

122 FERC ¶ 61,021  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;  
Suedeem G. Kelly, Marc Spitzer,  
Philip D. Moeller, and Jon Wellinghoff.

Columbia Gas Transmission Corporation

Docket Nos. CP07-367-000  
CP07-367-001  
CP08-19-000

ORDER ISSUING CERTIFICATES AND APPROVING ABANDONMENT

(Issued January 14, 2008)

1. On May 3, 2007, in Docket No. CP07-367-000, Columbia Gas Transmission Corporation (Columbia) filed an application under section 7 of the Natural Gas Act (NGA) for authority to abandon, construct, and operate certain natural gas storage, compression, and pipeline facilities in Ohio, West Virginia, and Virginia, proposing to provide storage and storage related transportation services for certain expansion customers (Eastern Market Expansion). Columbia also requests authority to accelerate certain replacement and reliability work at certain compressor stations that are proposed to be modified as part of the expansion project.
2. On November 5, 2007, in Docket No. CP08-19-000, Columbia filed an application under section 7 of the NGA for a certificate of public convenience and necessity authorizing it to restate the certificated volume of base gas stored in its Coco A storage field to a level below the volume currently certificated by the Commission. Concurrently, in Docket No. CP07-367-001, Columbia filed an amendment to its Eastern Market Expansion project to reflect this proposed change in base gas in the Coco A storage field.
3. For the reasons discussed below, we will grant the requested certificate and abandonment authorizations, as amended, subject to condition.

**I. Background**

4. Columbia is a natural gas company within the meaning of section 2(6) of the NGA, engaged in the business of transporting natural gas and operating underground storage fields in interstate commerce under authorizations granted by and subject to the jurisdiction of the Commission. Columbia operates facilities located in the states of Delaware, Kentucky, Maryland, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.

**II. Proposals**

**A. Docket Nos. CP07-367-000 and CP07-367-001**

5. Columbia states that the Eastern Market Expansion project is designed to meet the increased storage requirements of its existing customers. As proposed, the Eastern Market Expansion project will increase the storage capacity on Columbia's system by approximately 5,663 million cubic feet (MMcf) of natural gas and will provide up to 94 MMcf/d of storage service deliverability and associated firm pipeline capacity. Columbia proposes to place the facilities into service on April 1, 2009.

**1. Proposed Expansion Facilities**

6. Columbia proposes to construct and operate approximately 15.26 miles of 26-inch and 36-inch pipeline in Clay and Randolph Counties, West Virginia, and Warren, Clarke, and Fauquier Counties, Virginia. Along with the pipeline facilities, Columbia states that the expansion project requires the installation of a total of 12,280 horsepower (hp) of compression at three existing compressor stations, the upgrade of yard facilities at the existing Coco Compressor Station in Kanawha County, West Virginia, and the installation and upgrade of various existing points of delivery and appurtenances. Columbia also proposes to expand the existing Crawford storage field in Fairfield and Hocking Counties, Ohio and the existing Coco A and C storage fields in Kanawha County, West Virginia by drilling 9 new wells, reconditioning 14 existing wells, and constructing or replacing 13 well lines.

7. Specifically, Columbia proposes to:

- Construct approximately 7.24 miles of 26-inch diameter pipeline in Warren, Clarke and Fauquier Counties, Virginia.
- Construct approximately 5.17 miles of 36-inch diameter pipeline in Randolph County, West Virginia.

- Construct approximately 2.85 miles of 36-inch diameter pipeline in Clay County, West Virginia.
- Increase working gas capacity and maximum capacity by 2,900 MMcf, increase deliverability by 29 MMcf/d, and recondition four existing injection/withdrawal wells in the Coco A storage field in Kanawha County, West Virginia.<sup>1</sup>
- Increase deliverability by 20 MMcf/d, construct three new injection/withdrawal wells, and recondition three existing injection/withdrawal wells at the Coco C storage field in Kanawha County, West Virginia.
- Increase working gas capacity by 2,763 MMcf, increase cushion gas by 1,140 MMcf (increase total inventory by 3,903 MMcf), increase deliverability by 45 MMcf/d, construct seven new injection/withdrawal wells, reclassify eight existing “special” wells, and recondition seven existing injection/withdrawal wells in the Crawford storage field in Hocking County, Ohio.<sup>2</sup>
- Install an additional 4,700 hp of compression at the Lanham Compressor Station in Kanawha County, West Virginia.
- Install an additional 1,450 hp of compression at the Lost River Compressor Station in Hardy County, West Virginia.
- Install an additional 6,130 hp of compression at the Seneca Lake Compressor Station in Pendleton County, West Virginia.

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<sup>1</sup> Columbia’s amendment in Docket No. CP07-367-001 is limited to revising the references made on page 3 of Exhibit H of its original application to make the Coco A storage capacity set forth in the Eastern Market Expansion proceeding consistent with the restated levels reflected in Columbia’s application in Docket No. CP08-19-000. Columbia states that this revision will have no impact on the services or rates being offered to the expansion customers of the Eastern Market Expansion project.

<sup>2</sup> “Special” wells are a Columbia well designation for wells that do not fit cleanly into either “active” or “observation” wells. These wells may be used for winter-only withdrawal, 365-day withdrawal, or some other unique circumstance.

- Upgrade the appurtenant facilities at the Coco Compressor station and upgrade capacity at ten delivery points.

## 2. Proposed Replacement and Reliability Work

8. As part of the construction at the compressor station locations required for the expansion project, Columbia is proposing to accelerate replacement and reliability facility construction originally scheduled to occur within the next five years. Columbia explains that it analyzed whether and to what extent there would be other work in the same geographic areas that would otherwise be necessary over the next five years as part of Columbia's ongoing maintenance program for its system. Columbia determined that certain replacement and reliability work would be necessary and estimates the cost of that work would be \$35,688,000 if done in the normal course of business, independent of any other project. However, Columbia states that the same replacement and reliability work, if performed at the same time as the Eastern Market Expansion project, could be completed for an estimated cost of \$26,929,452, exclusive of an Allowance for Funds Used During Construction, resulting in savings of \$8,758,548. Columbia maintains that accelerating the replacement and reliability construction to coincide with work required for the expansion construction will provide improved system operational efficiency, reliability, and flexibility sooner and at a cost lower than if the facilities at the common locations are replaced separately in the future. This proposed construction will, among other things, involve replacing 22,460 hp of compression at existing compressor facilities and auxiliary equipment at the Lanham, Lost River and Seneca Compressor Stations, as follows:

- **Lanham Compressor Station:** Columbia proposes to replace an 11,100 hp gas turbine compressor unit installed in 1970 with two 11,508 hp electric motor driven compressor units (14,372 hp for the replacement and 4,700 hp for the expansion). Columbia claims that installing electric units at this facility will allow Columbia to make improvements in compressor efficiency and reduce the cost of operation as compared to gas fired units.<sup>3</sup> Columbia notes that the proposed construction of the two 11,508 hp compressor units exceeds the requirements served by the compressor unit being replaced and those of the expansion shippers by 3,944 hp. However,

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<sup>3</sup> Columbia states that this station is located near an electric generating plant in West Virginia that has among the lowest electric rates in the United States.

Columbia explains that these units were chosen because they were the next available horsepower increment that met the design day requirement.<sup>4</sup>

- **Lost River Compressor Station:** Columbia proposes to replace two 1,320 hp compressor units installed in 1954 with a 4,735 hp compressor unit (2,640 hp for the replacement and 1,450 hp for the expansion).<sup>5</sup> Columbia maintains that the replacement of these two units will eliminate future overhaul costs, scheduled control system upgrades, future auxiliary capital investments including the replacement of exhaust systems, and future air emission controls and noise reduction investments. Columbia also states that it will be able to run the new unit more efficiently because it can base load this unit which has automatic loading capability.
- **Seneca Compressor Station:** Columbia proposes to replace two 4,360 hp compressor units installed in 1968 with two 7,700 solar turbine driven compressor units (8,720 hp for the replacement and 6,130 for the expansion).<sup>6</sup> Columbia claims that the replacement of these two units at this time will eliminate future operation and maintenance costs, major repair and overhaul costs, and the costs of planned capital investment to replace turbine controls and auxiliary equipment. In addition, Columbia states that the Solar turbines proposed for installation are expected to improve both compression and fuel efficiency as compared to the older units.

### 3. Proposed Abandonment Authorization

9. Columbia requests authorization to abandon certain storage and transportation facilities that are being replaced or would no longer be required for its operations after

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<sup>4</sup> Columbia states that it does not seek a determination in this proceeding that it can roll in the costs of the excess horsepower into Columbia's system-wide rates. Rather, Columbia states it intends to include such costs in an expansion project to be filed in the future. Columbia proposes to roll in to its system-wide rates all other costs attributable to the replacement and reliability work.

<sup>5</sup> The 4,735 hp compressor unit was chosen because it was the next available horsepower increment that met the design day requirement.

<sup>6</sup> The two 7,700 compressor units were chosen because they were the next available horsepower increment that met the design day requirement.

the proposed expansion facilities are constructed.<sup>7</sup> Columbia's proposed accounting treatment for the abandonment is included in Exhibit Y of its application.

#### **4. Open Season and Precedent Agreements**

10. Columbia states it conducted an open season and reverse open season for the capacity created by the Eastern Market Expansion project from August 1 through August 15, 2005. As a result of the open season/reverse open season, Columbia states that it has signed precedent agreements for storage and transportation services under Rate Schedules FSS (Firm Storage Service) and SST (Storage Service Transportation) for the full capacity of the project with four customers<sup>8</sup> for a primary term of 15 years. Columbia explains that the City of Charlottesville has agreed to pay a discounted rate while the other expansion customers have agreed to pay negotiated rates.

11. Columbia states that the precedent agreements provide for the execution of service agreements that contain provisions that do not conform to the pro forma service agreements. These non-conforming provisions include incorporating a credit annex, referencing the start date for the service agreements which will be the expansion project's in-service date, referencing as a service agreement exhibit the negotiated rate agreement for the three negotiated rate customers, and incorporating Columbia's right to make a limited section 4 filing to reflect actual costs subject to a cost sharing mechanism.

12. The cost sharing mechanism in the precedent agreements provides that the maximum incremental monthly demand charge rates will be adjusted to fully reflect the actual costs of the project if the annual delivered cost is greater than \$228 per Dth but less than \$265 per Dth (i.e., project costs range from \$147.5 to \$152.6 million).<sup>9</sup> If the annual delivered cost of a Dth ranges from \$265 to \$300 per Dth (i.e., project costs range from \$152.6 to \$174.5 million), the maximum incremental demand charge rates will be adjusted so that Columbia and the expansion shippers share responsibility for the costs overruns equally. Finally, Columbia is precluded from developing incremental demand charge rates that include costs that would result in annual delivered costs per Dth greater than \$300. Columbia states that the Commission has previously approved cost

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<sup>7</sup> These include well lines and compressor station structures and equipment. *See* Exhibits H and Y to the application.

<sup>8</sup> The four customers are: Washington Gas Light Company, Columbia Gas of Virginia, Inc., City of Charlottesville, Virginia, and the Easton Utilities Commission.

<sup>9</sup> Columbia states that the current estimated annual cost per Dth is \$258.60.

sharing mechanisms that are similar to the mechanism contained in the Eastern Market Expansion precedent agreements.<sup>10</sup> Columbia states that it will file the service agreements 30 to 60 days before service commences consistent with Commission precedent.

## 5. Recourse Rates

13. Columbia estimates the total cost for construction of the expansion facilities to be \$147,455,722. Columbia is seeking incremental rate treatment for the demand rate components of the Eastern Market Expansion project under Rate Schedules FSS and SST. However, Columbia is proposing to charge expansion customers the existing currently effective commodity rates for service under Rate Schedules FSS and SST. Columbia contends that no additional compressor station variable Operation and Maintenance expenses (O&M) will be incurred for the Eastern Market Expansion project, except for the annual electric costs associated with the additional electric motor compression at the Lanham Compressor Station (Lanham), which will be offset by the increase in billing determinants. Columbia seeks a determination of rolled-in rate treatment for the commodity component, including recovery of Account No. 858 expenses through its Transportation Cost Rate Adjustment Surcharge (TCRA), the recovery of electric power costs through its Electric Power Cost Adjustment Surcharge (EPCA) and the recovery of company use, lost and unaccounted for quantities through its Retainage Adjustment Mechanism (RAM).

14. Columbia estimates the total construction cost of the reliability and replacement work to be \$26,929,452. Columbia proposes to roll in these costs in its next general rate case except for the costs attributable to the excess horsepower it proposes to construct at Lanham.<sup>11</sup>

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<sup>10</sup> *Citing Hardy Gas Storage*, 118 FERC ¶ 61,200, at P 7, *order granting clarification*, 119 FERC ¶ 61,198 (2007); *Millennium Pipeline Co.*, 117 FERC ¶ 61,319, at P 111 (2006), *order on reh'g*, 119 FERC ¶ 61,173 (2007); *Midwestern Gas Transmission Co.*, 114 FERC ¶ 61,257, at P 46, *reh'g denied*, 116 FERC ¶ 61,182 (2006); *Viking Gas Transmission Co.*, 87 FERC ¶ 61,068, at 61,281 (1999).

<sup>11</sup> Columbia estimates that 21.53 percent of the reliability and replacement costs or \$3,304,586 will be attributable to the excess horsepower. The percentage was derived by dividing the amount of horsepower not required for the expansion customers or to replace the existing compressor by the total horsepower proposed for installation at Lanham, less the horsepower required for the expansion customers.

**B. Docket No. CP08-19-000**

15. Columbia seeks Commission authorization to restate the certificated volume of base gas contained in the Coco A storage field from 22,805 MMcf to 16,545 MMcf, and the overall certificated capacity of the storage field from 44,500 MMcf to 36,240 MMcf. Columbia maintains that this change is necessary so that Columbia's certificate authorizations match the actual gas volume level in the storage field, and does not represent a physical gas loss.

16. Columbia states that it recently performed a material balance analysis on the Coco A storage field which determined the volume of gas in Coco A at the maximum shut-in reservoir pressure (measured at the wellhead) of 1,800 psig was 36,240 MMcf, not the 44,500 MMcf that is stated as the certificated level.<sup>12</sup> Columbia asserts that the typical cause of storage gas losses (e.g., adjacent production, migration beyond the boundaries of the storage field, etc.) are either not present at the Coco A storage field or not applicable. Rather, Columbia explains that the current 8,260 MMcf discrepancy between the certificated quantities and actual gas volumes is due to an accounting error resulting from the lack of direct measurement at the Coco A storage field during the 1950s and early 1960s.<sup>13</sup> Columbia claims that these measurement inaccuracies occurred long ago and

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<sup>12</sup> This analysis is attached at Exhibit Z-1 to the application.

<sup>13</sup> Storage operations began at Coco A in June 1950, when the Federal Power Commission approved United Fuel Gas Company's (United Fuel, Columbia's predecessor) application to build a pipeline (Line X52-M1) with a storage field connected to it (Coco A). The authority did not specify a total certificated capacity or pressure. When operations began, gas measurement facilities did not exist at the storage field. The closest meter was at the interconnection of Line X52-M1 and Columbia's main Line WB. Line X52-M1 had, and still has, multiple interconnects prior to reaching Coco A. United Fuel personnel assumed all gas leaving and entering Line X52-M1 was separately measured, and the volume injected into Coco A was assumed to be the net volume remaining following the reductions from the master meter on Line WB. In September 1957, United Fuel installed additional measurement and a second line into Coco A (Line X52-M2), which runs from Line WB to Coco A, also with multiple interconnects before reaching Coco A, and used the same "netting" method to determine the volume of gas going into Coco A. Relying on this "netting" method, United Fuel believed Coco A was capable of storing approximately 44,500 MMcf, which was then carried forward in all of Columbia's filings involving Coco A. In 1962, United Fuel installed measurement facilities at Coco A, and did away with the net volume approach.

led it to erroneously believe that part of the base gas had been physically injected into the Coco A storage field when, in fact it had not.

17. While it no longer possesses the meter specific measurement records from the 1950s and early 1960s, Columbia claims that other evidence supports its assertion that a volumetric inaccuracy existed during this time period. Specifically, Columbia states that the behavior of lost and unaccounted-for volumes (LAUF) during this time period is a strong indicator that 8,260 MMcf of gas was erroneously reported as going into Coco A when it should have been reported as lost and unaccounted-for gas. Specifically, Columbia states that the LAUF gas levels declined from 1957 to 1962, coinciding with the installation of measurement facilities, and the decrease is roughly equivalent to the overstatement of the volume of base gas that occurred during this 6-year period.<sup>14</sup>

### **III. Notice, Interventions, Comments, and Protests**

18. Notice of Columbia's application was published in the *Federal Register* on June 19, 2007 (72 Fed. Reg. 33,748). A number of timely unopposed interventions were filed.<sup>15</sup> Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.<sup>16</sup>

19. Virginia Natural Gas Inc. and Pivotal Utility Holdings, Inc. filed a joint late motion to intervene. The Commission finds that granting the late-filed motion to intervene at this early date will not delay, disrupt, or otherwise prejudice this proceeding, or place an additional burden on existing parties. Therefore, for good cause shown, we will grant the late-filed motion to intervene.<sup>17</sup>

20. Comments in support of the Columbia's project were filed by Columbia Gas of Virginia, Inc., Washington Gas Light Company, and jointly by the City of Charlottesville, Virginia and Easton Utilities Commission.

21. Notice of Columbia's application in Docket No. CP08-19-000 and amendment in Docket No. CP07-367-001 was published in the *Federal Register* on November 15, 2007

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<sup>14</sup> Application at 9-10; Exhibit Z-3.

<sup>15</sup> The parties filing timely motions to intervene are listed in Appendix A to this order.

<sup>16</sup> 18 C.F.R. § 385.214 (2007).

<sup>17</sup> *See* 18 C.F.R. § 385.214(d) (2007).

(72 Fed. Reg. 64,202). A number of timely unopposed interventions were filed.<sup>18</sup> Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.<sup>19</sup> Comments in support of Columbia's amended application in Docket No. CP07-367-001 were filed by Washington Gas Light Company and Columbia Gas of Virginia, Inc. The City of Charlottesville, Virginia and Easton Utilities Commission filed a joint late motion to intervene and comments in Docket Nos. CP08-19-000 and CP07-367-001. The Commission finds that granting the late-filed motion to intervene at this early date will not delay, disrupt, or otherwise prejudice this proceeding, or place an additional burden on existing parties. Therefore, for good cause shown, we will grant the late-filed motion to intervene.<sup>20</sup> In their joint comments, the City of Charlottesville, Virginia and Easton Utilities Commission request that the Commission expedite the treatment of the amended Eastern Market Expansion application but note that they would not oppose Commission action to rectify the inappropriate expense, and an adjustment to rates to remedy the apparent over collection of costs related to the Coco A storage field.

#### **IV. Discussion**

22. Since Columbia proposes facilities for the transportation of natural gas in interstate commerce subject to the jurisdiction of the Commission, the abandonment, construction and operation of the facilities are subject to the requirements of subsections (b), (c) and (e) of section 7 of the NGA.

##### **A. Docket No. CP08-19-000**

23. Columbia is requesting authority to restate the volume of base gas stored, and as a result, the total capacity of gas stored in the Coco A storage field, in order to correct a paper error which occurred early in the field's existence. In support of its position, Columbia filed engineering data and the historical lost and unaccounted-for gas chart for that time frame. After reviewing and analyzing this data, we conclude that Columbia's proposal is technically supported.

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<sup>18</sup> The parties filing timely motions to intervene are listed in Appendix A to this order.

<sup>19</sup> 18 C.F.R. § 385.214 (2007).

<sup>20</sup> *See* 18 C.F.R. § 385.214(d) (2007).

24. Coco A was initially certificated at a time when pressure and capacity limits were not typically specified in certificates. Over time, Commission policy has evolved, requiring first pressure and now pressure and capacity limits for storage certificates. Fields that were grandfathered-in or certificated without both pressure and capacity limits are now issued certificated pressure and capacity limits when an application is filed that requests any change in capacity. Columbia's currently certificated pressure and volume of 1,800 psig and 44,500 MMcf were accepted in Docket No. CP77-282 as Coco A's maximum operational inventory, and until now, certificates issued for Coco A did not involve capacity changes.

25. Volumetric and material balance analyses from data contained in this docket and in the Eastern Market Expansion project, confirm that the certificated capacity level of 44,500 MMcf is questionable. Using the geological and fluid data, the maximum volume is approximately 36,240 MMcf at a maximum pressure of 1,800 psig. Geological data shows the Coco A is a stratigraphic pool with clearly defined boundaries. There has also been no operational evidence of physical gas loss, migration, or boundary expansion problems to explain the difference of 8,260 MMcf. Columbia has been able to fully inject and withdraw Coco A's entire working gas capacity throughout its operational life.

26. We also agree with Columbia that the behavior of the LAUF gas during this time period is a strong indicator that 8,260 MMcf of gas was erroneously reported as being injected into Coco A when it should have been reported as lost and unaccounted-for gas. The LAUF data for the period between 1950 and 1964 shows a distinct decrease in the volume of LAUF gas between 1957 and 1962, the time period when the second measuring station was in service, as well as a distinct increase after direct measurement at Coco A began in 1962. Roughly estimating the average LAUF gas for both pre- and post-1957, the LAUF gas decreased from approximately 8,300 MMcf/year pre-1957, to approximately 6,500 MMcf/yr post-1957, which gives a total over the six years before direct measurement began of approximately 10,000 MMcf more accounted-for gas. When direct measurement began at Coco A in 1962, the LAUF began an immediate rebound to historic levels. These LAUF gas levels support the conclusion that approximately 8,260 MMcf of base gas was mistakenly recorded as going into Coco A.

27. We conclude that the physical amount of gas in Coco A is 36,240 MMcf at a maximum reservoir pressure of 1,800 psig (measured at the wellhead), and not 44,500 MMcf as currently certificated. We also conclude that the technical, geological, and operational data support Columbia's position that this difference does not represent a physical loss of gas from Coco A, but a paper error. Based on this analysis, we find that it is in the public convenience and necessity to authorize Columbia to restate the base gas volume in the Coco A storage field as 16,545 MMcf.

*Rate Proposal*

28. Columbia states that reducing the certificated base gas levels by 8,260 MMcf to 16,545 MMcf will result in a reduction of approximately \$7.5 million in the value of base gas. Columbia proposes to reflect the impact of this rate base adjustment on Columbia's recourse rates in its next general section 4 rate case. Columbia asserts that handling the base gas adjustment in its next section 4 rate case is appropriate and consistent with Commission precedent, especially given the de minimis impact the adjustment will have on Columbia's rate base. Columbia explains that the base gas adjustment of \$7.5 million is less than one-half of one percent of the rate base associated with Columbia's currently approved recourse rates of \$1.604 billion. Further, Columbia states that the \$7.5 million reduction in rate base is less than four-tenths of one percent of its current estimated rate base as reflected in its most recent Form 2 of \$1.909 billion. Columbia maintains that the Commission routinely permits adjustments to a pipeline's rate base, such as through abandonment or acquisition, without requiring a full scale review of the pipeline's rates.<sup>21</sup> Columbia claims that a rate review based on a single cost adjustment is inapplicable here as well since such an exercise would ignore, for example, Columbia's plant additions that have increased in amounts greater than its depreciation, depletion and amortization expenses over the last two years (2005 and 2006) by \$11.5 million and \$75.7 million, respectively.

29. We will accept Columbia's proposal to reflect the rate impact of reducing the certificated levels in its Coco A storage field in its next section 4 rate case. This is appropriate here given that the rate base adjustment of approximately \$7.5 million is less than one-half of one percent of the rate base underlying Columbia's existing recourse rates. Furthermore, no party has objected to Columbia's proposal.

**B. Docket Nos. CP07-367-000 and CP07-367-001****1. Public Convenience and Necessity**

30. On September 15, 1999, the Commission issued a Policy Statement to provide guidance as to how we will evaluate proposals for certificating major new construction.<sup>22</sup>

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<sup>21</sup> *Citing Columbia Gas Transmission Corp.*, 93 FERC ¶ 61,064, at 61,176 (2000).

<sup>22</sup> *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶61,227 (1999), *order on clarification*, 90 FERC ¶61,128 (2000); *order on clarification*, 92 FERC ¶61,094 (2000) (Policy Statement).

The Policy Statement established criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Policy Statement explains that in deciding whether to authorize the construction of major new pipeline facilities, the Commission balances the public benefits against the potential adverse consequences. Our goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

31. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, or landowners and communities affected by the route of the new pipeline. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission proceed to complete the environmental analysis where other interests are considered.

32. Columbia's proposal satisfies the threshold requirement that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. As explained below, we are approving Columbia's proposal to recover the fixed costs of the expansion project through incremental rates under Rate Schedules FSS and SST, thereby insulating existing customers from any rate increase for these costs. In addition, we are approving Columbia's request for a predetermination that it can roll in the costs of the commodity component of Rate Schedules FSS and SST, as well as its TCRA surcharge, EPCA charge, and RAM charge, because there will either be no impact on existing customers or existing customers' rates will decrease. As to the costs of the replacement and reliability work, we are approving Columbia's request for a predetermination to roll in these costs<sup>23</sup> consistent with our policy that recognizes that

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<sup>23</sup> As discussed below, our approval of rolled-in treatment does not include the costs attributable to the excess capacity installed at the Lanham Compressor Station for which Columbia is not seeking rolled-in rate treatment in the instant proceedings.

increasing the costs of existing customers to pay for projects designed to improve reliability or flexibility of service for the existing customers is not a subsidy.<sup>24</sup>

33. The project will not adversely affect Columbia's existing customers, or other pipelines and their customers. The proposed facilities are designed to provide incremental service without degradation of service to Columbia's existing firm customers. In addition, Columbia's project is designed to meet the increased storage requirements of its existing customers and there is no evidence that service on other pipelines will be displaced or bypassed and no pipeline companies have objected to the project. Thus, we conclude that Columbia's proposal will not have adverse impacts on existing pipelines or their captive customers.

34. Columbia designed the Eastern Market Expansion project to minimize the impact on landowners and the environment. Columbia states that the expansion of storage field capabilities will be constructed within the existing boundaries of Columbia's storage fields and the majority of the pipeline construction will make use of existing rights of ways. Thus, Columbia states that it anticipates only limited use of eminent domain authority.

35. Columbia has entered into long-term precedent agreements for 100 percent of the design capacity of the project. Columbia's proposal will provide needed storage and associated transportation infrastructure for the expansion customers. Based on the benefits that Columbia's proposal will provide to the market and the minimal adverse effects on existing customers, other pipelines, landowners, or communities, we find that approval of the Eastern Market Expansion project and related replacement and reliability work is required by the public convenience and necessity.

36. We also find that Columbia's proposal to abandon certain storage and transportation facilities that are being replaced or would no longer be required for its operations after the proposed project is placed in service is permitted by the public convenience and necessity.

## 2. Rates

### *Expansion Facilities*

37. As stated above, Columbia proposes to charge incremental demand rates for service under Rate Schedules SST and FSS. Columbia proposes a total reservation charge of \$19.664 per Dth per month, consisting of the existing base reservation charge

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<sup>24</sup> Policy Statement, 88 FERC ¶ 61,227 at fn.12.

of \$5.448 per Dth per month plus an additional reservation charge of \$14.216 per Dth per month for shippers utilizing the expansion facilities under Rate Schedule SST. Shippers taking service under Rate Schedule SST for Eastern Market Expansion service are also subject to an overrun rate of \$0.6567 per Dth. For shippers using the expansion facilities under Rate Schedules FSS, Columbia proposes to charge a reservation charge of \$3.317 per Dth per month, consisting of the existing reservation charge of \$1.505 per Dth per month plus an additional incremental reservation charge of \$1.812 per Dth per month. Shippers taking service under Rate Schedule FSS are also subject to a capacity charge of \$0.055 per Dth per month, which consists of the existing capacity charge of \$0.0290 per Dth per month plus an additional \$0.026 per Dth per month, withdrawal and injection charges of \$0.0153 per Dth each, and an overrun rate of \$0.1947 per Dth. Columbia calculates the proposed incremental reservation rates based on costs of \$147,455,722 associated with the project. In developing the proposed \$24,902,156 cost-of-service for the expansion project, Columbia utilized the last approved depreciation rate and pre-tax return approved by the Commission in Columbia's last general rate case in Docket No. RP95-408.<sup>25</sup>

38. Columbia proposes to charge its existing commodity rates under Rate Schedules FSS and SST, and requests a predetermination of rolled-in rate treatment for these cost components as well as its existing TCRA surcharge, EPCA charge, and RAM charge. Columbia asserts that rolled-in treatment of these cost components for the expansion customers is appropriate since doing so will either result in no cost impact or an anticipated net benefit to Columbia's existing customers.<sup>26</sup> Regarding commodity charges, Columbia asserts that there will be no increase in variable O&M expenses while commodity billing determinants associated with the project will increase significantly. Similarly, Columbia asserts that the project will not require additional Account No. 858 expenses, but will add 873,450 Dth of annual demand billing determinants and 9,918,510 Dth of annual commodity billing determinants under Rate Schedule SST resulting in estimated annual savings of \$460,000 to existing shippers if the TCRA surcharge applicable to the project is rolled in. Regarding the EPCA charge, Columbia estimates that although electric power costs will increase by approximately \$56,389 annually due to the installation of electric compression at the Lanham Compressor Station, the increase in electricity expenses in the calculation of the EPCA charge is offset by the increase in

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<sup>25</sup> *Columbia Gas Transmission Corp., order on uncontested settlement*, 79 FERC ¶ 61,044 (1997); *order on contested settlement*, 88 FERC ¶ 61,161 (1999).

<sup>26</sup> Columbia's support for rolled-in rate treatment for these cost components is included in Exhibit Z-3 to its application and in its October 18, 2007 response to Staff's October 5, 2007 data request.

billing determinants with no resulting impact on existing shippers. Finally, Columbia claims that while fuel used at the Lost River and Seneca Compressor Stations will increase by 72,900 Dth annually, transportation billing determinants will also increase by 9,918,510 Dth annually resulting in a decrease to the fuel retainage percentage.

39. The Commission has reviewed the proposed cost-of-service and initial recourse rates and finds the proposed cost-of-service and proposed recourse rates filed in the application and supported by Columbia's October 18, 2007 response to Staff's data request are reasonable. We also will approve Columbia's request for a presumption of rolled-in rate treatment for the costs associated with the commodity component of the FSS and SST rates and for the TCRA, EPCA, and RAM charges absent a significant change of circumstances. Columbia has adequately demonstrated that such treatment will result in no adverse impact to its existing customers.

40. The Commission will require Columbia to file actual tariff sheets in accordance with section 154.207 of the Commission's regulations no less than 30 days, or more than 60 days prior to commencing service. In addition, because we are approving incremental rates for the demand charges under Rate Schedules FSS and SST, Columbia will be required to maintain its accounts for these facilities in accordance with section 154.309 of the Commission's regulations, which applies to incremental expansions.

#### *Replacement and Reliability Work*

41. Columbia estimates that the total construction cost of the reliability and replacement work that it proposes will be \$26,929,452. Columbia requests a predetermination of rolled-in rate treatment for the costs of the replacement and reliability work based on its claim that this work will enhance long term reliability of its system since costs are significantly lower than if done on a stand-alone basis.

42. We will grant Columbia's request for a predetermination that the costs of the reliability and replacement work may be rolled into Columbia's system-wide rates in the next general rate case absent a significant change of circumstances.<sup>27</sup> As stated above, Commission policy recognizes that increasing the costs of existing customers to pay for projects designed to improve reliability or flexibility of service for the existing customers is not a subsidy.<sup>28</sup> Columbia's proposed work will improve reliability by replacing

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<sup>27</sup> Consistent with Columbia's request, this predetermination does not include the costs associated with the excess horsepower at the Lanham Compressor Station of \$3,304,586.

<sup>28</sup> See Policy Statement, 88 FERC ¶ 61,227 at fn. 12.

equipment, much of which is more than 40 years old, with new equipment and newer technologies.<sup>29</sup> In addition, the new compression facilities will allow Columbia to use the automatic load capabilities in the units, providing greater flexibility to meet varying market requirements. These gains in reliability and flexibility will be achieved at a lower cost than if this work was performed separately in the future.

#### *Excess Horsepower at Lanham*

43. As stated above, Columbia proposes to construct two 11,508 hp electric motor driven centrifugal compressor units at Lanham that exceed the horsepower required at Lanham by 3,944 hp. Columbia is not seeking recovery of the costs associated with the excess 3,944 hp at Lanham here but requests the authorization to include the costs of the excess horsepower in an expansion project to be filed in the future. Until Columbia files an expansion project that requires the use of this excess horsepower, Columbia proposes to post the capacity in accordance with the terms of its FERC Gas Tariff and charge customers using such capacity its system wide transportation rates currently on file and authorized by the Commission. We find that Columbia's proposal for the additional capacity is appropriate and consistent with Commission precedent.<sup>30</sup> We direct Columbia to maintain records sufficient to satisfy the requirements of section 154.309 of the Commission's regulations regarding recordkeeping for costs attributable to the excess 3,944 hp.

#### *Negotiated Rates*

44. Columbia is proposing to enter into negotiated rate agreements under Rate Schedules SST and FSS with three of the four expansion shippers. In addition, Columbia

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<sup>29</sup> While the proposed work will improve reliability for the reasons discussed above, it is noteworthy that additional steps may produce further reliability benefits. For example, because new gas-fired compressors would be driven by fuel available in the pipeline, they could provide reliability benefits beyond those associated with the installation of new electric compressors that are driven instead by power from external sources. Indeed, if use of waste heat recovery technology proved economically and technically feasible, it could be coupled with installation of new gas-fired compressors to provide required station power and thus optimize reliability.

<sup>30</sup> See *Tennessee Gas Pipeline Co.*, 111 FERC ¶ 61,436, at P 14-16 (2005) (permitting excess capacity created by replacement of compressor units to be posted and awarded at the pipeline's approved rate on file until the costs are included in a future expansion project).

states that the service agreements with all four expansion shippers contain non-conforming service agreement provisions and thus states that it will file the service agreements for Commission approval not less than 30 days or more than 60 days prior to the commencement of service. When Columbia files its service agreements it must comply with the Alternative Rate Policy Statement,<sup>31</sup> and the Commission's decision in *NorAm Gas Transmission Company*,<sup>32</sup> which require, among other things, that the pipeline clearly delineate the differences between the non-conforming rate agreements and its form of service agreement in redline and strikeout.

### **3. Engineering Analysis**

45. Our staff prepared an engineering analysis for the Eastern Market Expansion project. Based on that analysis and subject to the engineering conditions of Appendix B, we conclude that Columbia's proposal is technically sound and feasible. The Coco A and Crawford storage fields are both physically capable of storing the increased volume of gas. The construction, conversion, and remediation of injection/withdrawal wells at Coco A, Coco C, and Crawford will enable Columbia to increase the deliverability of each field to meet the incremental demand. Finally, the pipeline loops and compression are adequately sized to meet the incremental demand.

### **4. Environmental Analysis**

46. On November 7, 2006, we issued a Notice of Intent to Prepare an Environmental Assessment for the Proposed Columbia Gas Transmission Corporation Eastern Market Expansion Project and Request for Comments on Environmental Issues (NOI). In response to the NOI and subsequent Notice of Application, we received 14 environmental comment letters.<sup>33</sup> Substantive issues raised in these letters included potential impacts on

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<sup>31</sup> *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Service of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996), *reh'g and clarification denied*, 75 FERC ¶ 61,024 (1996), *reh'g denied*, 75 FERC ¶ 61,066 (1996), *aff'd sub nom. Burlington Resources Oil & Gas Co. v. FERC*, 172 F. 3d (D.C. Cir. 1998); and *Modification of Negotiated Rate Policy*, 104 FERC ¶ 61,134 (2003), *order on reh'g and clarification*, 114 FERC ¶ 61,042 (2006).

<sup>32</sup> 77 FERC ¶ 61,011 (1996).

<sup>33</sup> Federal agencies who commented included the U.S. Fish and Wildlife Service's West Virginia Field Office and the National Park Service. State agencies included the Virginia Department of Conservation and Recreation (VDCR) (two letters), the Virginia

streams, riparian areas, and wetlands; air quality and Kanawha County's non-attainment status; scenic, recreational, natural, and cultural resources associated with the Appalachian Trail (AT); illegal off-road vehicle/mountain bike use of the right-of-way; and impairing values on two Virginia Outdoors Foundation (VOF) conservation easements crossed by the pipeline. One specific comment from landowner James Summers expressed concern about construction noise, blasting, impacts on surface and groundwaters, and an extra workspace and widening an existing access road on his property.

47. Our Staff addressed all substantive comments in the environmental assessment (EA). The EA addresses geology and soils, water resources and wetlands, fisheries, vegetation and wildlife (including threatened and endangered species), land use, visual resources, threatened and endangered species, cultural resources, socioeconomics and environmental justice, air and noise quality, safety and reliability, cumulative impacts, and alternatives.

48. On July 19, 2007, our staff conducted a site visit of the two conservation easement properties with the landowner, representatives of the VOF, and Columbia. During the site visit, Columbia offered to implement off-site mitigation to compensate for potential construction damages. Subsequently, the VOF filed a letter<sup>34</sup> recommending measures to minimize impacts on the two conservation easements such as replacing trees removed by construction. On September 20, 2007, Columbia filed a response to the VOF's letter agreeing to its requests.

49. In response to Mr. Summers' concerns, the EA concluded that Columbia's project would not have a significant impact on ambient noise levels in the project area or on ground or surface water resources. The EA also recommends that Columbia file a detailed description of the extra workspace and access road on Mr. Summers' property that minimizes tree clearing. Our staff's review and written approval would precede Columbia's use of these areas.

50. The National Park Service (NPS) was able to review the EA prior to its issuance and provided valuable and constructive comments. The EA describes the values of the affected segment of the AT and includes Columbia's draft mitigation plans developed in

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Department of Environmental Quality, and the West Virginia Department of Environmental Protection.

<sup>34</sup> See letter to Gertrude F. Johnson, FERC staff, from Martha Little, VOF Deputy Director of Stewardship, dated September 10, 2007.

coordination with the NPS and the Virginia Department of Conservation and Recreation (VDCR) as appendix F. The EA also recommends that prior to construction, Columbia consult with the NPS and the VDCR to finalize the AT Restoration Plan, the AT and Sky Meadows State Park Trails Crossing Procedures, and the All-Terrain Vehicle Barrier Plan.

51. The EA was issued and placed in the record of this proceeding on October 1, 2007, with a public comment period extending until October 31, 2007. The EA was noticed in the *Federal Register* on October 9, 2007,<sup>35</sup> and mailed to federal, state, and local agencies, elected officials, public libraries, interveners to this proceeding, and other interested parties. We received six environmental comment letters in response to the EA. A number of comments were pro forma and editorial in nature. We will respond to those which require further discussion.

52. On October 29, 2007, Columbia filed a letter requesting clarification of EA recommendation 20, pertaining to the noise attributable to the modifications at the Coco and Lanham Compressor Stations at certain noise-sensitive areas (NSA). The EA recommends that the noise attributable to operation of the modified stations not exceed the predicted noise levels at NSA #2 at the Coco Compressor Station and NSA #7 at the Lanham Compressor Station. This same recommendation requires that Columbia must implement additional noise control measures if surveys during operation indicate the noise attributable to these modified stations exceeds a day-night noise level ( $L_{dn}$ ) of 55 decibels on the A-weighted scale (dBA) at the Coco NSA #2 and Lanham NSA #7. Columbia submits that it will make every reasonable effort to ensure the noise levels at Coco NSA #2 and Lanham NSA #7 not exceed the predicted levels; however, Columbia requests that the Order clarify that the noise limit above which Columbia must take corrective action is 55 dBA  $L_{dn}$  at Coco NSA #2 and Lanham NSA #7. We believe the wording in the staff's recommendation is clear that additional noise control measures would only be required if the noise attributable to the modified stations exceeds a  $L_{dn}$  of 55 dBA at Coco NSA #2 and Lanham NSA #7.

53. The VDCR commented that according to the topographic map, the project either overlies or is adjacent to a karst landscape, and suggests coordination with the VDCR in the event karst features are encountered. The EA section 1.1.1 indicates that the project area lies outside of areas with a history of subsidence problems due to karst terrain and that the potential for subsidence in the project area is low. The existing Columbia pipelines that this new pipeline will parallel did not encounter any karst features. However, we agree that Columbia should coordinate its construction activities with the

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<sup>35</sup> 72 Fed. Reg. 57,321.

VDCR and have added a condition to our staff's recommendations requiring Columbia to do so.

54. The VDCR also recommended adding two invasive species to table D-1 of the draft AT Restoration Plan presented in Appendix F of the EA. Additionally, VDCR commented that the draft AT Restoration Plan lists the purple loosestrife as a VDCR-designated noxious weed. The VDCR notes that noxious weeds are actually designated by the Virginia Department of Agriculture and Consumer Services and that the purple loosestrife does not carry such designation. We note that the EA recommends Columbia finalize the AT Restoration Plan in consultation with the VDCR, and we believe that this is the appropriate forum to address VDCR's issues.

55. The NPS commented that the EA should be clear in that Columbia must obtain approval of the mitigation plans for the AT and Sky Meadows State Park from the NPS and VDCR in order to cross their respective jurisdictions and that such approval has not been granted. The EA acknowledges this by stating that the NPS does retain responsibility for over-all administration of the AT and the responsibility for issuing authorizations for pipeline crossings on lands acquired by the NPS to protect the AT. Furthermore, EA recommendation 17 requires that prior to construction, Columbia consult with the NPS and VDCR to finalize the mitigation plans for the AT and Sky Meadows State Park including documentation of consultation with the NPS and VDCR.

56. Based on the discussion in the EA, we conclude that if constructed and operated in accordance with Columbia's application and supplements and the conditions imposed herein, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

57. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.<sup>36</sup>

58. Columbia shall notify the Commission's environmental staff by telephone or facsimile of any environmental noncompliance identified by other federal, state, or local

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<sup>36</sup> See, e.g., *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Comm'n*, 894 F.2d 571 (2d Cir. 1990); and *Iroquois Gas Transmission System*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

agencies on the same day that such agency notifies Columbia. Columbia shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

59. The Commission on its own motion received and made a part of the record in this proceeding all filed evidence, including the application and exhibits thereto, and after consideration thereof,

The Commission orders:

(A) A certificate of public convenience and necessity is issued in Docket Nos. CP07-367-000 and CP07-367-001 authorizing Columbia to construct and operate the Eastern Market Expansion project and related replacement and reliability work, as described more fully in the order and in the application and amendment.

(B) Permission for and approval of Columbia's abandonment of facilities, as more fully described in this order and in the application, are granted in Docket No. CP07-367-000.

(C) A certificate of public convenience and necessity is issued in Docket No. CP08-19-000 authorizing Columbia to restate the volume of base gas in the Coco A field from 22,805 MMcf to 16,545 MMcf.

(D) The certificate authority issued in Ordering Paragraph (A) shall be conditioned on the following:

- (1) Columbia's completion of the authorized construction of the proposed facilities and making them available for service within eighteen months of the issuance of this order pursuant to section 157.20(b) of the Commission's regulations;
- (2) Columbia's compliance with all applicable Commission regulations under the NGA including, but not limited to, Parts 154 and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the regulations;
- (3) Columbia's compliance with the engineering conditions listed in Appendix B to this order; and
- (4) Columbia's compliance with the environmental conditions listed in Appendix C to this order.

(E) Columbia shall execute firm service agreements equal to the level of service represented in its precedent agreements prior to commencing construction of the Eastern Market Expansion project.

(F) Columbia shall notify the Commission's environmental staff by telephone or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Columbia. Columbia shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

(G) Columbia's proposed initial rates for incremental storage and transportation services for the Eastern Market Expansion project are approved. Columbia must maintain its records for the expansion project in a manner to comply with the requirements of section 154.309 of the Commission's regulations.

(H) Columbia is granted a predetermination of rolled-in rate treatment for the costs of the replacement and reliability work (with the exception of the costs attributable to the excess horsepower at the Lanham Compressor Station), as well as for the commodity component of Rate Schedules FSS and SST and for the EPCA, TCRA and RAM charges absent a significant change in circumstances.

(I) Columbia must file, no less than 30 days, or more than 60 days, prior to commencing service, actual tariff sheets consistent with its pro forma tariff sheets.

(J) Columbia must file, no less than 30 days, or more than 60 days, prior to commencing services, its non-conforming service agreements with expansion customers.

(K) In Docket No. CP07-367-000, the joint late motion to intervene of Virginia Natural Gas Inc. and Pivotal Utility Holdings, Inc. is accepted.

(L) In Docket Nos. CP08-19-000 and CP07-367-001, the joint late motion to intervene of the City of Charlottesville, Virginia and Easton Utilities Commission is accepted.

By the Commission.

( S E A L )

Kimberly D. Bose,  
Secretary.

## **Appendix A**

### **List of Parties Filing Timely Interventions**

#### **Docket No. CP07-367-000**

Baltimore Gas and Electric Company  
City of Charlottesville, Virginia and Easton Utilities Commission  
City of Richmond, Virginia  
Columbia Gas of Virginia, Inc.  
Conectiv Energy Supply, Inc.  
Delmarva Power & Light Company  
East Ohio Gas Company and Hope Gas, Inc.  
Honeywell International, Inc.  
Independent Oil & Gas Association of West Virginia  
Orange and Rockland Utilities, Inc.  
Piedmont Environmental Council  
Proliance Energy LLC  
PSEG Energy Resources & Trade, LLC  
Washington Gas Light Company

#### **Docket No. CP08-19-000**

Conectiv Energy Supply, Inc.  
Delmarva Power & Light Company  
Honeywell International, Inc.  
Nisource Distribution Companies  
Orange and Rockland Utilities, Inc.  
Proliance Energy LLC  
PSEG Energy Resources & Trade, LLC  
Washington Gas Light Company

#### **Docket No. CP07-367-001**

Honeywell International, Inc.  
Orange and Rockland Utilities, Inc.  
PSEG Energy Resources & Trade, LLC

## Appendix B

### Engineering Conditions

1. The total maximum gas storage inventory stored in the Coco A Storage field shall not exceed 39,149 MMcf at 14.73 psia and 60°F without prior Commission authorization. The maximum shut-in stabilized reservoir pressure (as measured at the wellhead) shall not exceed 1,900 psig. The deliverability of the Coco A is 360 MMcf/d.
2. The total maximum gas storage inventory stored in the Coco C Storage field shall not exceed 17,270 MMcf at 14.73 psia and 60°F without prior Commission authorization. The maximum shut-in stabilized reservoir pressure (as measured at the wellhead) shall not exceed 1,800 psig. The deliverability of the Coco C is 188 MMcf/d.
3. The total maximum gas storage inventory stored in the Crawford Storage field shall not exceed 75,103 MMcf at 14.73 psia and 60°F without prior Commission authorization. The maximum shut-in stabilized reservoir pressure (as measured at the wellhead) shall not exceed 800 psig. The deliverability of the Crawford is 245 MMcf/d.
4. Columbia shall operate all fields in such manner as to prevent/minimize gas loss or migration.
5. Columbia shall periodically conduct an inventory verification study on each field.
6. Columbia shall submit for each field semiannual reports (to coincide with the termination of the injection and withdrawal cycles) containing the following information (volumes shall be stated at 14.73 psia and 60 degrees Fahrenheit and pressures shall be stated in psia):
  - (1) The daily volumes of natural gas injected into and withdrawn from the storage reservoir.
  - (2) The volume of natural gas in the reservoir at the end of the reporting period.
  - (3) The maximum daily injection and withdrawal rates experienced during the reporting period. Average working pressure on such maximum days taken

at a central measuring point where the total volume injected or withdrawn is measured.

- (4) Results of any tracer program by which the leakage of injected gas may be determined. If leakage of gas exists, the report should show the estimated total volume of gas leakage, the volume of recycled gas, and the estimated remaining inventory of gas in the reservoir at the end of the reporting period.
- (5) Any surveys of pressures in gas wells, and the results of back-pressure tests conducted during the reporting period.
- (6) The latest revised structural and isopach maps showing the locations of the wells and the location of the gas-water contact. These maps need not be filed if there is no material change from the maps previously filed.
- (7) For the reporting period, a summary of wells drilled, worked over, or recompleted with subsea depth of formation and casing settings. Copies of any new core analyses, back-pressure tests, or well log analyses.
- (8) Discussion of current operating problems and conclusions.
- (9) Such other data or reports which may aid the Commission in the evaluation of the storage project.
- (10) Reports shall continue to be filed semiannually until the storage inventory volumes and pressures have reached or closely approximate the certificated maximum levels permitted in the Commission's Order. Thereafter, the reports shall continue on a semiannual basis for a period of one year.

## Appendix C

### **Environmental Conditions for Columbia's Eastern Market Expansion Project and Related Replacement and Reliability Work**

1. Columbia Gas Transmission Corporation (Columbia) shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), and as identified in the environmental assessment (EA), unless modified by the Order. Columbia must:
  - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
  - b. justify each modification relative to site-specific conditions;
  - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
  - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) before using that modification.
2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
  - a. the modification of conditions of the Order; and
  - b. the design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.
3. **Prior to any construction**, Columbia shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (EI) and contractor personnel will be informed of the EIs' authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.
4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Columbia shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of

environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Columbia's exercise of eminent domain authority granted under Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Columbia's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way (ROW) for a pipeline to transport a commodity other than natural gas.

5. Columbia shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, and documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

This requirement does not apply to route variations required herein or extra workspace allowed by the Columbia's Environmental Construction Standards and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
  - b. implementation of endangered, threatened, or special concern species mitigation measures;
  - c. recommendations by state regulatory authorities; and
  - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. Columbia shall develop and implement an environmental complaint resolution procedure. The procedure shall provide landowners with clear and simple

directions for identifying and resolving their environmental mitigation problems/concerns during construction of the project and restoration of the ROW. **Prior to construction**, Columbia shall mail the complaint procedures to each landowner whose property would be crossed by the project.

7. **At least 60 days before construction begins**, Columbia shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how Columbia will implement the mitigation measures required by the Order. Columbia must file revisions to the plan as schedules change. The plan shall identify:
  - a. how Columbia will incorporate these requirements into contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
  - b. the number of EIs assigned per spread, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
  - c. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
  - d. the training and instructions Columbia will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
  - e. the company personnel (if known) and specific portion of Columbia's organization having responsibility for compliance;
  - f. the procedures (including the use of contract penalties) Columbia will follow if noncompliance occurs; and
  - g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
    1. the completion of all required surveys and reports;
    2. the mitigation training of onsite personnel;
    3. the start of construction; and
    4. the start and completion of restoration.
8. Columbia shall employ at least one EI per spread. The EI shall be:
  - a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

- b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 7 above) and any other authorizing document;
  - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
  - d. a full-time position, separate from all other activity inspectors;
  - e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
  - f. responsible for maintaining status reports.
9. Columbia shall file updated status reports prepared by the head EI with the Secretary on a *weekly* basis **until all construction and restoration activities are complete**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. the current construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmental sensitive areas;
  - b. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
  - c. a description of corrective actions implemented in response to all instances of noncompliance, and their cost;
  - d. the effectiveness of all corrective actions implemented;
  - e. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
  - f. copies of any correspondence received by Columbia from other federal, state, or local permitting agencies concerning instances of noncompliance, and Columbia's response.
10. Columbia must receive written authorization from the Director of OEP **before commencing service** from the project. Such authorization will only be granted following a determination that rehabilitation and restoration of the ROW and other areas affected are proceeding satisfactorily.
11. **Within 30 days of placing the certificated facilities in service**, Columbia shall file an affirmative statement with the Secretary, certified by a senior company official:

- a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
  - b. identifying which of the certificate conditions Columbia has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
12. Columbia shall file the locations of all springs, seeps, and wells identified within 150 feet of its construction ROW with the Director of the OEP **prior to construction.**
13. Columbia shall file a report with the Secretary, **within 30 days** of placing their pipeline facilities in service, identifying all water supply wells/systems damaged by construction and how they were repaired. The report shall include a discussion of any complaints concerning the well yield or quality and how each problem was resolved.
14. Columbia's vegetation maintenance program should exclude clearing within the wetlands crossed by the Hocking River directional drill at station numbers 0+00 and 9+39.
15. Columbia shall **not begin construction** of the Eastern Market Expansion Project **until:**
  - a. the OEP staff completes any necessary consultation with the U.S. Fish and Wildlife Service; and
  - b. Columbia has received written notification from the Director of OEP that construction and/or use of mitigation (including implementation of conservation measures) may begin.
16. Columbia shall **not utilize** the extra workspace or expand the existing access road (AR6) near milepost 1.14 of Loop C in West Virginia **until** it files, with the Secretary for review and written approval by the Director of OEP, a detailed description of the extra workspace and access road at this location that minimizes tree clearing.
17. Columbia shall consult with National Park Service (NPS) and the Virginia Department of Conservation and Recreation (VDNR), as appropriate, to finalize the AT Restoration Plan, the AT and Sky Meadows State Park Trails Crossing

Procedures, and the All Terrain Vehicle Barrier Plan. **Prior to construction**, Columbia shall file the finalized plans, including documentation of consultation with the NPS and VDCR.

18. Columbia shall **defer construction and use of facilities** and staging, storage, and temporary work areas and new or to-be-improved access roads in West Virginia and Ohio **until**:
- a. Columbia files any required treatment plan(s), and the State Historic Preservation Officers' (SHPO) comments on any plan(s);
  - b. Columbia files a contingency plan for drill failure or "frac-out" for the Hocking Valley Canal and the Ohio SHPO's comments on that plan;
  - c. the Advisory Council on Historic Preservation is afforded an opportunity to comment, if historic properties would be adversely affected; and
  - d. the Director of OEP reviews and approves all reports and plans and notifies Columbia in writing that it may proceed with any treatment or construction.

All material filed with the Commission containing **location, character, and ownership** information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: **"CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE"**.

19. **Prior to construction**, Columbia shall file, for the review and written approval of the Director of OEP, a compliance and mitigation plan for the noise-sensitive areas (NSA) near the proposed Crawford storage wells 12467 and 12472 and Coco storage well 12440 indicating how noise levels attributable to well drilling would be controlled at the nearby NSAs, or alternatively, what mitigation would be offered to the residents of those NSAs.
20. Columbia shall conduct noise surveys at the Coco and Lanham Compressor Stations **no later than 60 days** after placing the authorized equipment in service to verify that the noise from all of the equipment at the modified stations at full capacity:
- a. does not exceed the predicted noise levels at NSA #2 at the Coco Compressor Station and NSA #7 at the Lanham Compressor Station; and
  - b. does not exceed the previously existing noise levels that are at or above a day-night noise level ( $L_{dn}$ ) of 55 decibels on the A-weighted scale (dBA) at NSAs #1, #3, and #4 at the Coco Compressor Station and at NSAs #1-6 at the Lanham Compressor Station.

If the noise attributable to the operation of all of the equipment at the modified stations exceeds an  $L_{dn}$  of 55 dBA at Coco NSA #2 or Lanham NSA #7, or if any of the noise levels at Coco NSAs #1, #3, and #4 or Lanham NSAs #1-6 are exceeded, Columbia shall, **within 1 year** of the in-service date, implement additional noise control measures to reduce the operating noise levels at the NSAs to or below the previously existing noise levels. Columbia shall confirm compliance with this requirement by filing second noise surveys with the Secretary **no later than 60 days** after it installs the additional noise controls.

21. Columbia shall conduct noise surveys at the Lost River and Seneca Compressor Stations to verify that the noise attributable to the operation of all of the equipment at the modified stations at full load does not exceed the previously existing noise levels that are at or above an  $L_{dn}$  of 55 dBA at the nearby NSAs. The results of the noise surveys shall be filed with the Secretary **no later than 60 days** after placing the new units in service. If any of these noise levels are exceeded, Columbia shall, **within 1 year** of the in-service date, implement additional noise control measures to reduce the operating noise levels at the nearby NSAs to or below the previously existing noise levels. Columbia shall also confirm compliance with this requirement by filing second noise surveys with the Secretary **no later than 60 days** after.
22. Columbia shall coordinate with the VDCR to document karst features in the event that karst landscape is encountered during the construction of Loop A in Warren, Clarke, and Fauquier Counties, Virginia.