  
brian@mcintoshlaw.com

Glenn S. Krassen  
Matthew W. Warnock  
Bricker & Eckler LLP  
1001 Lakeside Avenue East, Suite 1350  
Cleveland, Ohio 44114  
gkrassen@bricker.com  
mwarnock@bricker.com

John L. Einstein, IV  
790 Windmill Drive  
Pickerington, OH 43147  
jeinstein@volunteerenergy.com

Joseph M. Clark  
6641 North High Street, Suite 200  
Worthington, OH 43085  
Joseph.clark@directenergy.com

Matthew White  
6100 Emerald Parkway  
Dublin, Ohio 43016  
mswhite@igsenergy.com

M. Anthony Long  
Honda of America Mfg., Inc.  
24000 Honda Parkway  
Marysville, Ohio 43040  
Tony\_long@ham.honda.com

## **ATTACHMENT A**

## Columbia Gas of Ohio Design Peak Day Capacity Portfolio

### City Gate

<u>Pipeline</u>	<u>Rate Schedule</u>	<u>Contract No.</u>	<u>Contract Capacity</u>
TCO	Storage Transportation SST	03044	1,445,102
	FTS	80152	238,186
		82544	38,974
		82545	29,231
		85154	45,538
			351,929
North Coast	FT	30014-A	35,000
		30013-A	7,593
			42,593
PEPL	Storage Transportation EFT	018606	26,338
	Long Haul West End EFT	018605	15,000
	Short Haul - Winter Only EFT	018604	28,662
			70,000
	<b>Total Pipeline</b>		1,909,624

### LOCAL

Gatherco	22,840
Producers	6,000
Misc Small	800
Brewster	950
<b>Total Local</b>	30,590

**TOTAL CITY GATE RESOURCES      1,940,214**

### Upstream

<u>Pipeline</u>	<u>Rate Schedule</u>	<u>Contract No.</u>	<u>Contract Capacity</u>
<b><u>Firm Transportation</u></b>			
Columbia Gulf	FTS-1	80061	273,629
Crossroads	FT-1	TBD	7,689
Tennessee	FT-A	46986	40,000
	FT-A	63440	30,000
Trunkline			
<b><u>Storage</u></b>			
TCO	FSS-MDSQ	3045	1,445,102
	FSS-SCQ		80,441,913
PEPL	FS-MDQ	18601	26,667
	FS-SCQ		2,000,000

## **ATTACHMENT B**



**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**11/12/2012 4:43:13 PM**

**in**

**Case No(s). 12-2637-GA-EXM**

Summary: Testimony of Mike Anderson electronically filed by Cheryl A MacDonald on behalf of Columbia Gas of Ohio, Inc.