NEAL | HARWELL
ATTORNEYS AT LAW

Erik C. Lybeck
Neal & Harwell, PLC
elybeck@nealharwell.com
615.238.3522

June 22, 2022 **16-00028**

VIA EMAIL: david.foster@tn.gov, pat.murphy@tn.gov, joe.shirley@tn.gov, michelle.mairs@tn.gov

Staff
Tennessee Public Utility Commission
502 Deaderick Street, Fourth Floor
Nashville, TN 37243

RE: Atmos Energy Corporation's Response to Exeter's Final Report

Dear Staff:

Atmos Energy Corporation ("Atmos Energy" or "Company") hereby provides its response to the recommendations in Exeter's final report ("Report") on Atmos Energy's Performance Based Ratemaking Mechanism Tariff Rider ("PBRM") for the period of April 1, 2017 through March 31, 2020:

- Atmos Energy agrees that the recent increase in volatility in gas commodity prices increases the benefit of hedging a portion of gas costs to mitigate gas cost rate volatility. Atmos Energy also agrees that to the extent the Commission approves a hedging program, it would be appropriate for the PBRM to be modified to ensure that hedging gains and losses are excluded from the calculation of GPIM savings or costs. The GPIM and a Hedging Program have fundamentally different purposes. The GPIM incentivizes Atmos Energy to reduce gas costs. The hedging program seeks to reduce volatility.

- Atmos Energy agrees that its storage inventory planning criteria were reasonable and that it adhered to those criteria.

- In its recommendation regarding the ACIM criteria, Exeter notes that it "has not encountered a gas cost incentive mechanism in another jurisdiction that provided for a sharing of savings associated with demand charge discounts." Atmos Energy cannot speak to Exeter's experience but would note that it also has performance incentive mechanisms in Kansas, Kentucky, Louisiana, and Mississippi that also provide for a sharing of savings associated with demand charge discounts. Other utilities in those jurisdictions have such mechanisms as well. Also, the negotiation of discounts may require Atmos Energy to

consider and weigh the tradeoffs of accepting less desirable primary receipt points. Atmos Energy believes that an incentive mechanism should be comprehensive and cover all forms of upstream gas costs, as leaving a type of cost out simple incentivizes the shifting of costs to that area.

- Atmos Energy agrees that maintaining the $2 million cap is appropriate at this time, but over time, some adjustment for inflation may be required in order to keep the GPIM meaningful for both the Company and its customers.

Also, while not a "Recommendation" in Section 7.3 of the Report, Atmos Energy notes that Exeter discussed in Section 6.2.1 whether or not the use of Asset Management Arrangements which provide discounted commodity prices as opposed to a fixed fee may circumvent the intent of the sharing provisions included in the PBRM approved in Docket No. 16-00028. Atmos Energy commonly uses both types of arrangements throughout its eight-state service territory. Currently, Atmos Energy's RFPs provide flexibility for how respondents bid. Value for asset optimization may be proposed in the form of a discount to index pricing and/or a fixed upfront or periodic payment/credit. Ultimately, we select the bid that provides the overall greatest benefit to our customers. The Company suggests that the adoption of a single PBR sharing percentage applied to the overall PBR savings may alleviate the consultant's concern with the current PBRM that applies different sharing percentages depending on the mechanism that gives rise to the savings.

Sincerely,

Erik C. Lybeck

ECL:mmb

cc: Consumer Advocate (via email: karen.stachowski@ag.tn.gov)

ATMOS ENERGY CORPORATION

REVIEW OF PERFORMANCE BASED RATEMAKING MECHANISM TARIFF RIDER

Prepared for:

TENNESSEE PUBLIC UTILITY COMMISSION AUDIT STAFF

CONSUMER ADVOCATE AND PROTECTION DIVISION OF THE TENNESSEE ATTORNEY GENERAL

June 2022

Prepared by:

EXETER
ASSOCIATES, INC.
10480 Little Patuxent Parkway, Suite 300
Columbia, Maryland 21044

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

Page

1. Introduction and Scope of Investigation

Atmos Energy Corporation (Atmos or Company) has operated under a Performance Based Ratemaking Mechanism Tariff Rider (PBRM) for gas costs since April 1, 1999. On September 26, 2007, the Tennessee Regulatory Authority (TRA), the predecessor to the Tennessee Public Utility Commission (TPUC or Commission), opened Docket No. 07-00225 to evaluate the Company's gas purchasing activities and the PBRM.[1] The Company, Audit Staff of the TRA (TRA Staff), and the Consumer Advocate Division of the Tennessee Attorney General (CAD) (collectively, the "Settling Parties") subsequently filed a Stipulation and Settlement Agreement in Docket No. 07-00225 (2013 Settlement) that was approved by the TRA in an order issued August 6, 2013.

The 2013 Settlement provided for a triennial comprehensive review of Atmos' capacity planning and gas purchasing activities under the PBRM by an independent consultant. The review period established by the 2013 Settlement was April 1, 2011 through March 31, 2014. Exeter Associates, Inc. (Exeter) was selected by the Settling Parties through a request for proposal (RFP) process to perform the independent review provided for under the 2013 Settlement. In a final report issued August 4, 2015 (2015 PBRM Report), Exeter presented its findings and conclusions concerning the PBRM for the review period and recommended certain changes to Atmos' PBRM.

On March 15, 2016, in response to Exeter's 2015 PBRM Report, Atmos filed a Petition to revise its PBRM to reflect Exeter's recommended changes (Docket No. 16-00028). On December 20, 2016, prior to the commencement of hearings in Docket No. 16-00028, TRA Staff, CAD, and the Company filed for approval of a Settlement Agreement (2016 Settlement) that revised the PBRM tariff effective April 1, 2016. On March 28, 2017, the TRA issued an order approving the 2016 Settlement effective April 1, 2016. Included in the 2016 Settlement was a provision providing for a triennial review of Atmos' transactions and activities under the PBRM starting in September 2021, and for triennial reviews to be conducted once every three years thereafter. Exeter has been selected through an RFP process to perform the first triennial review provided for under the 2016 Settlement in Docket No. 16-00028. Exeter has previously been selected to perform similar independent reviews of the performance-based gas procurement incentive mechanisms of both Piedmont Natural Gas Company (Piedmont) and Chattanooga Gas Company (Chattanooga). The first review period established by the 2016 Settlement is April 1, 2017 through March 31, 2020. The purpose of Exeter's review is to examine and report on all transactions and activities by Atmos under the PBRM including, but not limited to: (a) natural gas procurement; (b) capacity management; (c) storage management; (d) hedging; (e) reserve margins; and (f) off-system sales. The specific tasks to be accomplished in the review were described in the Scope of Review included with the RFP. The Scope of Review included in the RFP is presented as Appendix A to this Report.

[1] In 2017, legislation was passed that officially renamed the Tennessee Regulatory Authority as the Tennessee Public Utility Commission.

A draft report presenting the findings, results, and conclusions of Exeter's review was provided to TPUC Staff, CAD, and the Company on May 5, 2022. On May 20, 2022, Atmos provided its comments on the draft report. Atmos' comments were intended to clarify certain facts regarding its PBRM as well as respond to several findings set forth in the draft report. Exeter has incorporated the Company's comments into this final report (Report), as Exeter deemed appropriate.

Exeter's Report consists of six sections in addition to this introductory section. Section 2 of the Report identifies the pipeline companies serving Atmos and describes the services the Company purchases from each pipeline. In addition, Section 2 discusses the Company's review period gas supply arrangements and Asset Management Agreements (AMAs). Also included in Section 2 is a description of the Atmos system and the markets it serves, statistical data identifying the number of customers served, and usage by customer class. Finally, Section 2 identifies the city gate metering stations serving Atmos' Tennessee service territory.

Section 3 of the Report summarizes and evaluates Atmos' gas procurement activities and performance under the PBRM. Section 3 also assesses Atmos' decision not to engage in price hedging during the review period.

Section 4 evaluates Atmos' storage management activities. Section 5 analyzes the reasonableness of the Company's capacity portfolio. This includes an evaluation of Atmos' design peak day forecasting model.

Section 6 begins with a comparison of Atmos' PBRM with the performance-based gas procurement incentive mechanisms of Piedmont and Chattanooga. Next, the overall balance of the incentives between Atmos and ratepayers under the PBRM is addressed. The final section of the Report, Section 7, summarizes Exeter's conclusions, presents findings of fact, and identifies and describes areas of concern and improvement that may warrant further consideration.

2. Atmos System and Markets

Atmos Energy Corporation operates six natural gas distribution divisions. Those divisions and the number of customers served by each division as of September 30, 2021 are as follows:

Division	Service Areas	Customer Meters
Mid-Tex	Texas, including the Dallas/ Fort Worth Metroplex	1,791,482
Kentucky/Mid-States	Kentucky	183,937
	Tennessee	159,461
	Virginia	24,746
Louisiana	Louisiana	373,207
West Texas	Amarillo, Lubbock, Midland	326,419
Mississippi	Mississippi	272,993
Colorado-Kansas	Colorado	125,241
	Kansas	139,763

In Tennessee, Atmos provides natural gas sales and distribution service to three physically and geographically separated service territories in West Tennessee, Middle Tennessee, and East Tennessee. The Company's West Tennessee service territory consists of Union City and the adjacent areas in Obion County. The Middle Tennessee service territory consists of Columbia, Franklin, Murfreesboro, Nolensville, and the adjacent areas in Maury, Rutherford, and Williamson counties. The East Tennessee service territory consists of Johnson City, Elizabethton, Greenville, Kingsport, Shelbyville, Lynchburg, Maryville-Alcoa, Morristown, Bristol, and adjacent areas in Bedford, Moore, Blount, Hamblen, Sullivan, Carter, Washington, and Greene counties. The gas supply and transportation contracts serving the East Tennessee service territory also serve customers in Virginia, and the Bristol distribution system straddles the state line serving customers in both Tennessee and Virginia. For gas supply procurement purposes, the West Tennessee and Middle Tennessee service territories are internally referred to by the Company as "Area I," and the East Tennessee/Virginia service territory is internally referred to as "Area II." Atmos' purchased gas costs are recovered through a Purchased Gas Adjustment Rider (PGA Rider). Separate PGA Riders are applicable for the West Tennessee service territory and the Middle/East Tennessee service territories.

Atmos contracted for firm transportation and storage services from seven interstate pipelines during the review period:

Pipeline	Services
Texas Gas Transmission, LLC (Texas Gas)	Firm Transportation/Storage
Columbia Gulf Transmission, LLC (Columbia Gulf)	Firm Transportation
Texas Eastern Transmission, LP (Texas Eastern or Tetco)	Firm Transportation/Storage
Eastern Gas Transmission and Storage, Inc. (EGTS)[1]	Storage
Tennessee Gas Pipeline, LLC (TGP)	Firm Transportation/Storage
Southern Natural Gas, LLC (SONAT)	Firm Transportation
East Tennessee Natural Gas, LLC (ETNG)	Firm Transportation/Storage

[1] For the review period, this pipeline was Dominion Transmission, Inc. (DETI).

Atmos is physically interconnected with four interstate pipelines: Texas Gas, Columbia Gulf, Texas Eastern, and ETNG. Figure 1, Figure 2, and Figure 3 present maps of the Company's three service territories and the interstate pipelines serving each service territory. The interstate pipeline services purchased by Atmos during the review period are described in Section 2.1. In addition to purchasing services from these seven interstate pipelines, the Company also purchased storage services from the Saltville Gas Storage Company, LLC (Saltville Storage), the Monroe Gas Storage Company, LLC (Monroe Storage), and the Jefferson Island Storage & Hub Company, LLC (Jefferson Island Storage), and utilized the Barnsley Storage facility located in Kentucky which is owned and operated by Atmos Pipeline & Storage, LLC. These storage services and facilities are also discussed in Section 2.1. Section 2.2 describes Atmos' review period AMAs. Under its AMAs, Atmos assigned its interstate pipeline transportation and storage services and the storage services purchased from Saltville Storage, Monroe Storage and Jefferson Island Storage to an Asset Manager, and purchased all of its gas supplies from the Asset Manager.[2] Section 2.3 addresses Atmos' AMA gas supply delivery arrangements. Section 2.4 summarizes the jurisdictional services provided by Atmos, the number of customers served, and annual throughput volumes. Finally, Section 2.5 identifies Atmos' city gate metering stations.

[2] Assignments to the Asset Manager were accomplished either by the direct release of capacity to the Asset Manager or by designating the Asset Manager as Atmos' agent.

Figure 1. Atmos West Tennessee Service Territory

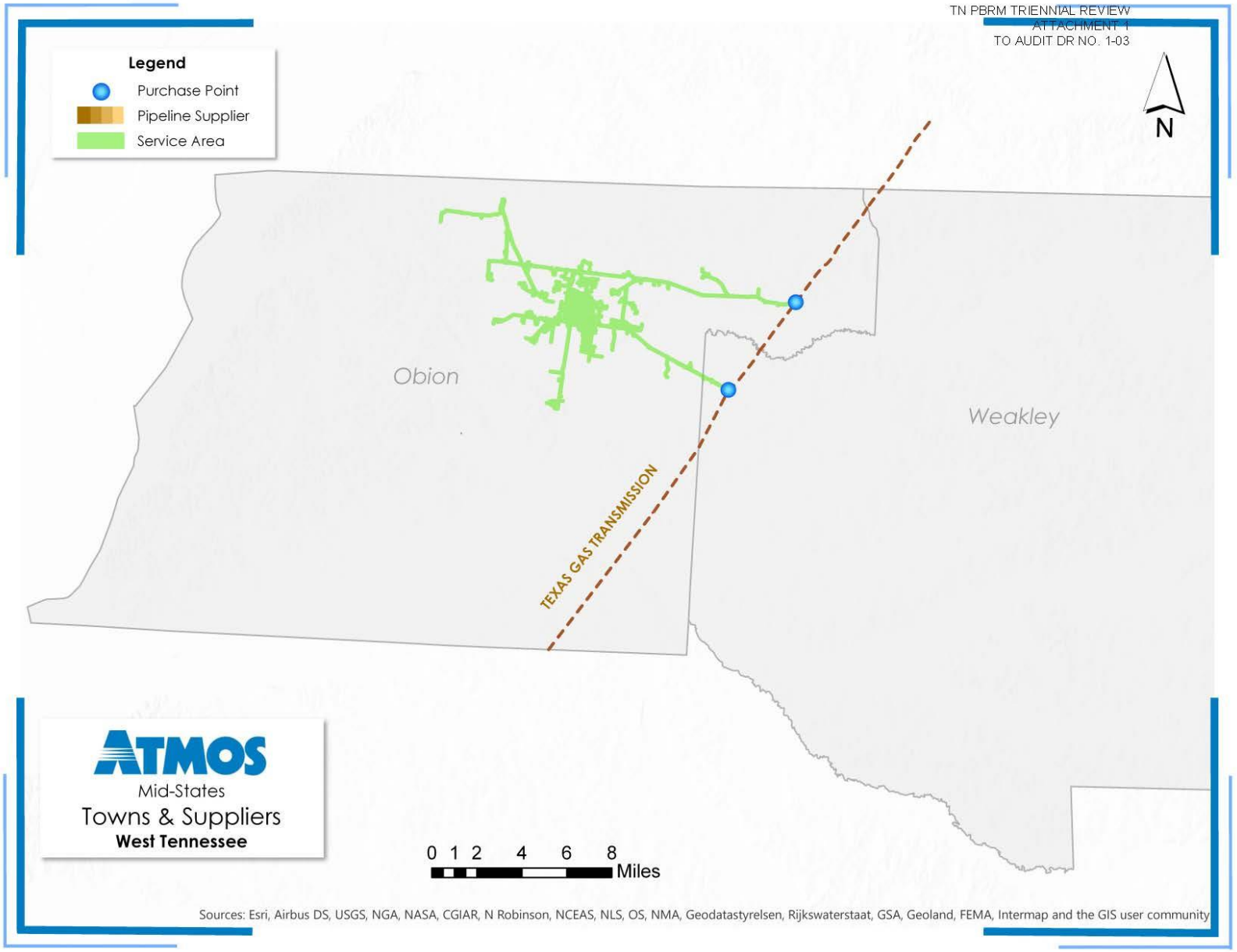


Figure 2. Atmos Middle Tennessee Service Territory

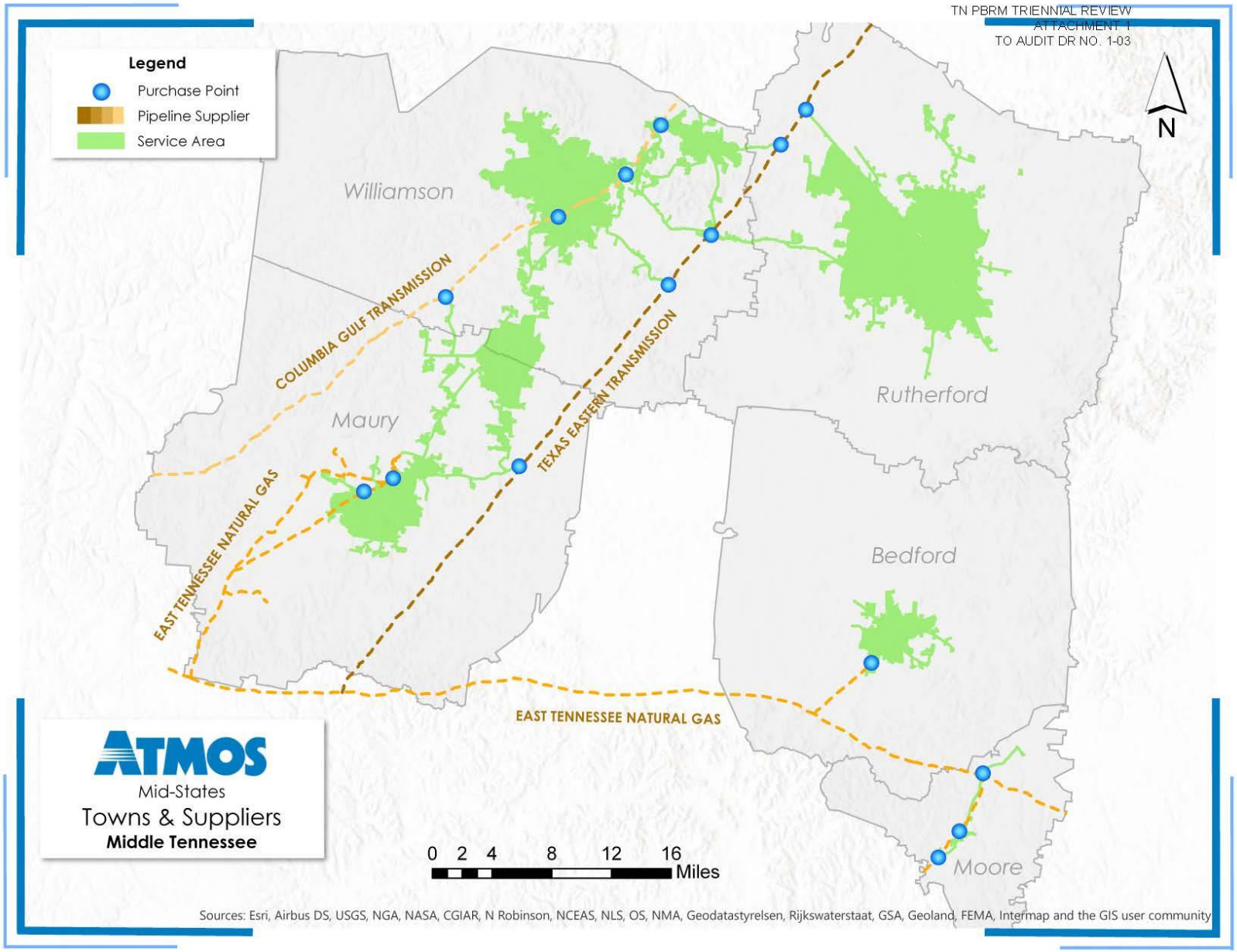
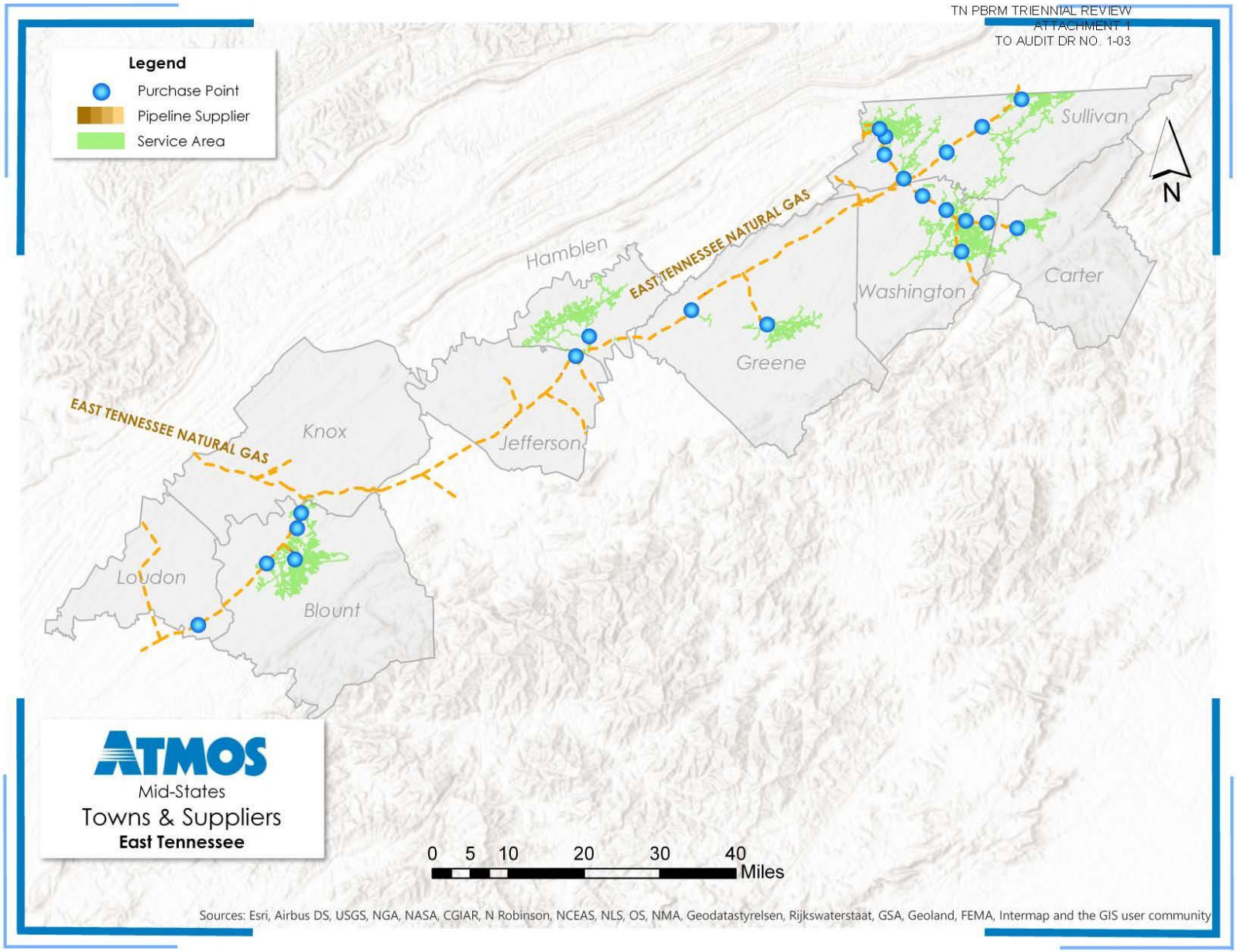


Figure 3. Atmos East Tennessee Service Territory



2.1 Interstate Pipeline and Storage Services

During the review period, Atmos' firm transportation arrangements with Texas Gas and ETNG provided for the delivery of gas supplies directly to Atmos' distribution systems (city gate), while TGP and SONAT provided for the upstream delivery of gas to ETNG. Atmos maintained a number of transportation arrangements with Columbia Gulf and Texas Eastern during the review period that provided for the delivery of gas supplies directly to Atmos' system, and/or the upstream delivery of gas supplies to ETNG. Gas supplies delivered to Atmos under these interstate pipeline transportation arrangements were generally purchased in the Gulf Coast production region. The demand charges associated with the firm interstate pipeline arrangements that serve the East Tennessee service territory were allocated between the Tennessee and Virginia jurisdictions based on forecasted design day demands.

2.1.1 Texas Gas Transmission

The Texas Gas system, which originates in Southern Louisiana (SL) and extends to Lebanon, Ohio, consists of five rate zones (Zones SL and 1-4). Zone SL consists of the lower half of Louisiana and provides access to the Gulf Coast production region. Zone 1 includes the upper half of Louisiana and extends to just south of Atmos' West Tennessee service territory. Zone 1 provides Atmos with access to Fayetteville and Haynesville Shale gas production. The West Tennessee service territory is located in Texas Gas Zone 2.

Atmos maintained two contracts with Texas Gas during the review period that provided for the delivery of gas to the West Tennessee service territory. Under Contract No. G0750, Atmos purchased a bundled firm transportation and storage service that provided for no-notice service under Rate Schedule SGT (Small General Transportation service).[3] This contract provided for a maximum daily delivered quantity (MDQ) of 7,495 dekatherms (Dth) per day during the months of November through March. Of this quantity, 5,108 Dth/day was available as no-notice service, and the remaining 2,387 Dth/day was available to deliver nominated flowing supplies. The maximum winter season no-notice quantity was 239,576 Dth. Contract No. G0750 also provided for the delivery of nominated supplies of 4,120 Dth/day during the months of April through October.

Atmos purchased firm transportation service from Texas Gas under Rate Schedule STF (Short Term Firm) during the review period (Contract No. 21483). This arrangement, initially effective through September 30, 2019, provided for an MDQ of 2,000 Dth/day during the winter period (November through March) and an MDQ of 500 Dth/day during the summer period (April through October). Contract No. 21483 was subsequently extended through March 31, 2022 at a reduced winter MDQ of 1,000 Dth/day and reduced summer MDQ of

[3] A no-notice service allows a shipper (transporter) such as Atmos to physically take delivery of actual quantities greater than or less than the quantity purchased and nominated for delivery. Differences between nominated and actual deliveries are accommodated by storage injections or withdrawals.

250 Dth/day. Atmos' firm transportation agreements with Texas Gas specify primary receipt point entitlements by zone.

2.1.2 Columbia Gulf Transmission

The interstate pipeline facilities of Columbia Gulf extend from the Gulf Coast production region in Louisiana to Leach, Kentucky at the Kentucky/West Virginia border. Atmos maintained eight firm transportation contracts with Columbia Gulf under Rate Schedule FTS-1 during the review period (Contract Nos. 23188, 23481, 142156, 168971, 211462, 158165, 169319, and 215235). With the exception of Contract No. 142156, the primary receipt points for each Columbia Gulf firm transportation contract were in the Gulf Coast region. The primary receipt point under Contract No. 142156 was the interconnect between Columbia Gulf and Columbia Gas Transmission, LLC (Columbia Gas) in Leach, Kentucky. Therefore, the delivery path under Contract No. 142156 was Leach, Kentucky south to the Gulf Coast region. Atmos released the segment of the delivery path under Contract No. 142156 that was downstream of the Company's Middle Tennessee distribution system to its affiliate, Trans Louisiana Gas Pipeline, during the review period.

Contract Nos. 23188, 23481, 142156, 168971, and 211462 provided for the delivery of gas directly to the Company's Middle Tennessee service territory. The MDQ for each contract providing for the delivery of gas directly to the Company's Middle Tennessee service territory was as follows:

Contract No.	MDQ (Dth)
23188	15,000
23481	22,500
142156	12,500
168971	10,000
211462	12,000

Contract No. 211462, which had an MDQ of 12,000 Dth, did not become effective until November 1, 2018, and replaced Texas Eastern Contract No. 911446 which had an MDQ of 9,000 Dth/day (see Section 2.1.3).

Contract Nos. 158165, 169319, and 215235 provided for the upstream delivery of gas to ETNG for subsequent delivery to Atmos' East Tennessee service territory. The MDQ under Contract No. 158165 was 10,000 Dth/day during the review period. The MDQ under Contract No. 169319 was 5,000 Dth/day until its expiration effective March 31, 2019. The capacity under Contract No. 169319 was replaced by Contract No. 215235 which had an MDQ of 10,000 Dth/day. The additional 5,000 Dth/day under Contract No. 215235 replaced the Ridgetop delivered TGP supply service under the AMA that was effective during the period April 1, 2016 through March 31, 2019 which was no longer provided under the AMA which became effective April 1, 2019 (see Sections 2.2 and 2.3).

2.1.3 Texas Eastern Transmission

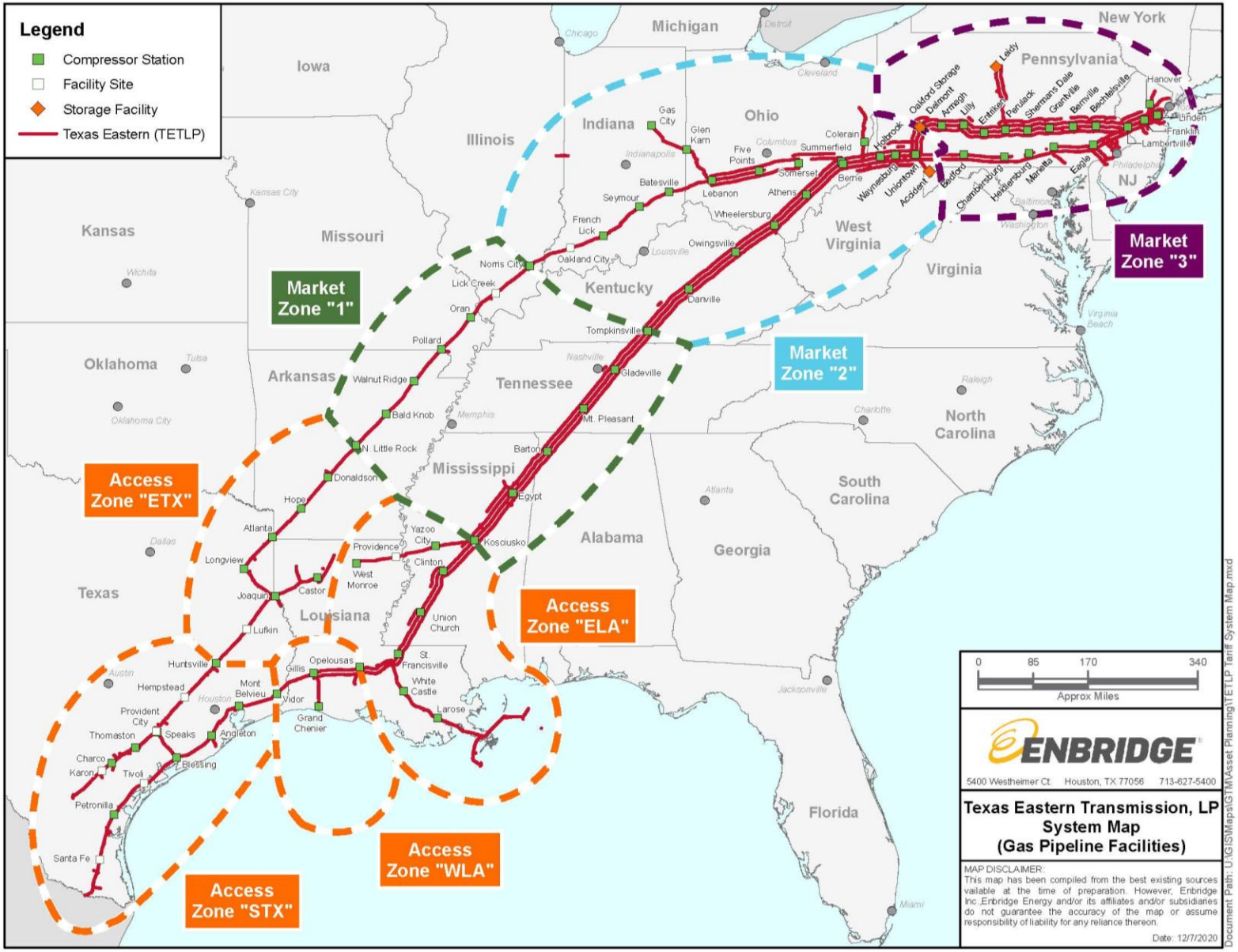
The Texas Eastern system originates in the Gulf Coast production region and extends to the New York City area. Texas Eastern consists of four Gulf Coast production region rate zones (East Louisiana [ELA], West Louisiana [WLA], South Texas [STX], and East Texas [ETX]) and three market area rate zones (Zones M-1, M-2, and M-3). A map of Texas Eastern's rate zones is presented in Figure 4.

Atmos maintained six service arrangements with Texas Eastern during the review period. Atmos maintained three firm transportation contracts with Texas Eastern under Rate Schedule FT-1 that provided for the delivery of Gulf Coast produced gas supplies in Zone ELA to Atmos' Middle Tennessee service territory in Zone M1 (Contract Nos. 911392, 911195 and 911446). Contract No. 911392 had an MDQ of 4,000 Dth/day and was a one-year contract effective for the period November 2016 through October 2017. Contract No. 911995 had an MDQ of 5,000 Dth/day and was in effect the entire review period. Contract No. 911446 had an MDQ of 9,000 Dth/day and was a one-year contract effective for the period November 2017 through October 2018. Atmos released a 5,000-Dth segment of this contract from Texas Eastern Zone ELA to Zone M1 to its Mississippi Division which left Atmos with 4,000 Dth of receipts in Zone ELA and 5,000 Dth of receipts in Zone M1, with a total of 9,000 Dth of deliveries to Zone M1.

Texas Eastern Rate Schedule FT-1 Contract No. 911193 was a segmented release acquired from Atmos' Mississippi Division. Contract No. 911193 provided for the delivery of gas from Texas Eastern Zone M-1, had an MDQ of 15,000 Dth/day, and provided for the delivery of 5,000 Dth/day to the Company's Middle Tennessee service territory and 10,000 Dth/day to the East Tennessee/Virginia service territory. Gas supplies delivered under Contract No. 911193 to the East Tennessee/Virginia service territory were subsequently delivered to Atmos' city gate by ETNG.

Texas Eastern Rate Schedule FT-1 Contract No. 910800 provided for the delivery of gas to Atmos' Middle Tennessee service territory. Contract No. 910800 was a backhaul arrangement providing for the delivery of gas withdrawn under Atmos' subsequently discussed EGTS storage arrangement. The EGTS storage facility under contract to Atmos is located in Texas Eastern Zone M-2 (see Section 2.1.7). Texas Eastern Zone M-2 is located in the Marcellus Shale production region in the Appalachian region which is currently the most prolific gas producing region in the United States. Marcellus Shale produced supplies are generally lower cost than Gulf Coast production region gas supplies. When not required to deliver supplies withdrawn from EGTS storage, Atmos used Texas Eastern Contract No. 910800 to deliver Marcellus Shale purchased supplies to its distribution system. The MDQ under Texas Eastern Contract No. 910800 was 5,000 Dth/day.

Figure 4. Texas Eastern Rate Zones



Texas Eastern Contract No. 400244 provided for bundled storage and transportation service under Texas Eastern Rate Schedule SS-1. The maximum daily withdrawal quantity (MDWQ) under the SS-1 contract was 3,000 Dth/day, and the maximum winter season withdrawal quantity was 180,000 Dth. Contract No. 400244 provided service to the Company's Middle Tennessee service territory. Marcellus Shale supplies were purchased by Atmos to fill SS-1 storage.

2.1.4 Tennessee Gas Pipeline

The TGP system originates in the Gulf Coast natural gas production region and extends to New England. In the production region, the TGP system consists of three primary transmission lines, referred to as the 100, 500, and 800 Legs. The TGP system is also divided into eight zones (Zones 0, L, and 1-6) for rate purposes. The State of Texas is designed as Zone 0, Zone L consists largely of the State of Louisiana, and Zone 1 extends from the Texas border with Northern Louisiana to the Kentucky/Tennessee border. A map of the TGP system is provided in Figure 5. Gas supplies purchased for delivery on TGP are delivered to Atmos by ETNG in TGP Zone 1 at the Lobelville and Ridgetop receipt points. These receipt points are identified in Figure 6 which is presented in Section 2.1.6.

During the review period, Atmos maintained two firm transportation service arrangements with TGP under Rate Schedule FT-A to serve the Company's East Tennessee service territory (Contract Nos. 69218 and 92725). FT-A Contract No. 69218 provided for the delivery of Gulf Coast supplies to ETNG and had a review period MDQ of 34,000 Dth/day through September 30, 2019, at which time the MDQ increased to 35,000 Dth/day. The Company's receipt point capacity under TGP Contract No. 69218 at the conclusion of the review period was subdivided by zone and leg, as shown in Table 1.

Figure 5. Tennessee Gas Pipeline System Map

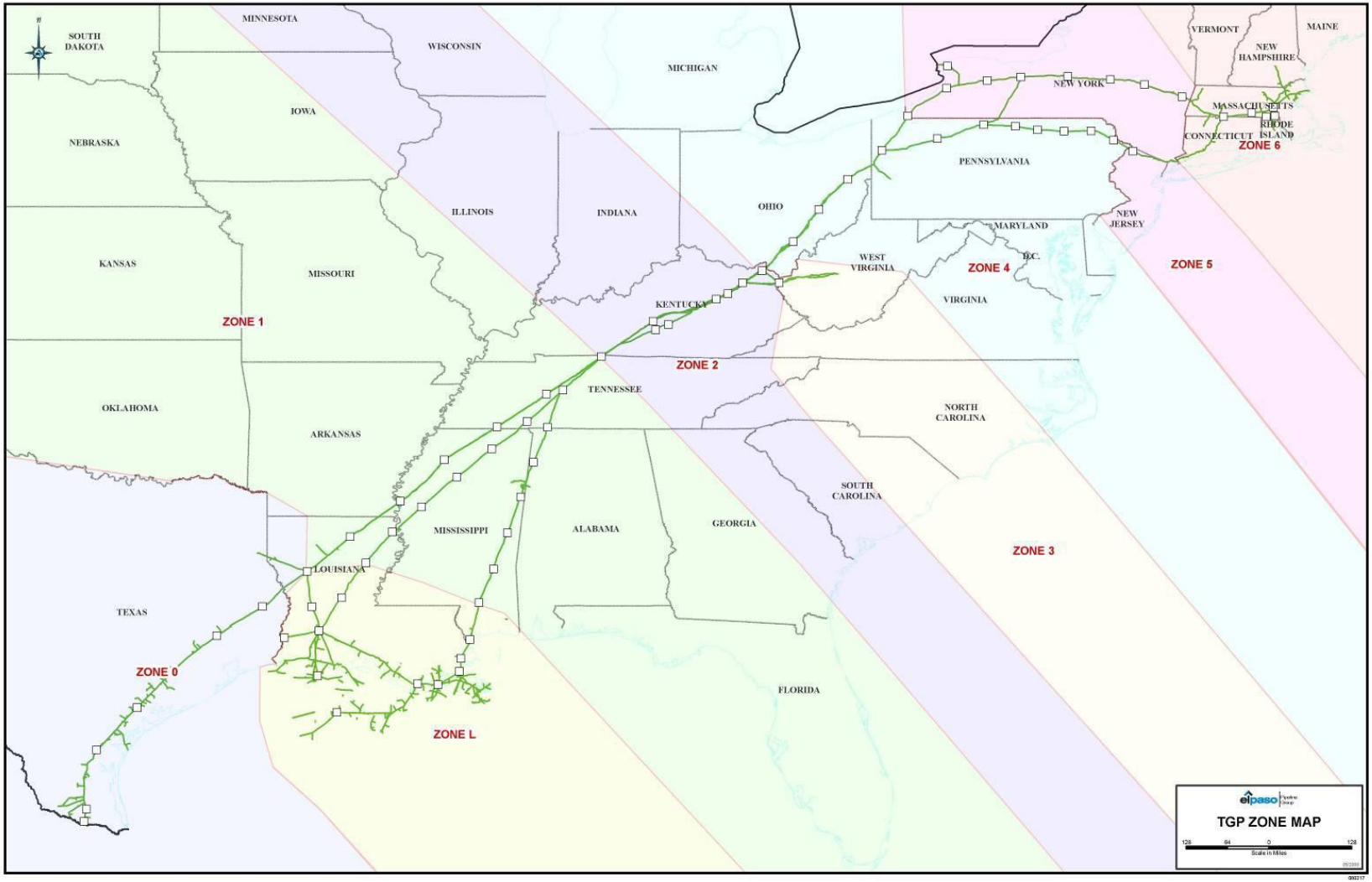


Table 1. Tennessee Gas Pipeline Capacity, Contract No. 69218	
Zone – Leg	**MDQ (Dth)**
Zone 0 – 100 Leg	15,000
Zone L/1 – 500 Leg	9,000
Zone L/1 – 800 Leg	7,500
Zone 1 – 100 Leg	2,500
Zone L/1 – 800 Leg	1,000
Total:	**35,000**

TGP FT-A Contract No. 92725 also provided for the delivery of Gulf Coast supplies to ETNG. The MDQ associated with Contract No. 92725 was 10,000 Dth/day, with receipt points of 5,000 Dth/day in TGP Zone 0 – 100 Leg and 5,000 Dth/day in TGP Zone L - 500 Leg. During the review period, Atmos released a 5,000 Dth segment of the TGP Zone 0 - 100 Leg capacity to its Louisiana Division and a 5,000 Dth segment of the TGP Zone L - 500 Leg capacity to its Mississippi Division. Atmos used the unreleased segments under Contract No. 92725 to deliver gas supplies purchased in TGP Zone 1 to ETNG.

Atmos maintained a market area firm storage service arrangement with TGP that provided for no-notice service under Rate Schedule FS-MA (Contract No. 3981). Gas was delivered to and from storage under Atmos' FT-A firm transportation arrangements with TGP. The MDWQ associated with Contract No. 3981 was 10,000 Dth/day, and the maximum winter season withdrawal entitlement was 417,837 Dth.

Atmos also maintained a TGP production area firm storage service arrangement under Rate Schedule FS-PA (Contract No. 309552) that provided for no-notice service. The MDWQ and maximum winter seasonal withdrawal entitlement under Contract No. 309552 was identical to those under FS-MA Contract No. 3981, and gas was also delivered to and from storage under Atmos' FT-A firm transportation arrangements with TGP.

2.1.5 Southern Natural Gas Company

The SONAT system originates in the Gulf Coast production region in Louisiana and extends across the southeast United States. Atmos maintained a firm transportation service arrangement with SONAT under Rate Schedule FT during the review period (Contract No. FSNG239). This arrangement provided for the upstream delivery of Gulf Coast-sourced supplies to ETNG for subsequent delivery to the Company's East Tennessee service territory. The MDQ associated with the Company's SONAT FT arrangement was 7,658 Dth/day.

2.1.6 East Tennessee Natural Gas

ETNG consists of two mainline systems in Central Tennessee that converge near Knoxville and extend to an area just south of Roanoke, Virginia. ETNG provides for, among other things, the delivery of upstream gas supplies delivered under certain Atmos firm transportation contracts with Columbia Gulf, Texas Eastern, TGP, and SONAT to Atmos' Middle and East

Tennessee service territories. ETNG is also interconnected with Transcontinental Gas Pipe Line, LLC (Transco) at Cascade Creek in Rockingham County, North Carolina. A map of the ETNG system is presented in Figure 6.

During the review period, Atmos maintained 12 arrangements for firm transportation service with ETNG. Of these 12 arrangements, eight were under Rate Schedule FT-A, three were under Rate Schedule FT-APT, and one was under Rate Schedule FT-ART. Rate Schedule FT-APT was established for the firm transportation services made available as a result of ETNG's incremental Patriot expansion project which received Federal Energy Regulatory Commission (FERC) approval in 2002. The firm transportation services provided under Rate Schedules FT-A and FT-APT are the same but the demand changes under Rate FT-APT were higher, reflecting the higher incremental costs associated with the Patriot expansion project facilities. Since the conclusion of the review period, FERC approved a settlement in Docket No. RP20-980 which provided for roll-in rate treatment of Rate FT-APT and FT-ART with Rate FT-A.

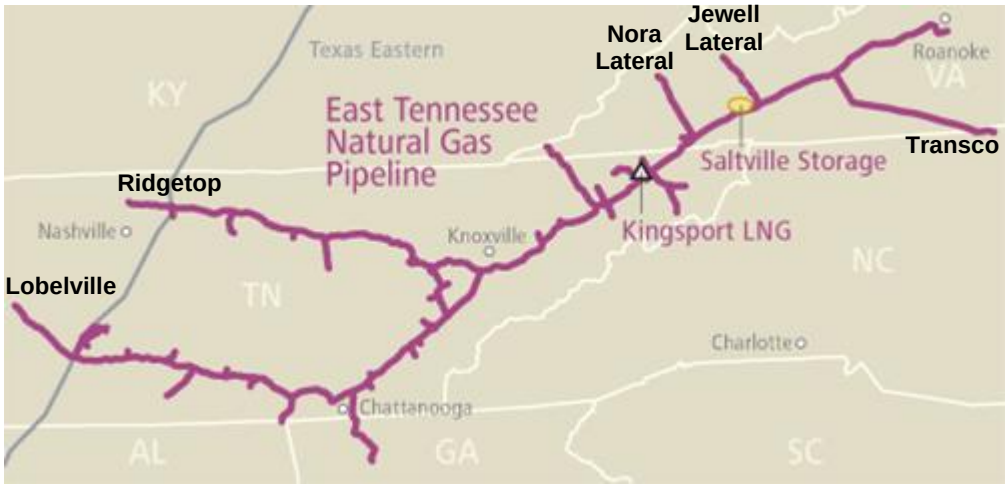
The MDQ for each of Atmos' 12 ETNG contracts at the commencement and conclusion of the review period are summarized in Table 2. Also identified is the upstream pipeline initially delivering gas to ETNG under each arrangement or the upstream receipt point. Additional relevant information for certain contracts identified in Table 2 is subsequently discussed. All of the contracts identified in Table 2 provided for the delivery of gas to Atmos' East Tennessee service territory with the exception of FT-A Contract No. 410660 which provided for the delivery of gas to Atmos' Middle Tennessee service territory.

Table 2. East Tennessee Natural Gas – Summary of Review Period Firm Transportation Contracts

Rate Schedule	Contract No.	Service Territory	Maximum Daily Contract Quantity (Dth)		End of Review Period Upstream Pipeline or Receipt Point (Dth)
			Begin	End	
FT-A	30774	East Tennessee	84,588	86,088	43,521 TGP 10,000 Texas Eastern 12,567 Nora Lateral 20,000 Columbia Gulf
FT-A	30777	East Tennessee	36,633	36,633	ETNG LNGS Storage
FT-A	410243	East Tennessee	1,500	0	Consolidated with Contract No. 30774
FT-A	410529	East Tennessee	500	0	Contract Expired
FT-A	410542	East Tennessee	2,500	0	Consolidated with Contract No. 410549
FT-A	410549	East Tennessee	823	3,323	Saltville Storage
FT-A	410650	East Tennessee	0[1]	0[1]	Contract Expired
FT-A	410660	Middle Tennessee	0	1,500	Texas Eastern
FT-ART	34538	East Tennessee	27,500	27,500	4,000 Nora Lateral 7,500 SONAT 10,000 Jewell Lateral 6,000 Saltville Storage
FT-APT	410274	East Tennessee	1,500	1,500	Saltville Storage
FT-APT	410334		20,000	20,000	
FT-APT	410527	East Tennessee	1,600	1,600	Transco
Total:			**177,144**	**178,144**	

[1] Contract MDQ was 1,000 Dth, effective for the period December 7, 2018 – February 28, 2019.

Figure 6. East Tennessee Natural Gas System Map



As indicated in Table 2, ETNG FT-A Contract No. 30774 provided for the delivery of gas from TGP, Texas Eastern, and Columbia Gulf to Atmos' East Tennessee service territory. The contract also provided capacity for the delivery of gas on ETNG's Nora Lateral, located in Dickenson County in southwest Virginia (see Figure 6 above). Atmos purchased gas from its Asset Manager on a delivered-to-Nora Lateral basis during the review period. At the commencement of the audit period, the MDQ associated with Contract No. 30774 was 84,588 Dth/day. The MDQ was increased by 1,500 Dth/day when Contract No. 410243 with an MDQ of 1,500 Dth/day expired on March 31, 2019.

Atmos purchased winter-period liquefied natural gas (LNG) unbundled storage service from ETNG under Rate Schedule LNGS (Liquefied Natural Gas Storage Service) to serve the East Tennessee service territory during the review period. Atmos maintained ETNG FT-A Contract No. 30777 to provide for the delivery of gas from the LNG facility. The ETNG LNG facility is located near Kingsport, Tennessee. Contract No. 30777 only provided for service during the winter months of November through March. The MDQ associated with Contract No. 30777 was 36,633 Dth/day. The MDWQ associated with the ETNG LNGS arrangement (Contract No. 33245) was 52,633 Dth/day and the maximum winter season withdrawal entitlement was 339,900 Dth.

ETNG FT-A Contract No. 410529 had an MDQ of 500 Dth/day and expired on April 30, 2019. ETNG FT-A Contract Nos. 410542 and 410549, with initial MDQs of 2,500 and 823 Dth/day, respectively, both provided for the delivery of gas from the Saltville Storage facility located in southwest Virginia (see Figure 6). The two contracts were consolidated under Contract No. 410549 during the review period with a combined total MDQ of 3,323 Dth/day. Atmos' Saltville Storage arrangement is discussed in greater detail in Section 2.1.8.

ETNG FT-A Contract No. 410650 had an MDQ of 1,000 Dth and served the East Tennessee service territory. The contract provided for the delivery of supplies from TGP at Lobelville, and had a contract term of December 7, 2018 through February 28, 2019.

ETNG FT-A Contract No. 410660, with an MDQ of 1,500 Dth/day, serves the Middle Tennessee service territory. Gas supplies purchased for delivery under this arrangement are delivered to ETNG by TGP.

ETNG FT-ART Contract No. 34538 provided for the delivery of up to 27,500 Dth/day to the East Tennessee service territory. This included the delivery of 7,500 Dth/day from SONAT under Contract No. FSNG239; 4,000 Dth/day for the delivery of gas supplies purchased from Atmos' Asset Manager delivered to the interconnect of the ETNG mainline and Nora Lateral interconnect (see Figure 6); 6,000 Dth/day for the delivery of gas withdrawn from Saltville Storage; and 10,000 Dth/day for the delivery of gas on ETNG's Jewell Ridge Lateral in Tazewell and Smyth counties, Virginia that was purchased from Atmos' Asset Manager on a delivered-to-Jewell Ridge lateral basis (see Figure 6).

ETNG FT-APT Contract Nos. 410274 and 410334 provided for the delivery of gas withdrawn from Saltville Storage to Atmos' East Tennessee service territory. The MDQs associated with these arrangements were 1,500 Dth/day and 20,000 Dth/day, respectively.

ETNG FT-APT Contract No. 410527 provided for the delivery of Transco-sourced gas supplies purchased by Atmos from its Asset Manager on a delivered-to-ETNG basis at the interconnect of ETNG and Transco in Cascade Creek, North Carolina (see Figure 6). The MDQ associated with Contract No. 410527 was 1,600 Dth/day.

2.1.7 Eastern Gas Transmission and Storage

The EGTS system is located in the Appalachia region. Atmos purchased unbundled storage service from EGTS under Rate Schedule GSS (General Storage Service) to serve the Company's Middle Tennessee service territory during the review period (Contract No. 600047). The EGTS storage facility is located in Oakford, Pennsylvania and gas withdrawn from GSS storage is delivered to Atmos by backhaul under Texas Eastern FT-1 Contract No. 910800. The MDWQ under the EGTS GSS arrangement was 4,880 Dth/day and the maximum winter season withdrawal entitlement was 411,765 Dth.

2.1.8 Saltville Gas Storage Company

Saltville Storage is owned and operated by Enbridge, Inc., which also owns ETNG and Texas Eastern. The Saltville Storage facility is located in Smyth County, Virginia and is directly connected to ETNG (see Figure 6). Atmos initially purchased unbundled storage service under three arrangements with Saltville Storage under Rate Schedule FSS during the review period (Contract Nos. 420009, 420040, and 420099). The initial service entitlements under Contract Nos. 420009 and 420099 were subsequently consolidated under Contract No. 420009 during the audit period. The combined MDWQ associated with Saltville Storage Contract No. 420009 was 35,000 Dth/day. The MDWQ associated with Contract No. 420040 was 7,000 Dth/day. The total maximum winter season withdrawal entitlement under these arrangements was 413,500 Dth. Gas withdrawn from Saltville Storage was generally delivered to Atmos under ETNG FT-A Contract No. 410549, FT-ART Contract No. 34538, FT-APT Contract Nos. 410274 and 410334.

2.1.9 Barnsley Storage

The Barnsley Storage field, located in Hopkins County, Kentucky, is owned and operated by Atmos Pipeline & Storage, LLC, a wholly-owned subsidiary of Atmos Energy Holdings, Inc. The costs associated with owning and operating Barnsley Storage are allocated to Atmos and included in the Company's base rates. The MDWQ from Barnsley Storage was 27,000 Dth/day and the maximum winter season withdrawal entitlement was 1,300,000 Dth. Barnsley Storage is not physically interconnected with the Company's distribution systems. Gas withdrawn from Barnsley Storage was delivered to Atmos through various exchange arrangements provided under the Company's AMAs. That is, gas withdrawn from Barnsley Storage was delivered to other markets served by the Asset Manager and like quantities were delivered to Atmos to serve the Company's West and Middle Tennessee service territories. Exchange deliveries may be delivered to Atmos by Texas Gas, Columbia Gulf, and Texas Eastern.

2.1.10 Monroe Gas Storage Company

The Monroe Storage facility is located in Monroe County, Missouri. Atmos purchased storage service from Monroe Storage during the review period under a contract with an MDWQ of 10,360 Dth and a maximum winter season withdrawal entitlement of 350,000 Dth. Gas supplies withdrawn from Monroe Storage can be delivered to Atmos' East Tennessee service territory by TGP and Texas Eastern and subsequently ETNG, and directly to Atmos' Middle Tennessee service territory by Texas Eastern.

2.1.11 Jefferson Island Storage & Hub

The Jefferson Island Storage facility is located in Iberia Parish, Louisiana. Atmos purchased storage service from Jefferson Island Storage during the review period under a contract with an MDWQ of 25,000 Dth and a maximum winter season withdrawal entitlement of 250,000 Dth. Gas supplies withdrawn from Jefferson Island Storage can be delivered to Atmos' East Tennessee service territory by TGP and Columbia Gulf and subsequently ETNG, and directly to Atmos' Middle Tennessee service territory by Columbia Gulf.

2.2 Asset Management Agreements

Atmos operated under two AMAs during the review period. The terms and conditions for service under both AMAs were similar. Both AMAs were selected through an RFP process. In Docket No. 05-00253, the TRA approved RFP procedures for Atmos' selection of an Asset Manager.

The term of the first review period AMA was April 1, 2016 through March 31, 2019, and the AMA was awarded to [redacted] Atmos filed for TRA approval of the first AMA on January 20, 2016 and received TRA approval in an order issued April 18, 2016. Effective January 3, 2017, [redacted]

The second AMA was awarded [redacted]. The term of the second review period AMA was April 1, 2019 through March 31, 2022. Atmos filed for TPUC approval of its AMA [redacted] on May 15, 2019. At that time, the Company's tariff required it to file for TPUC approval of a new AMA no later than December 1 of each year for an AMA to be implemented the following April 1. In its filing, the Company indicated that it believed that, since the AMA was not with an affiliate, the need to file with the TPUC for approval of the AMA before the effective date was no longer required. Nevertheless, the TPUC approved the AMA [redacted] on October 7, 2019. [redacted]

Under the review period AMAs, when provided for under the service provider's tariff, Atmos released its firm transportation and storage service contracts, or assets, to the Asset Manager at zero cost. For those service providers whose tariffs did not provide for the release of the transportation or storage services, the Asset Manager was designated as Atmos' agent, and was responsible for the nomination and scheduling of those services. During the review period, all of Atmos' firm transportation and storage services were released to the Asset Manager except for the Texas Gas no-notice service under Rate Schedule SGT, Barnsley Storage, and Jefferson Island Storage. The AMAs also provided that Atmos would purchase its gas supplies from the Asset Manager. Unlike the AMAs Atmos typically had in place prior to those in effect during the review period, and AMAs typically utilized by gas distribution utilities like Atmos, Atmos was not paid a fee by the Asset Manager for the ability to utilize Atmos' assets and to be Atmos' gas supplier. Instead of being paid a fee by the Asset Manager, the gas supplies purchased by Atmos from the Asset Manager were generally priced at a discount to average market (index) prices. Exeter notes that, however, the AMA Atmos had in effect for the period April 1, 2015 through March 31, 2016 also provided for the purchase of gas supplies at discounted prices rather than the payment of a fee by the Asset Manager. This AMA was not reviewed in Exeter's 2015 PBRM Report because it was not in effect during the applicable review period.

In the natural gas industry, gas supply commodity purchases are generally categorized as either monthly baseload or daily purchases. Monthly baseload purchases are generally arranged on a monthly basis, and the same quantity of gas is delivered on each day during the month. All other purchases are generally considered daily purchases and, as the term implies, are typically made on a day-to-day basis. Frequently, daily purchases are made that flow for several consecutive days. Gas industry publications report average market prices, referred to as "index prices," on a monthly basis for monthly baseload purchases and on a daily basis for daily purchases. The industry standard publication utilized for price comparison purposes for monthly baseload purchases is S&P Global Platts' *Inside FERC's Gas Market Report* (*Inside FERC*). The industry standard publication utilized for price comparison purposes for daily purchases is S&P Global Platts' *Gas Daily* (*Gas Daily*). These publications were used to price Atmos' gas supply purchases under its review period AMAs. The discount to index prices for AMA gas supply purchases is discussed in greater detail in Section 2.3 of this Report.

Under the AMAs, Atmos determined how its pipeline transportation and storage assets should be used on a daily basis to meet its customers' gas supply requirements (referred to as "virtual

dispatch"). On a daily basis, the Asset Manager was entitled to use Atmos' assets in the manner determined by virtual dispatch, use the assigned assets in a different manner, or use other assets that the Asset Manager had available to satisfy Atmos' daily gas supply requirements so long as the Asset Manager met Atmos' daily requirements. The billing arrangements under the AMAs provided that Atmos would continue to be responsible for the demand charges associated with the released assets. The Asset Manager was billed for the variable transportation and storage charges incurred under the released assets. Those charges incurred by the Asset Manager to provide service to Atmos pursuant to virtual dispatch were billed to Atmos by the Asset Manager.

2.3 AMA Gas Supply and Delivery Arrangements

As stated above, Atmos purchased its gas supplies from the Asset Manager under AMAs pursuant to Atmos' virtual dispatch instructions. Supplies purchased utilizing the assets released to the Asset Manager were based on index prices for the gas production location accessed by the released firm transportation assets, generally adjusted for the previously indicated AMA discount. However, a commodity adder was applicable to certain purchases. For example, gas supplies nominated for purchase by Atmos through virtual dispatch in Texas Gas Zone 1 were priced based on Texas Gas Zone 1 published index prices. Index pricing applied to purchases delivered to Atmos under its Texas Gas SGT and STF, Columbia firm transportation Gulf FTS-1, Texas Eastern FT-1, TGP FT-A, and SONAT FT firm transportation arrangements. The index price location utilized to price Atmos' gas supply purchases under the AMAs and the applicable commodity adders and discounts are discussed in greater detail later in this section of the Report.

In addition to upstream purchases, Atmos also purchased gas supplies from its Asset Manager on a delivered-to-ETNG and city gate basis during the review period. For these purchases, the Asset Manager arranged for the delivery of gas supplies using assets other than those released to it by Atmos. The delivered-to-ETNG arrangements included an arrangement that provided for the delivery of 16,567 Dth/day into ETNG's Nora Lateral, an arrangement that provided for the delivery of 10,000 Dth/day into ETNG's Jewell Lateral, an arrangement that provided for the delivery of 1,600 Dth/day into ETNG's interconnect with Transco at Cascade Creek during the months November – March, and an arrangement that provided for the delivery of 7,341 Dth/day into ETNG's interconnect with TGP at Ridgetop during the months of November – March. The arrangement providing for deliveries to TGP at Ridgetop was only in place under the AMA which was effective April 1, 2016 through March 31, 2019.

In addition to these delivered-to-ETNG supply arrangements which served the East Tennessee service territory, the AMAs included a peak winter period (December through February) arrangement that provided for the delivery of up to 23,000 Dth/day of Columbia Gulf and Texas Eastern-sourced gas supplies directly to the Middle Tennessee service territory. Purchases under this arrangement were priced based on a production area index price applicable for Gulf Coast gas supplies accessed by Columbia Gulf or Texas Eastern, as applicable, plus a commodity adder.

Atmos' review period gas supply arrangements under the AMAs also included arrangements that provided for the purchase and delivery of baseload gas supplies to fill EGTS GSS and Barnsley Storage during the summer period (April through October). The EGTS GSS storage fill arrangement had an MDQ of 2,288 Dth/day, and the gas purchased was priced based on EGTS Appalachia published index prices less a commodity discount. The Barnsley Storage fill arrangement was for 12,250 Dth/day, and the gas purchased was priced based on Texas Gas index prices less a discount which varied by the service territory served. Texas Gas is the only physical interconnect with Barnsley Storage. The Barnsley Storage fill arrangement had an MDQ of 5,467 Dth/day.

Finally, as indicated previously in Section 2.1.9, gas supplies withdrawn from Barnsley Storage cannot physically be delivered to any of the Company's Tennessee service territories. Under the AMA, these withdrawals were delivered to the West or Middle Tennessee service territories by displacement (exchange). The AMA provided for Barnsley Storage exchange deliveries by either Texas Gas, Columbia Gulf, or Texas Eastern. Atmos was charged a variable charge of $0.05/Dth for the delivery of Barnsley Storage withdrawals.

Table 3 summarizes the Company's interstate pipeline upstream and direct transportation, storage, and AMA delivery arrangements by service territory at the conclusion of the review period. Table 4 summarizes the index price locations and commodity discounts and adders that were applicable under the review period AMAs. Exeter's review found the index locations utilized to price gas supply purchases under the AMA to be reasonable and appropriate.

Table 3. Summary of Capacity and Gas Supply Delivery Arrangements, 2019-2020 Winter Season (Dth)

Pipeline/Provider – Service	Contract No.	Tennessee Territory	MDQ Winter	MDQ Summer	Winter Entitlement	Annual Entitlement	Contract Expiration
CITY GATE RESOURCES							
East Tennessee Natural Gas							
Firm Transportation (FT-A)	30774	East[1]	86,088	86,088	12,999,288	31,422,120	3/31/2024
Firm Transportation (FT-A)	30777	East[1]	36,633	0	339,900	0	3/31/2024
Firm Transportation (FT-A)	410549	East[1]	3,323	3,323	501,773	1,212,895	3/31/2026
Firm Transportation (FT-A)	410660	Middle	1,500	1,500	226,500	547,500	3/31/2022
Firm Transportation (FT-ART)	34538	East[1]	27,500	27,500	3,306,500	7,847,500	3/31/2022
Firm Transportation (FT-APT)	410274	East[1]	1,500	1,500	15,000	547,500	10/31/2021
Firm Transportation (FT-APT)	410334	East[1]	20,000	20,000	200,000	7,300,00	4/30/2025
Firm Transportation (FT-APT)	410527	East[1]	1,600	1,600	241,600	584,000	3/31/2025
Texas Eastern Transmission							
Firm Transportation (FT-1)	910800	Middle	5,000	5,000	755,000	1,825,000	3/31/2021
Firm Transportation (FT-1)	911195	Middle	5,000	5,000	755,000	1,825,000	3/31/2021
Firm Transportation (FT-1)	911193MTN	Middle	5,000	5,000	755,000	1,825,000	3/31/2020
Storage Service (SS-1)	400244	Middle	3,000	3,000	180,000	0	3/31/2021
Columbia Gulf Transmission							
Firm Transportation (FTS-1)	23188	Middle	15,000	15,000	2,265,000	5,475,000	3/31/2024
Firm Transportation (FTS-1)	23841	Middle	22,500	22,500	3,397,500	8,212,500	3/31/2022
Firm Transportation (FTS-1)	142156	Middle	12,500	12,500	1,887,500	4,562,500	3/31/2022
Firm Transportation (FTS-1)	168971	Middle	10,000	10,000	1,510,000	3,650,000	3/31/2024
Firm Transportation (FTS-1)	211462	Middle	12,000	12,000	1,812,000	4,380,000	3/31/2024
Texas Gas Transmission							
No-Notice Transportation (SGT)	G0750	West	7,495	4,120	600,013	1,242,117	4/1/2024
Firm Transportation (STF)	21483	West	1,000	250	151,000	258,000	3/31/2022
Asset Manager							
Delivered Columbia Gulf/Texas Eastern	AMA	Middle	23,000	0	2,070,000	2,070,000	3/31/2022
Barnsley Exchange (Columbia Gulf, Texas Gas, Texas Eastern)	AMA	Middle/West	27,000	0	1,300,000	0	3/31/2022
Total City Gate Resources:			**326,639**	**235,881**	**35,268,574**	**84,786,632**	
UPSTREAM RESOURCES							
East Tennessee Natural Gas							
Storage Service (LNGS)	33245	East[1]	52,633	0	339,000	0	3/31/2024
Tennessee Gas Pipeline							
Firm Transportation (FT-A)	69218	East[1]	35,000	35,000	5,285,000	12,775,000	3/31/2025
Firm Transportation (FT-A)	92725	East[1]	10,000	10,000	1,510,000	3,650,000	3/31/2025
Storage Service (FS-MA)	3981	East[1]	10,000	0	417,837	0	3/31/2025
Storage Service (FS-PA)	309552	East[1]	10,000	0	417,837	0	3/31/2025
Southern Natural Gas							
Firm Transportation (FT)	FSNG239/450438	East[1]	7,658	7,658	1,156,358	2,795,170	8/31/2022
Columbia Gulf Transmission							
Firm Transportation (FTS-1)	158165	East[1]	10,000	10,000	1,510,000	3,650,000	3/31/2022
Firm Transportation (FTS-1)	215235	East[1]	10,000	10,000	1,510,000	3,650,000	3/31/2022
Texas Eastern Transmission							
Firm Transportation (FT-1)	911193ETN	East[1]	10,000	10,000	1,510,000	3,650,000	3/31/2021
Eastern Gas Transmission and Storage							
Storage Service (GSS)	600047	Middle	4,880	0	411,765	0	3/31/2026
Monroe Storage							
Storage Service (FSS)	ATMOS00325S	Middle/East[1]	10,360	0	350,000	0	3/31/2024
Saltsville Storage							
Storage Service	420009	East[1]	35,000	0	343,500	0	4/30/2024
Storage Service	420040	East[1]	7,000	0	70,000	0	4/30/2022
Barnsley Storage							
Storage Service	UCG-10924	Middle/West	27,000	0	1,300,000	0	12/31/2021
Jefferson Island Storage							
Storage Service	AMD-311JF-001	Middle/East[1]	25,000	0	250,000	0	3/31/2022
Asset Manager							
Nora Lateral into ETNG	AMA	East[1]	16,567	16,567	2,501,617	6,046,955	3/31/2022
Jewell Lateral into ETNG	AMA	East[1]	10,000	10,000	1,510,000	3,650,000	3/31/2022
Transco into ETNG	AMA	East[1]	1,600	0	241,600	241,600	3/31/2022
Barnsley Injection	AMA	Middle/West	0	12,250	1,300,000	0	3/31/2022
EGTS GSS Storage Injection	AMA	Middle	0	2,288	411,765	0	3/31/2022
Total Upstream Resources:			**317,698**	**123,763**	**22,346,279**	**40,108,725**	

[1] Allocated 69% to the Tennessee jurisdiction and 31% to the Virginia jurisdiction.

Table 4. Summary of Asset Management Agreement – Gas Supply Index Pricing Provisions (Dth)

Svc. Terr.	Pipeline/ Provider	Service	Contract No.	Monthly Pricing - *Inside FERC*[1] AMA 1	Monthly Pricing - *Inside FERC*[1] AMA 2	Daily Pricing - *Gas Daily*[1] AMA 1	Daily Pricing - *Gas Daily*[1] AMA 2
West	Texas Gas Transmission	Firm Transportation SGT	G0750	[redacted]	[redacted]	[redacted]	[redacted]
		Firm Transportation STF	21483				
Middle	Columbia Gulf Transmission	Firm Transportation FTS-1	23188	[redacted]	[redacted]	[redacted]	[redacted]
			23841				
			1168971				
			1211462				
			142156				
Middle	Texas Eastern Transmission	Firm Transportation FT-1	910800	[redacted]	[redacted]	[redacted]	[redacted]
			911195				
			911193MTN				
West Middle	Asset Manager	Barnsley Injection	AMA	[redacted]	[redacted]	Baseload Supply Only	
Middle	Eastern Gas Transmission and Storage	GSS Storage Injection	AMA	[redacted]	[redacted]	Baseload Supply Only	
Middle	Columbia Gulf Transmission / Texas Eastern Transmission	Delivered Supply	AMA	Daily Supply Only		[redacted]	[redacted]
East	Columbia Gulf Transmission	Firm Transportation FTS-1	158165	[redacted]	[redacted]	[redacted]	[redacted]
			215235				
East	Tennessee Gas Pipeline	Firm Transportation FT-A	69218/ 92725	[redacted]	[redacted]	[redacted]	[redacted]
East	Texas Eastern Transmission	Firm Transportation FT-1	911193ETN	[redacted]	[redacted]	[redacted]	[redacted]
East	Southern Natural Gas	Firm Transportation FT	FSNG239/ 450438	[redacted]	[redacted]	[redacted]	
East	Nora/Jewell Lateral into ETNG / TGP into ETNG / Transco into ETNG	Delivered Supply	AMA	[redacted]	[redacted]	[redacted]	[redacted]

[1] Positive amounts are commodity adders; amounts in parentheses are discounts.

2.4 Markets Served by Atmos

Atmos provided firm bundled utility sales service during the review period, and also provided transportation service from its city gates to a customer's premises for those customers who acquire their own gas supplies on the interstate markets and separately arrange for the delivery of those supplies to Atmos' city gates. Table 5 summarizes the number of Atmos customers served and annual throughput by class during the review period. As shown in Table 5, Atmos has been experiencing moderate customer growth. This customer growth has been most significant in the Company's Middle Tennessee service territory.

Table 5. Annual Customers and Throughput by Class, 12 Months ended March 31

	2018	2019	2020
Customers by Class			
Residential	126,507	129,559	132,218
Commercial	16,493	16,669	16,886
Industrial	353	357	355
Public Authority	673	750	794
Compressed Natural Gas	1	1	1
Transportation	124	124	128
Total Customers:	**144,151**	**147,460**	**150,382**
Volumes by Rate Schedule (Dth)			
Residential	7,596,719	8,122,449	7,496,866
Commercial	5,285,053	5,543,578	5,321,633
Industrial	1,526,770	1,912,002	1,680,074
Public Authority	62,579	61,591	54,339
Compressed Natural Gas	3,676	3,253	3,065
Transportation	10,815,428	11,532,232	11,633,723
Total Volumes:	**25,290,225**	**27,175,105**	**26,189,700**

2.5 City Gate Metering Stations

The Scope of Review for this investigation provides for the identification of Atmos' city gate metering stations serving its Tennessee service territories at which the Company receives natural gas from each interstate pipeline and identification of the meters measuring the amount of gas flowing into Atmos' Tennessee service territories from those pipelines. Table 6 identifies Atmos' active city gate meter stations by interstate pipeline, state, and service territory.

Table 6. Interstate Pipeline City Gate Station Meters

Pipeline	State	Service Territory	Meter Number	Meter Name
Texas Gas Transmission	TN	West	1836	Union City Aggregation Meter
Columbia Gulf Transmission	TN	Middle	404901	UCG-Williamson
			405601	UCG-Burwood
			405602	
			405603	
			411701	UCG-Triune Connector
			411702	
			418201	UCG-Governor's Club
Texas Eastern Transmission	TN	Middle	70102	Murfreesboro
			70396	Franklin
			71430	Nolensville
			73025	Williamson
			73076	Columbia
East Tennessee Natural Gas	TN	East	59026	UCG Columbia West
			59027	UCG Morristown
			59028	UCG Johnson City East
			59046	UCG Maryville
			59048	UCG Maryville East
			59049	UCG Greenville
			59050	UCG Johnson City West
			59051	UCG Kingsport South
			59055	UCG Columbia North
			59059	Rockford
			59061	UCG Shelbyville
			59067	UCG Kingsport North
			59070	UCG Elizabethton
			59083	UCG Lynchburg
			59103	UCG Rockford North
			59104	UCG Lynchburg Portable
			59109	UCG Motlow
			59112	UCG Foothills Pointe
			59115	UCG Lowland
			59124	UCG Kingsport Regional
			59125	UCG Morton
			59126	UCG Gray
			59127	UCG Tri Cities
			59128	UCG Miller Park
			59129	UCG Boones Creek
			59145	UCG Maryville West
			59155	United Cities Morristown South
			59169	Mohawk
East Tennessee Natural Gas	TN/VA	East	59002	UCG Bristol
			59071	UCG Blountville
			59074	UCG Bristol North
East Tennessee Natural Gas	VA	East	59010	UCG Blacksburg
			59013	UCG Pulaski
			59022	UCG Radford
			59069	UCG Wytheville
			59075	UCG Marion
			59076	UCG Abingdon West
			59077	UCG Dublin
			59116	UCG Marion East
			59117	UCG Abingdon East
			59119	UCG Glade Springs
			59120	UCG Marion North
			59121	UCG Chilhowie
			59122	UCG Rural Retreat
			59130	UCG Abingdon
			59185	UCG Glade Highlands
			59193	UCG Progress Park Wythe Co.
			59247	NEW Radford East

3. Performance Based Ratemaking Mechanism Tariff Rider

Section 3 of Exeter's Report summarizes and evaluates Atmos' gas procurement activities and performance under the Performance Based Ratemaking Mechanism Tariff Rider. The PBRM is designed to encourage the Company to perform its gas purchasing activities at minimum cost, consistent with efficient operations and service reliability. The PBRM replaces the reasonableness or prudence review of the Company's gas purchasing activities overseen by the TPUC in accordance with Rule 1220-4-7-.05, Audit of Prudence of Gas Purchases. A complete copy of Atmos' current PBRM tariff is include as Appendix B to this report.

Section 3.1 describes the structure of the PBRM. Sections 3.2 through 3.5 discuss Atmos' review period performance under each of the four components of the PBRM. Atmos' review period PBRM savings calculations are addressed in Section 3.6. Finally, discussed and evaluated in Section 3.7 is Atmos' decision not to engage in hedging activity to mitigate the volatility of its gas cost rates during the review period.

3.1 PBRM Structure

The PBRM consists of four components:

- Gas Procurement Incentive Mechanism (GPIM)
- Capacity Management Incentive Mechanism (CMIM)
- Avoided Cost Incentive Mechanism (ACIM)
- Off-System Sales Revenue Incentive Mechanism (OSIM)

The GPIM establishes a predefined benchmark index to which Atmos' commodity cost of gas is compared. It also addresses the use of financial instruments or private contracts in managing gas costs. For commodity costs, on a monthly basis, Atmos' commodity cost of gas is compared to a benchmark amount. The benchmark amount is determined by multiplying actual monthly and daily purchase quantities in a month by the appropriate monthly and daily published index prices. The GPIM provides for a 75% sales customer and 25% Atmos sharing of the difference between actual and benchmark costs.

Under the CMIM, to the extent Atmos is able to release transportation or storage capacity, the associated revenues are shared by Atmos' sales customers and Atmos on a 75% / 25% basis, respectively. The CMIM also addresses the sharing of AMA fees which are shared between sales customers and Atmos on a 90% / 10% basis, respectively.

The ACIM is designed to encourage Atmos to explore ways to reduce upstream fixed and variable capacity costs associated with the transportation of gas supplies. Avoided costs can be achieved through delivered services, transportation discounts obtained from pipelines, the acquisition of discounted released capacity, variation from an existing transportation delivery path, or the acquisition of seasonal capacity that avoids year-round demand charges.

Under the ACIM, Avoided Costs are equal to Total Benchmark Transportation Cost less Total Actual Transportation Cost. Total Benchmark Transportation Cost is equal to the total demand and variable transportation costs to purchase transportation services for the Company's peak

day requirement plus reserve margin at maximum FERC tariff rates using the Benchmark Path. The initial Benchmark Path is the path followed by Atmos' contracts set forth in the Settlement Agreement in Docket No. 16-00028. If Atmos changes the path or capacity on any of the contracts that form the Benchmark Path, then one year from the effective date of the change, the path and capacity from the new contract will become part of the Benchmark Path. During that one-year period, savings will be determined by comparing the actual transportation cost of the new contract with the cost using the path for the old contract (priced at maximum FERC tariff rates for the old contract's path); provided, however, that if the total capacity of the new contract exceeds that of the old contract, then the old contract's path will be used for comparison only up to the capacity of the old contract, and above that capacity, the new contract's path will be used for comparison. Following that one-year period, savings on the new contract will be determined by comparing the actual transportation cost for the new contract against the cost for the new contract's path and capacity priced at maximum FERC tariff rates. The capacity amounts in the Benchmark Path may be adjusted by the Company to account for any change in the Company's peak-day requirement plus reserve margin, with such changes to be filed no later than 60 days after such adjustment. Resulting changes to the Benchmark Path shall become effective coincident with the effective date of the incremental transportation agreement, and the actual path and capacity of the incremental transportation agreement will become part of the Benchmark Path. Total Actual Transportation Cost equals the Company's actual annual total demand and variable transportation costs. For avoidance of doubt, whenever savings are calculated under the ACIM, the benchmark price used for comparison will always be the maximum FERC tariff rate. ACIM savings are shared between sales customers and Atmos on an 85% / 15% basis, respectively.

The OSIM is designed to encourage the Company to generate revenue from the off-system sale of gas supplies. The net margins on off-system sales are determined based on published index prices and are shared between sales customers and the Company on a 75% / 25% basis, respectively. Atmos' total share of savings under the PBRM are capped at $2.0 million per year. Atmos' share of PBRM savings was limited by the $2.0 million cap during each year reviewed in this Report.

An Incentive Plan Account Filing (IPA Filing) is submitted by Atmos to the TPUC for each Plan Year. TPUC Staff audits each IPA Filing and presents its findings in a Compliance Audit Report (Audit Report). TPUC Staff's Audit Reports for the review period identified no material findings. Table 7 summarizes Atmos' performance under the PBRM during the review period.

Table 7. Detail of Review Period Performance Based Ratemaking Mechanism Results				
	Year Ended March 31			
	2018	2019	2020	Total
Incentive Mechanism Savings				
Gas Procurement	[redacted]	[redacted]	[redacted]	[redacted]
Capacity Management	[redacted]	[redacted]	[redacted]	[redacted]
Avoided Cost	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Sales	0	0	0	**0**
Total:	**$12,440,823**	**$12,394,003**	**$11,097,391**	**$35,932,217**
Savings Allocation				
Ratepayers				
Gas Procurement (75%)	[redacted]	[redacted]	[redacted]	[redacted]
Capacity Management (75%)[1]	[redacted]	[redacted]	[redacted]	[redacted]
Avoided Cost (85%)	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Sales (85%)	0	0	0	**0**
Subtotal:	*10,169,263*	*10,146,607*	*9,059,734*	***29,375,604***
Cap Adjustment	271,560	247,395	37,656	**556,611**
Total Adjusted Ratepayers:	**$10,440,823**	**$10,394,002**	**$9,097,390**	**$29,932,215**
Company				
Gas Procurement (25%)	[redacted]	[redacted]	[redacted]	[redacted]
Capacity Management (25%)[1]	[redacted]	[redacted]	[redacted]	[redacted]
Avoided Cost (15%)	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Sales (15%)	0	0	0	**0**
Subtotal:	*$2,271,560*	*$2,247,395*	*$2,037,656*	***$6,556,611***
Cap Adjustment	271,560	247,395	37,656	**556,611**
Total Adjusted Company:	**$2,000,000**	**$2,000,000**	**$2,000,000**	**$6,000,000**
Total Savings Allocation:	**$12,440,823**	**$12,394,002**	**$11,097,390**	**$35,932,215**

[1] All review period CMIM savings were attributable to the release of transportation capacity and are shared between sales customers and Atmos on a 75% / 25% basis, respectively. No AMA fees, which are shared on a 90% / 10% customer/Atmos basis, respectively, were realized during the review period.

3.2 Gas Procurement Incentive Mechanism

Atmos' audit period gas supply commodity purchases by pipeline index location or service for the East Tennessee and Virginia service territory are identified in Table 8, and purchases for the Middle and West service territories are identified in Table 9. Table 10 provides an audit period comparison of monthly baseload *Inside FERC* index prices for the locations and services that were available to Atmos to purchase gas supplies under the AMAs in effect during the review period. Also identified are average city gate variable delivered prices that reflect the pipeline variable and fuel costs associated with the delivery of gas to Atmos' city gate. *Gas Daily* index prices for the locations and services identified in Table 10 exhibited the same relative relationship as the monthly *Inside FERC* prices reflected in Table 9 during the review period.

Table 11 and Table 12 identify the GPIM savings realized by Atmos during the review period for each purchase location and service for the East Tennessee and Virginia service territory and the Middle and West service territories, respectively. As subsequently discussed, Atmos' purchases during the review period appear to have been consistent with least-cost procurement. The Columbia Gulf cashout purchases identified in Table 12 reflect differences between Atmos' actual monthly purchase nominations and the actual monthly deliveries to the Company. Nominations in excess of actual deliveries and deliveries in excess of actual nominations are resolved via cashout settlement by the Asset Manager. Cashout purchases are priced based on Columbia Gulf index prices. In Table 12, positive purchase quantities are cashout purchases by Atmos and negative purchase quantities are cashout purchases by the Asset Manager. Differences between actual monthly purchase nominations and actual monthly deliveries on the other interstate pipelines directly serving Atmos are addressed through no-notice service injections and withdrawals and are not subject to cashout. Cashout quantities are largely attributable to factors over which Atmos has little control, such as weather variances, and are not currently included by the Company in the GPIM. Exeter finds the exclusion of cashout purchases from the GPIM to be reasonable since they are largely attributable to factors beyond the Company's control.

Table 8. East Tennessee & Virginia Service Territory – Summary of Commodity Purchases by Pipeline Index Location/Service (Dth)

	Tennessee Gas			Texas Eastern	Columbia Gulf		AMA Delivered Supply		
Month	100 Leg	500 Leg	800 Leg	Zone M-1	Mainline	SONAT LA	TGP Ridgetop	Nora/ Jewell	Transco
April 2017	143,635	28,948	2,163	20,750	274,465	0	0	0	0
May	154,344	0	0	17,376	156,992	0	0	0	0
June	305,175	0	0	18,434	112,350	0	0	0	0
July	280,744	0	0	19,597	119,580	0	0	0	0
August	227,373	0	0	18,777	114,578	0	0	0	0
September	227,273	0	0	17,007	103,777	0	0	0	0
October	363,655	0	3,624	18,090	148,060	0	0	0	0
November	410,609	1,705	62,406	37,231	140,997	0	0	0	0
December	54,665	267,527	141,165	219,030	328,447	34,591	75,053	0	0
January 2018	74,536	276,450	143,238	219,155	328,635	132,401	160,596	20,955	0
February	78,351	194,429	81,645	191,854	261,849	5,287	14,015	0	0
March	292,011	181,124	36,257	56,326	168,801	0	20,861	0	0
Subtotal:	*2,612,371*	*950,183*	*470,498*	*853,627*	*2,258,531*	*172,279*	*270,525*	*20,955*	*0*
April 2018	464,476	41,998	20,336	17,176	131,830	0	0	0	0
May	316,854	0	0	18,160	112,097	0	0	0	0
June	220,703	0	0	42,153	110,052	0	0	0	0
July	266,004	0	0	19,022	117,417	0	0	0	0
August	237,654	0	0	18,824	116,424	0	0	0	0
September	269,294	0	0	18,126	112,108	0	0	0	0
October	408,170	0	0	17,164	106,157	0	0	0	0
November	220,574	123,657	96,466	169,005	318,632	5,332	12,700	0	0
December	110,775	152,203	70,606	93,338	163,336	83,566	43,764	241,823	101,145
January 2019	237,101	37,799	25,232	23,161	53,408	165,554	0	555,338	33,445
February	422,826	260,862	0	0	279,942	0	0	0	0
March	108,685	42,839	55,931	36,579	269,986	0	0	0	0
Subtotal:	*3,283,116*	*659,358*	*268,571*	*472,708*	*1,891,389*	*254,452*	*56,464*	*797,161*	*134,590*
April 2019	389,057	0	8,896	16,464	199,803	0	0	0	0
May	180,865	0	0	17,841	213,013	0	0	0	0
June	182,648	0	48,464	17,549	11,637	3,263	0	0	0
July	83,232	6,007	0	20,031	203,877	0	0	0	0
August	215,069	23,376	20,705	120,361	13,542	0	0	0	0
September	258,987	0	0	146,521	13,224	0	0	0	0
October	353,365	0	0	145,909	12,838	0	0	0	0
November	329,173	9,372	49,125	173,990	219,613	12,748	0	0	0
December	498,347	0	17,144	185,872	225,399	0	0	0	0
January 2020	460,981	0	1,054	180,012	401,055	0	0	0	0
February	168,005	15,217	2,577	170,455	382,575	0	0	0	0
March	117,732	0	0	175,908	400,972	0	0	0	0
Subtotal:	*3,237,461*	*53,972*	*147,965*	*1,370,913*	*2,297,548*	*16,011*	*0*	*0*	*0*
Total:	**9,132,948**	**1,663,513**	**887,034**	**2,697,248**	**6,447,468**	**442,742**	**326,989**	**818,116**	**134,590**

Note: Prior to allocation to Virginia.

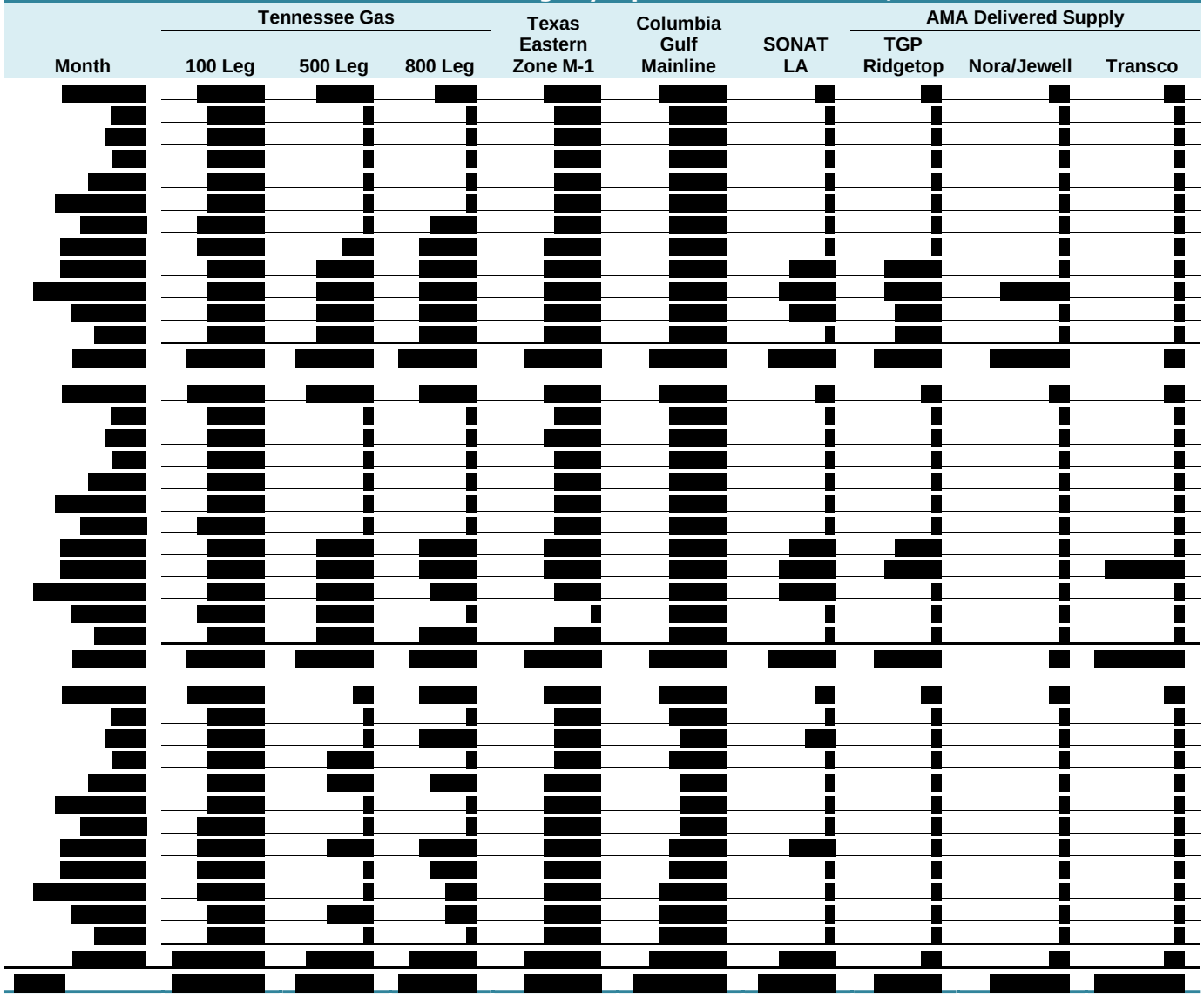
Table 9. Middle & West Tennessee Service Territory – Summary of Commodity Purchases by Pipeline Index Location/Service (Dth)

Month	Texas Eastern			EGTS Storage	Columbia Gulf Mainline	Columbia Gulf Cashout	Texas Gas		AMA Delivered Columbia Gulf	Barnsley Injection		Total (Table 8 + Table 9)
	ELA	Zone M-1	Zone M-2				Zone SL	Zone 1		Middle	West	
April 2017	0	42,450	152,940	52,680	217,980	(52,688)	0	45,030	0	165,375	2,537	**1,096,265**
May	0	47,089	158,038	60,140	88,806	29,664	0	32,147	0	170,887	2,622	**918,105**
June	0	42,450	152,940	52,680	45,600	4,807	0	30,060	0	165,375	2,537	**932,408**
July	0	43,865	158,038	54,436	30,504	5,911	0	37,448	0	170,887	2,622	**923,632**
August	0	43,865	158,038	54,436	36,177	3,090	0	37,417	0	170,887	2,622	**867,260**
September	0	42,450	152,940	52,680	62,640	12,049	0	40,650	0	165,375	2,537	**879,378**
October	0	48,639	158,038	54,436	244,191	36,066	16,863	36,983	0	170,887	2,622	**1,302,154**
November	0	0	116,040	0	529,823	15,068	0	30,474	0	0	0	**1,344,353**
December	0	40,488	63,953	0	918,996	18,744	0	13,950	14,106	0	0	**2,190,715**
January 2018	0	64,777	65,565	0	1,164,956	20,592	0	36,014	0	0	0	**2,707,870**
February	0	0	48,496	0	728,931	(60,006)	0	9,632	0	0	0	**1,554,483**
March	0	18,219	66,526	0	412,528	12,481	0	8,035	0	0	0	**1,273,169**
Subtotal:	*0*	*434,292*	*1,451,552*	*381,488*	*4,481,132*	*45,778*	*16,863*	*357,840*	*14,106*	*1,179,673*	*18,099*	***15,989,792***
April 2018	0	43,200	152,610	53,190	501,076	16,556	0	61,790	0	162,690	2,562	**1,669,490**
May	0	44,640	157,697	54,963	91,969	32,453	0	41,664	0	168,113	2,647	**1,041,257**
June	0	71,516	152,610	53,190	34,860	20,637	0	45,610	0	162,690	2,562	**916,583**
July	0	44,640	157,697	54,963	30,473	(8,242)	0	47,915	0	168,113	2,647	**900,649**
August	0	44,640	157,697	54,963	36,115	(10,042)	0	39,804	0	168,113	2,647	**866,839**
September	0	43,200	152,610	53,190	73,740	(14,165)	0	43,590	0	162,690	2,562	**916,945**
October	0	45,477	157,697	56,947	279,401	8,166	0	43,981	0	168,113	2,647	**1,293,920**
November	0	137,527	152,610	0	694,365	23,365	0	31,222	0	0	0	**1,985,455**
December	0	15,153	59,086	0	992,305	(37,710)	0	20,367	0	0	0	**2,109,757**
January 2019	0	20,204	47,519	0	1,027,687	(33,269)	0	27,869	0	0	0	**2,221,048**
February	0	0	42,532	0	800,408	(586)	0	4,060	0	0	0	**1,810,044**
March	0	16,164	71,517	0	681,823	(1,857)	0	27,759	0	0	0	**1,309,426**
Subtotal:	*0*	*526,361*	*1,461,882*	*381,406*	*5,244,222*	*(4,694)*	*0*	*435,631*	*0*	*1,160,522*	*18,274*	***17,041,413***
April 2019	0	43,140	152,400	52,980	352,254	(31,101)	0	53,190	0	162,750	2,280	**1,402,113**
May	0	44,640	157,480	55,025	75,826	46,108	0	41,726	0	0	837	**833,361**
June	0	43,200	152,400	53,250	55,548	3,532	0	46,395	0	81,930	2,280	**702,096**
July	0	44,702	157,480	55,025	35,867	(3,593)	0	47,306	0	168,981	2,976	**821,891**
August	90,459	111,924	0	55,025	36,952	18,762	0	40,610	0	167,710	2,635	**917,130**
September	0	174,780	0	53,250	95,160	(15,944)	0	54,630	0	167,670	2,550	**950,828**
October	0	180,978	0	56,947	238,793	43,546	0	53,196	0	167,710	2,635	**1,255,917**
November	0	136,170	11,240	0	570,753	101,270	0	57,967	0	0	0	**1,671,421**
December	0	124,837	73,749	0	686,340	53,510	0	31,093	0	0	0	**1,896,291**
January 2020	0	116,777	51,646	0	783,153	59,912	0	6,789	0	0	0	**2,061,379**
February	0	109,243	48,314	0	452,166	110,424	0	3,335	0	0	0	**1,462,311**
March	0	132,029	91,977	0	213,683	13,505	0	21,483	0	0	0	**1,167,289**
Subtotal:	*90,459*	*1,262,420*	*896,686*	*381,502*	*3,596,495*	*399,931*	*0*	*457,720*	*0*	*916,751*	*16,193*	***15,142,027***
Total:	**90,459**	**2,223,073**	**3,810,120**	**1,144,396**	**13,321,849**	**441,015**	**16,863**	**1,251,191**	**14,106**	**3,256,946**	**52,566**	**48,173,232**

Table 10. Summary of *Inside FERC* Index Prices

	Tennessee Gas			Texas Eastern				Columbia Gulf			Transco	Texas Gas		EGTS
Month	100 Leg East	500 Leg East	800 Leg East	ELA Middle	Zone M-1 Middle	Zone M-1 East	Zone M-2 Middle	Mainline East	Mainline Middle	SONAT LA East	Zone 5 East	Zone SL West	Zone 1 West	Appalachia East
April 2017	$3.06	$3.09	$3.07	$3.08	$3.07	$3.07	$2.68	$3.06	$3.06	$3.10	$3.18	$3.06	$3.06	$2.71
May	3.00	3.05	3.05	3.04	3.01	3.01	2.59	3.02	3.02	3.06	3.14	3.02	3.02	2.60
June	3.07	3.15	3.14	3.14	3.16	3.16	2.67	3.11	3.11	3.16	3.25	3.12	3.12	2.68
July	2.90	2.97	2.97	2.96	2.94	2.94	1.80	2.95	2.95	2.99	3.09	2.93	2.93	1.81
August	2.80	2.88	2.88	2.85	2.85	2.85	1.70	2.85	2.85	2.88	3.01	2.85	2.84	1.73
September	2.80	2.89	2.87	2.86	2.86	2.86	1.63	2.85	2.85	2.88	2.98	2.86	2.85	1.71
October	2.80	2.88	2.87	2.87	2.85	2.85	1.06	2.84	2.84	2.88	2.99	2.84	2.84	1.10
November	2.61	2.66	2.65	2.64	2.62	2.62	1.51	2.60	2.60	2.66	2.83	2.60	2.60	1.57
December	2.92	3.01	2.98	2.97	2.96	2.96	2.51	2.96	2.96	3.02	3.67	2.97	2.96	2.50
January 2018	2.62	2.67	2.65	2.65	2.65	2.65	2.27	2.61	2.61	2.68	5.58	2.64	2.62	2.29
February	3.51	3.59	3.54	3.53	3.58	3.58	3.02	3.49	3.49	3.58	9.98	3.58	3.53	2.89
March	2.50	2.57	2.55	2.52	2.52	2.52	2.11	2.49	2.49	2.57	2.87	2.56	2.50	2.10
Annual Average:	*$2.88*	*$2.95*	*$2.94*	*$2.93*	*$2.92*	*$2.92*	*$2.13*	*$2.90*	*$2.90*	*$2.96*	*$3.88*	*$2.92*	*$2.91*	*$2.14*
AMA Adjustment:	[redacted]													
Variable Adjustment:	[redacted]													
Effective Cost:	[redacted]													
April 2018	$2.57	$2.62	$2.60	$2.59	$2.58	$2.58	$2.22	$2.55	$2.55	$2.63	$2.76	$2.59	$2.55	$2.24
May	2.70	2.76	2.75	2.74	2.71	2.71	2.27	2.67	2.67	2.76	2.87	2.72	2.67	2.32
June	2.76	2.81	2.79	2.80	2.74	2.74	2.19	2.72	2.72	2.82	2.94	2.76	2.71	2.22
July	2.83	2.92	2.90	2.89	2.87	2.87	2.32	2.84	2.84	2.94	3.07	2.88	2.82	2.34
August	2.66	2.75	2.74	2.73	2.70	2.70	2.40	2.68	2.68	2.76	2.91	2.72	2.68	2.40
September	2.77	2.83	2.82	2.82	2.81	2.81	2.46	2.76	2.76	2.84	2.94	2.80	2.76	2.48
October	2.90	2.96	2.92	2.86	2.91	2.91	2.38	2.84	2.84	2.96	3.05	2.92	2.85	2.43
November	3.10	3.15	3.12	3.08	3.10	3.10	2.78	3.04	3.04	3.15	3.34	3.11	3.06	2.78
December	4.62	4.71	4.67	4.60	4.66	4.66	4.29	4.59	4.59	4.70	5.94	4.67	4.63	4.32
January 2019	3.53	3.59	3.54	3.50	3.54	3.54	3.31	3.47	3.47	3.60	7.31	3.54	3.48	3.32
February	2.83	2.88	2.85	2.85	2.87	2.87	2.68	2.79	2.79	2.89	4.88	2.85	2.80	2.71
March	2.76	2.79	2.76	2.75	2.76	2.76	2.60	2.70	2.70	2.80	3.02	2.78	2.73	2.62
Annual Average:	*$3.00*	*$3.06*	*$3.04*	*$3.02*	*$3.02*	*$3.02*	*$2.66*	*$2.97*	*$2.97*	*$3.07*	*$3.75*	*$3.03*	*$2.98*	*$2.68*
AMA Adjustment:	[redacted]													
Variable Adjustment:	[redacted]													
Effective Cost:	[redacted]													
April 2019	$2.62	$2.65	$2.61	$2.58	$2.60	$2.60	$2.40	$2.55	$2.55	$2.65	$2.73	$2.57	$2.57	$2.43
May	2.44	2.50	2.46	2.42	2.45	2.45	2.11	2.38	2.38	2.50	2.53	2.44	2.39	2.13
June	2.51	2.56	2.52	2.49	2.48	2.48	2.15	2.39	2.39	2.57	2.63	2.46	2.42	2.17
July	2.14	2.20	2.18	2.13	2.12	2.12	1.90	2.06	2.06	2.21	2.35	2.06	2.06	1.92
August	1.94	2.06	2.02	1.98	1.94	1.94	1.79	1.92	1.92	2.08	2.18	1.96	1.92	1.80
September	2.05	2.19	2.12	2.13	2.11	2.11	1.56	2.02	2.02	2.19	2.28	N/A	2.03	1.61
October	2.20	2.38	2.23	2.31	2.23	2.23	1.33	2.09	2.09	2.37	2.46	N/A	2.09	1.35
November	2.40	2.54	2.47	2.47	2.44	2.44	1.90	2.34	2.34	2.55	2.66	2.42	2.38	2.02
December	2.30	2.41	2.35	2.36	2.34	2.34	2.04	2.29	2.29	2.41	3.27	2.35	2.31	2.05
January 2020	2.00	2.08	2.04	2.04	2.05	2.05	1.74	1.98	1.98	2.10	3.29	2.00	2.00	1.73
February	1.76	1.80	1.76	1.78	1.78	1.78	1.46	1.73	1.73	1.81	2.30	1.77	1.73	1.46
March	1.69	1.75	1.71	1.72	1.72	1.72	1.45	1.66	1.66	1.76	1.89	1.70	1.66	1.46
Annual Average:	*$2.17*	*$2.26*	*$2.21*	*$2.20*	*$2.19*	*$2.19*	*$1.82*	*$2.12*	*$2.12*	*$2.27*	*$2.55*	*$2.17*	*$2.13*	*$1.84*
AMA Adjustment:	[redacted]													
Variable Adjustment:	[redacted]													
Effective Cost:	[redacted]													

Table 11. East Tennessee & Virginia Service Territory – Summary of PBRM Gas Procurement Incentive Mechanism Savings by Pipeline Index Location/Service



Note: Prior to allocation to Virginia.

Table 12. Middle & West Tennessee Service Territory – Summary of PBRM Gas Procurement Incentive Mechanism Savings by Pipeline Index Location/Service

Month	Texas Eastern			EGTS Storage	Columbia Gulf Mainline	Columbia Gulf Cash-out	Texas Gas		AMA Delivered Columbia Gulf	Barnsley Injection		Total (Table 11 + Table 12)
	ELA	Zone M-1	Zone M-2				Zone SL	Zone 1		Middle	West	
[redacted]												

Atmos' West Tennessee service territory can only be served by Texas Gas. Applicable index purchase locations for Texas Gas supplies are Zone SL and Zone 1. As shown in Table 10, Zone 1-sourced supplies typically had a slightly lower delivered cost than Zone SL delivered supplies during the review period. As a result, and as indicated in Table 9, the Company generally attempted to maximize Zone 1 purchases during the review period.

Atmos' Middle Tennessee service territory is primarily served by Columbia Gulf under firm transportation arrangements that provide for the direct delivery of Gulf Coast production region supplies. In addition, the Middle Tennessee service territory can be served by Texas Eastern under firm transportation arrangements with gas sourced in Texas Eastern Zones ELA, M-1 or M-2. The Middle Tennessee service territory requirements can also be met with delivered-to-city-gate supplies available under the Company's AMAs. These delivered-to-city-gate supplies can be sourced on Columbia Gulf or Texas Eastern. Daily deliveries from Texas Eastern are generally required to meet certain operational requirements of the Middle Tennessee service territory. As shown in Table 10, Columbia Gulf sourced supplies were slightly lower cost than Texas Eastern Zone M-1 sourced supplies during the review period, and as shown in Table 9, Columbia Gulf sourced supply purchases significantly exceeded Texas Eastern Zone M-1 sourced supply purchases. Texas Eastern Zone M-2 sourced supplies, which are delivered under Contract No. 910800, were available at lower cost than either Columbia Gulf or Texas Eastern Zone ELA of M-1 sourced supplies during the review period and Atmos maximized the purchase of these supplies when Contract No. 910800 was not required to deliver EGTS storage withdrawals.[4] Delivered-to-city-gate Columbia Gulf and Texas Eastern-sourced supplies are priced based on Gulf Coast index prices that are nearly identical. However, the price for these delivered-to-city-gate supplies included a commodity adder which resulted in a variable delivered cost that exceeded the cost of firm transportation delivered supplies. Therefore, Atmos only purchased delivered-to-city-gate supplies to serve the Middle Tennessee service territory during peak demand periods.

Atmos' East Tennessee service territory is only served by ETNG. Operationally, most of the gas delivered *by* ETNG must be delivered *to* ETNG by TGP. Applicable index purchase locations for TGP supplies are Zone 0 – 100 Leg, Zone 1 – 500 Leg, and Zone 1 – 800 Leg. As shown previously in Table 10, Zone 0 sourced supplies were consistently the lowest cost, and as indicated by Table 9, approximately 80% of the Company's TGP sourced gas supply purchases were Zone 0 purchases. SONAT sourced supplies can be delivered to ETNG for the East Tennessee service territory, but these supplies had a higher delivered cost than TGP sourced supplies during the review period, as shown in Table 10, and were generally only purchased during demand peak periods. The AMAs in effect during the review period entitled Atmos to purchase Nora Lateral, Jewell Lateral and Transco delivered-to-ETNG supplies to serve the East Tennessee service territory. The cost of these delivered-to-ETNG supplies were generally higher than supplies delivered to ETNG by TGP and, therefore, purchases of delivered-to-

[4] On August 1, 2019, Texas Eastern experienced a transmission pipeline failure which prevented Atmos from using Contract No. 910800 to purchase and deliver Zone M-2 sources supplies to its distribution system during the months of August through October 2019.

ETNG supplies were generally limited to peak demand periods or other period of constraint during the review period.

3.3 Capacity Management Incentive Mechanism

As initially discussed in Sections 2.1.2, 2.1.3, and 2.1.4, Atmos released segments of three pipeline firm transportation contracts via prearranged biddable arrangements during the audit period. During each month of the audit period, Atmos released 5,000 Dth/day of TGP Contract No. 92725 to the Louisiana Division and 5,000 Dth/day of TGP Contract No. 92725 to the Mississippi Division. Also for each month of the audit period, Atmos released 11,500 Dth/day of Columbia Gulf Contract No. 142156 to Trans Louisiana Gas Pipeline. For the period November 2017 through October 2018, Atmos released 5,000 Dth/day of Texas Eastern Contract No. 911446 to the Mississippi Division.

TGP Contract No. 92725 and Texas Eastern Contract No. 911446 were discounted-rate contracts, and the releases of these contracts were made at less than the discounted rate. Columbia Gulf Contract No. 142156 was a maximum FERC tariff rate contract, and the release of this capacity was made at less than the maximum rate. The capacity release revenues realized by Atmos during the audit period are summarized in Table 13.

Table 13. Capacity Release Revenues

Pipeline	Contract No.	MDQ (Dth)	Party	Revenues[1]
Tennessee Gas Pipeline	92725	5,000	Louisiana Division	$562,727
Tennessee Gas Pipeline	92725	5,000	Mississippi Division	422,053
Columbia Gulf Transmission	142156	11,500	Trans Louisiana Gas Pipeline	904,680
Texas Eastern Transmission	911446	5,000	Mississippi Division	91,250
Total:				**$1,980,710**

[1] Prior to Virginia allocation.

In addition to providing for the sharing of capacity release revenues, the CMIM also provided for the sharing of AMA fees. Typically under an AMA, the Asset Manager would pay the party releasing the assets a fee. Atmos' audit period AMAs did not provide for the payment of a fee by the Asset Manager. Atmos received compensation for releasing its assets to the Asset Manager by purchasing gas under the AMAs at discounts to market index prices.

3.4 Avoided Cost Incentive Mechanism

The ACIM revenues realized by Atmos during the review period were almost entirely attributable to obtaining discounts from the maximum FERC-approved demand charges under the Company's firm transportation contracts or the avoidance of demand and variable charges under the AMA delivered services. ACIM revenues were also realized during the review period due to variations from an existing transportation delivery path. As initially discussed in Section 2.1.2, Columbia Gulf firm transportation Contract No. 211462 replaced the 9,000 Dth/day provided under Texas Eastern Contract No. 911446 effective November 1, 2018. Effective

November 1, 2019, Columbia Gulf firm transportation Contract No. 215235 replaced 5,000 Dth/day of TGP delivered supply of 7,341 Dth/day that was provided under the AMA that was effective April 1, 2016 through March 31, 2019 but not provided under the AMA effective April 1, 2019 through March 31, 2022. Atmos audit period ACIM revenues are summarized by pipeline and delivered service in Table 14. No review period ACIM revenues were realized as a result of the acquisition of seasonal capacity that avoided year-round demand changes.

Table 14. Summary of Audit Period Avoided Demand and Variable Costs (Dth)

Pipeline/Provider - Service	Contract No.	Tennessee Territory	Avoided Demand	Avoided Variable
CITYGATE RESOURCES				
[redacted]				

[1] Costs prior to the Virginia jurisdictional allocation.

3.5 Off-System Sales Revenue Incentive Mechanism

Under the audit period AMAs, the Asset Manager managed all of Atmos' firm transportation and storage assets. Therefore, Atmos was unable to use those assets to engage in off-system sales during the audit period and realized no off-system sales revenue to share under the OSIM.

3.6 Assessment of PBRM Review Period Calculations and Savings

Exeter's review found that the PBRM savings identified by Atmos for the review period were determined consistent with the provisions of the Company's PBRM tariff, and Exeter's review did not reveal any concerns with the calculations or procedures used by Atmos to determine the savings realized under the PBRM during the review period.

3.7 Hedging Activity

Atmos did not use futures contracts, financial instruments, or private contracts to manage, hedge, or otherwise reduce the volatility of its gas costs during the review period. Under the PBRM, the gains or losses associated with hedging activity would be reflected in the calculation of GPIM savings or costs. The Company claims that the inclusion of hedging losses in the PBRM has discouraged the use of hedging. In hindsight, as shown in Table 10, commodity gas prices during the review period were not very volatile and, therefore, the absence of hedging did not result in significant volatility in Atmos' gas cost rates. However, as shown below in Table 15, as measured by Henry Hub New York Mercantile Exchange (NYMEX) settlement prices, commodity gas prices have recently become more volatile. Therefore, it would not be unreasonable for Atmos to begin to hedge a portion of its gas costs. If the TPUC Staff and CAD believe it would be appropriate for Atmos to hedge a portion of its gas costs to mitigate gas cost rate volatility, Exeter believes it would be appropriate for the PBRM to be modified to ensure that hedging gains and losses are excluded from the calculation of GPIM savings or costs.

Table 15. NYMEX Settlement Prices (Dth)

January 2020	$2.158	April 2021	$2.586
February	$1.877	May	$2.925
March	$1.821	June	$2.984
April	$1.634	July	$3.617
May	$1.794	August	$4.044
June	$1.722	September	$4.370
July	$1.495	October	$5.841
August	$1.854	November	$6.202
September	$2.579	December	$5.447
October	$2.101	January 2022	$4.024
November	$2.996	February	$6.265
December	$2.896	March	$4.568
January 2021	$2.467	April	$5.336
February	$2.760	May	$7.267
March	$2.854	June	$8.908

4. Storage Activity

The Scope of Review for this investigation, as stated in the RFP, requires the review of Atmos' actual gas procurement transactions and costs. The Company's gas supply purchase transactions were reviewed in Section 3 of the Report and found to be reasonable. Section 4 of the Report reviews Atmos' storage activity; specifically, the Company's storage arrangements are discussed in Section 4.1 and storage planning guidelines are discussed in Section 4.2.

4.1 Storage Arrangements and Activity

As discussed in greater detail in Section 2 of the Report, Atmos purchased bundled storage service from Texas Gas under Rate Schedule SGT and from Texas Eastern under Rate Schedule SS-1. Atmos purchased unbundled storage service from EGTS under Rate Schedule GSS; from TGP under Rate Schedules FS-PA and FS-MA; from ETNG under Rate Schedule LNGS; from Saltville Storage under Rate Schedule FSS; from Monroe Storage under Rate Schedule FSS, and from Jefferson Island under Rate Schedule FSS. The Texas Gas SGT and TGP FS-PA and FS-MA storage arrangements also provide Atmos with no-notice service. The Company also had access to the Barnsley Storage field. Atmos' storage arrangements during the review period are summarized in Table 16.

Table 16. Summary of Review Period Storage Service Arrangements (Dth)

Service	Rate Schedule	Maximum Withdrawal Quantity	
		Daily	Seasonal
Texas Gas Transmission	SGT	5,108	239,576
Texas Eastern Transmission	SS-1	3,000	180,000
Eastern Gas Transmission and Storage	GSS	4,880	411,765
Tennessee Gas Pipeline	FS-PA	10,000	417,837
Tennessee Gas Pipeline	FS-MA	10,000	417,837
East Tennessee Natural Gas	LNGS	52,633	339,900
Saltville Storage	FSS	42,000	413,500
Monroe Storage	FSS	10,360	350,000
Jefferson Island Storage	FSS	25,000	250,000
Barnsley Storage	-	27,000	1,300,000
Total:		**189,981**	**4,320,415**

Table 17 identifies the monthly storage activity (injections/withdrawals) and the inventory balances under Atmos' storage arrangements at the conclusion of each month of the review period. Also identified in Table 17 are Atmos' storage inventory balances as a percent of the Company's maximum seasonal contract quantity. The storage activity presented in these tables reflects Atmos' virtual dispatch use of storage, and not the actual physical use of storage by Atmos' Asset Managers.

Table 17. Summary of Review Period Storage Activity (Dth)

	Texas Gas Transmission SGT			Tennessee Gas Pipeline FS-PA			Tennessee Gas Pipeline FS-MA			Eastern Gas Transmission & Storage GSS			East Tennessee Natural Gas LNGS			Texas Eastern SS-1		
Month	Activity	Inventory	239,576 Capacity %	Activity	Inventory	417,837 Capacity %	Activity	Inventory	417,837 Capacity %	Activity	Inventory	411,765 Capacity %	Activity	Inventory	339,900 Capacity %	Activity	Inventory	180,000 Capacity %
March 2017		23,826	10%		27,070	6%		27,110	6%		17,035	4%		317,674	93%		7,203	4%
April	33,249	57,075	24%	77,262	104,332	25%	77,275	104,385	25%	51,660	68,695	17%	0	317,674	93%	22,650	29,853	17%
May	23,122	80,197	33%	(24,387)	79,945	19%	(24,389)	79,996	19%	58,962	127,657	31%	0	317,674	93%	25,704	55,557	31%
June	27,893	108,090	45%	84,904	164,849	39%	84,918	164,914	39%	51,660	179,317	44%	0	317,674	93%	22,599	78,156	43%
July	35,969	144,059	60%	69,900	234,749	56%	69,916	234,830	56%	53,382	232,699	57%	0	317,674	93%	23,351	101,507	56%
August	29,561	173,620	72%	46,996	281,745	67%	47,005	281,835	67%	53,382	286,081	69%	0	317,674	93%	23,337	124,844	69%
September	26,247	199,867	83%	46,316	328,061	79%	46,324	328,159	79%	51,660	337,741	82%	0	317,674	93%	22,568	147,412	82%
October	20,476	220,343	92%	48,798	376,859	90%	48,805	376,964	90%	53,382	391,123	95%	0	317,674	93%	23,309	170,721	95%
November	(1,897)	218,446	91%	(78,199)	298,660	71%	(78,198)	298,766	72%	(36,900)	354,223	86%	0	317,674	93%	(16,116)	154,605	86%
December	(57,519)	160,927	67%	(49,037)	249,623	60%	(49,042)	249,724	60%	(94,550)	259,673	63%	0	317,674	93%	(40,477)	114,128	63%
January 2018	(63,047)	97,880	41%	(127,254)	122,369	29%	(127,258)	122,466	29%	(92,938)	166,735	40%	(113,875)	203,799	60%	(44,133)	69,995	39%
February	(48,006)	49,874	21%	(38,861)	83,508	20%	(38,867)	83,599	20%	(57,477)	109,258	27%	64,272	268,071	79%	(27,663)	42,332	24%
March	(39,278)	10,596	4%	(46,165)	37,343	9%	(46,166)	37,433	9%	(91,977)	17,281	4%	0	268,071	79%	(34,234)	8,098	4%
April 2018	21,007	31,603	13%	6,101	43,444	10%	6,104	43,537	10%	52,140	69,421	17%	0	268,071	79%	22,732	30,830	17%
May	28,929	60,532	25%	54,636	98,080	23%	54,641	98,178	23%	53,878	123,299	30%	52,000	320,071	94%	23,481	54,311	30%
June	33,736	94,268	39%	52,954	151,034	36%	52,962	151,140	36%	52,140	175,439	43%	0	320,071	94%	11,714	66,025	37%
July	39,872	134,140	56%	72,178	223,212	53%	72,187	223,327	53%	53,878	229,317	56%	0	320,071	94%	23,462	100,487	56%
August	32,717	166,857	70%	50,118	273,330	65%	50,116	273,443	65%	53,878	283,195	69%	0	320,071	94%	23,453	123,940	69%
September	34,587	201,444	84%	82,828	356,158	85%	82,836	356,279	85%	52,140	335,335	81%	0	320,071	94%	22,686	146,626	81%
October	29,150	230,594	96%	32,774	388,932	93%	32,777	389,056	93%	55,831	391,166	95%	19,827	339,898	100%	24,271	170,897	95%
November	(26,976)	203,618	85%	(33,340)	355,592	85%	(33,334)	355,722	85%	(28,800)	362,366	88%	0	339,898	100%	(12,726)	158,171	88%
December	(40,683)	162,935	68%	(50,365)	305,227	73%	(50,370)	305,352	73%	(99,169)	263,197	64%	0	339,898	100%	(42,848)	115,323	64%
January 2019	(63,299)	99,636	42%	(102,066)	203,161	49%	(102,071)	203,281	49%	(85,211)	177,986	43%	0	339,898	100%	(41,091)	74,232	41%
February	(57,993)	41,643	17%	26,510	229,671	55%	26,511	229,792	55%	(74,122)	103,864	25%	0	339,898	100%	(37,121)	37,111	21%
March	(33,756)	7,887	3%	(216,754)	12,917	3%	(216,766)	13,026	3%	(86,707)	17,157	4%	0	339,898	100%	(28,531)	8,580	5%
April 2019	25,710	33,597	14%	65,375	78,292	19%	65,385	78,411	19%	51,960	69,117	17%	0	339,898	100%	22,700	31,280	17%
May	25,441	59,038	25%	77,102	155,394	37%	77,118	155,529	37%	53,940	123,057	30%	0	339,898	100%	23,445	54,725	30%
June	34,630	93,668	39%	53,984	209,378	50%	53,992	209,521	50%	52,200	175,257	43%	0	339,898	100%	22,677	77,402	43%
July	33,106	126,774	53%	18,259	227,637	54%	18,253	227,774	55%	53,940	229,197	56%	0	339,898	100%	23,484	100,886	56%
August	25,673	152,447	64%	22,932	250,569	60%	22,929	250,703	60%	53,940	283,137	69%	0	339,898	100%	23,472	124,358	69%
September	35,833	188,280	79%	85,490	336,059	80%	85,498	336,201	80%	52,200	335,337	81%	0	339,898	100%	22,702	147,060	82%
October	24,325	212,605	89%	82,851	418,910	100%	82,861	419,062	100%	55,831	391,168	95%	0	339,898	100%	23,790	170,850	95%
November	(4,861)	207,744	87%	(76,785)	342,125	82%	(76,788)	342,274	82%	(41,190)	349,978	85%	0	339,898	100%	(17,901)	152,949	85%
December	(30,752)	176,992	74%	(52,444)	289,681	69%	(52,447)	289,827	69%	(83,824)	266,154	65%	0	339,898	100%	(36,541)	116,408	65%
January 2020	(71,641)	105,351	44%	(102,552)	187,129	45%	(102,555)	187,272	45%	(78,545)	187,609	46%	0	339,898	100%	(33,436)	82,972	46%
February	(67,503)	37,848	16%	(121,791)	65,338	16%	(121,795)	65,477	16%	(108,025)	79,584	19%	0	339,898	100%	(47,757)	35,215	20%
March	(2,770)	35,078	15%	57,350	122,688	29%	57,365	122,842	29%	(65,565)	14,019	3%	0	339,898	100%	(28,062)	7,153	4%

Table 17. Summary of Review Period Storage Activity (Dth) (cont'd)

	Barnsley Storage			Saltville Storage FSS			Jefferson Island Storage			Monroe Storage			Total Table 17			Total Table 17 (excluding ETNG LNGS)		
Month	Activity	Inventory	1,300,000 Capacity %	Activity	Inventory	413,500 Capacity %	Activity	Inventory	250,000 Capacity %	Activity	Inventory	350,000 Capacity %	Activity	Inventory	4,320,415 Capacity %	Activity	Inventory	3,980,515 Capacity %
March 2017		45,366	3%		18,018	4%		10,361	4%		15,104	4%	0	508,767	12%	0	191,093	5%
April	166,770	212,136	16%	52,500	70,518	17%	31,590	41,951	17%	43,620	58,724	17%	556,576	1,065,343	25%	556,576	747,669	19%
May	172,329	384,465	30%	54,312	124,830	30%	33,573	75,524	30%	46,035	104,759	30%	365,261	1,430,604	33%	365,261	1,112,930	28%
June	166,770	551,235	42%	52,560	177,390	43%	31,740	107,264	43%	43,740	148,499	42%	566,784	1,997,388	46%	566,784	1,679,714	42%
July	172,329	723,564	56%	54,312	231,702	56%	32,798	140,062	56%	45,198	193,697	55%	557,155	2,554,543	59%	557,155	2,236,869	56%
August	172,329	895,893	69%	54,312	286,014	69%	32,798	172,860	69%	45,198	238,895	68%	504,918	3,059,461	71%	504,918	2,741,787	69%
September	166,770	1,062,663	82%	52,560	338,574	82%	31,740	204,600	82%	43,740	282,635	81%	487,925	3,547,386	82%	487,925	3,229,712	81%
October	172,329	1,234,992	95%	54,312	392,886	95%	32,798	237,398	95%	49,848	332,483	95%	504,057	4,051,443	94%	504,057	3,733,769	94%
November	(117,000)	1,117,992	86%	0	392,886	95%	(22,500)	214,898	86%	(36,210)	296,273	85%	(387,020)	3,664,423	85%	(387,020)	3,346,749	84%
December	(268,053)	849,939	65%	(85,164)	307,722	74%	(57,381)	157,517	63%	(75,764)	220,509	63%	(776,987)	2,887,436	67%	(776,987)	2,569,762	65%
January 2018	(349,312)	500,627	39%	(162,157)	145,565	35%	(61,952)	95,565	38%	(82,995)	137,514	39%	(1,224,921)	1,662,515	38%	(1,111,046)	1,458,716	37%
February	(156,194)	344,433	26%	(30,280)	115,285	28%	(32,470)	63,095	25%	(44,942)	92,572	26%	(410,488)	1,252,027	29%	(474,760)	983,956	25%
March	(282,846)	61,587	5%	(95,686)	19,599	5%	(50,688)	12,407	5%	(74,962)	17,610	5%	(762,002)	490,025	11%	(762,002)	221,954	6%
April 2018	164,490	226,077	17%	52,320	71,919	17%	31,530	43,937	18%	44,070	61,680	18%	400,494	890,519	21%	400,494	622,448	16%
May	169,973	396,050	30%	54,064	125,983	30%	32,581	76,518	31%	45,539	107,219	31%	569,722	1,460,241	34%	517,722	1,140,170	29%
June	164,490	560,540	43%	52,320	178,303	43%	31,530	108,048	43%	44,070	151,289	43%	495,916	1,956,157	45%	495,916	1,636,086	41%
July	169,973	730,513	56%	54,064	232,367	56%	32,581	140,629	56%	45,539	196,828	56%	563,734	2,530,891	59%	563,734	2,199,820	55%
August	169,973	900,486	69%	54,591	286,958	69%	32,519	173,148	69%	45,477	242,305	69%	512,842	3,043,733	70%	512,842	2,712,662	68%
September	164,490	1,064,976	82%	52,320	339,278	82%	31,470	204,618	82%	44,010	286,315	82%	567,367	3,611,100	84%	567,367	3,280,029	82%
October	169,973	1,234,949	95%	54,064	393,342	95%	32,519	237,137	95%	45,477	331,792	95%	496,663	4,107,763	95%	476,836	3,756,865	94%
November	(126,857)	1,108,092	85%	0	393,342	95%	(17,070)	220,067	88%	(25,019)	306,773	88%	(304,122)	3,803,641	88%	(304,122)	3,452,743	87%
December	(131,661)	976,431	75%	(13,133)	380,209	92%	(43,488)	176,579	71%	(61,173)	245,600	70%	(532,890)	3,270,751	76%	(532,890)	2,919,853	73%
January 2019	(416,175)	560,256	43%	(179,570)	200,639	49%	(73,727)	102,852	41%	(89,947)	155,653	44%	(1,153,157)	2,117,594	49%	(1,153,157)	1,766,696	44%
February	(76,456)	483,800	37%	0	200,639	49%	(25,652)	77,200	31%	(36,338)	119,315	34%	(254,661)	1,862,933	43%	(254,661)	1,512,035	38%
March	(174,540)	309,260	24%	(153,752)	46,887	11%	(64,015)	13,185	5%	(104,227)	15,088	4%	(1,079,048)	783,885	18%	(1,079,048)	432,987	11%
April 2019	163,740	473,000	36%	131,256	178,143	43%	75,750	88,935	36%	44,130	59,218	17%	646,006	1,429,891	33%	646,006	1,078,993	27%
May	837	473,837	36%	69,223	247,366	60%	6,696	95,631	38%	45,663	104,881	30%	379,465	1,809,356	42%	379,465	1,458,458	37%
June	83,580	557,417	43%	(60,163)	187,203	45%	30,824	126,455	51%	44,190	149,071	43%	315,914	2,125,270	49%	315,914	1,774,372	45%
July	170,624	728,041	56%	7,967	195,170	47%	13,299	77,757	31%	46,686	195,757	56%	385,618	2,448,891	57%	385,618	2,159,990	54%
August	169,043	897,084	69%	90,210	285,380	69%	32,550	172,304	69%	45,663	241,420	69%	486,412	2,997,300	69%	486,412	2,646,402	66%
September	168,930	1,066,014	82%	50,730	336,110	81%	32,262	204,566	82%	44,190	285,610	82%	577,835	3,575,135	83%	577,835	3,224,237	81%
October	169,043	1,235,057	95%	55,614	391,724	95%	32,971	237,537	95%	46,903	332,513	95%	574,189	4,149,324	96%	574,189	3,798,426	95%
November	(129,990)	1,105,067	85%	(23,804)	367,920	89%	(25,020)	212,517	85%	(34,980)	297,533	85%	(431,319)	3,718,005	86%	(431,319)	3,367,107	85%
December	(78,352)	1,026,715	79%	(85,936)	281,984	68%	(50,220)	162,297	65%	(70,432)	227,101	65%	(540,948)	3,177,057	74%	(540,948)	2,826,159	71%
January 2020	(211,493)	815,222	63%	0	281,984	68%	(55,444)	106,853	43%	(77,781)	149,320	43%	(733,447)	2,443,610	57%	(733,447)	2,092,712	53%
February	(422,240)	392,982	30%	(263,164)	18,820	5%	(57,565)	49,288	20%	(80,301)	69,019	20%	(1,290,141)	1,153,469	27%	(1,290,141)	802,571	20%
March	(139,268)	253,714	20%	0	18,820	5%	(4,392)	44,896	18%	(5,651)	63,368	18%	(130,993)	1,022,476	24%	(130,993)	671,578	17%

4.2 Storage Planning Guidelines

Atmos has established general storage planning guidelines that identify the inventory levels the Company plans to maintain. Atmos plans to fill its storage on a ratable basis during the summer injection period (April through October) (i.e., inject the same quantity each day of the 214-day April through October summer period). During the winter storage withdrawal season (November through March), excluding ETNG LNGS service, Atmos generally plans to maintain winter withdrawal storage inventory balances as follows:

November 1	95%	February 1	40%
December 1	85%	March 1	20%
January 1	65%	April 1	5%

In the 2015 PBRM Report, Exeter noted that Atmos was applying its general winter storage inventory balance planning criteria to ETNG LNGS service. Exeter expressed a concern with applying the criteria to ETNG LNGS service because at the time, a fuel retainage charge of approximately 16% was assessed for LNGS service on all gas delivered for liquefaction. That is, 16% of the gas delivered to ETNG for liquefaction is retained by ETNG and used to operate the liquefaction facilities. This added significantly to the cost of LNGS service. Exeter recommended that Atmos limit the use of LNGS service to only those occasions when operationally necessary to meet customer requirements, rather than deplete LNGS inventory to 5% of capacity as the Company had planned under its other storage services. In its comments on Exeter's draft 2015 PBRM Report, the Company agreed to modify the way it used ETNG LNGS service and limit withdrawals to those occasions when operationally necessary rather than deplete LNGS inventory to 5% of capacity. As shown by Table 17, the Company did modify its use of ETNG LNGS service consistent with its prior agreement.

Atmos' current review period actual and planned inventory balances are summarized in Table 18. As shown, actual storage inventory balances were generally consistent with planned balances.

Table 18. Planned and Actual Storage Inventory

	March 31		November 1	
Year	**Planned**	**Actual**[1]	**Planned**	**Actual**[1]
2017	5%	5%	95%	94%
2018	5%	6%	95%	94%
2019	5%	11%	95%	95%
2020	5%	17%	95%	

[1] Excludes ETNG's LNGS storage inventory balances.

Exeter's review found that Atmos' storage inventory planning criteria were generally reasonable, consistent with the criteria used by other gas distribution companies, and the Company generally adhered to those criteria. Therefore, Atmos' review period storage activity generally appears reasonable.

5. Evaluation of Capacity Portfolio

Section 5.1 addresses the design day criteria Atmos utilizes for capacity planning purposes. Section 5.2 examines Atmos' design day forecasting model. The actual peak day demands experienced by Atmos during the review period are discussed in Section 5.3. Section 5.4 examines the balance between Atmos' capacity resources and its customers' requirements. Finally, potential modifications to Atmos' capacity portfolio are addressed in Section 5.5.

5.1 Design Day Criteria

Atmos secures sufficient capacity resources to meet the forecasted design day requirements of its sales customers. The Company prepares separate design day forecasts for each of the towns or areas identified in Table 19. Also identified in Table 19 is the design day heating degree day (HDD) and wind speed criteria utilized by Atmos for the 2019-2020 winter season and the measuring weather station utilized for each town or area.

Table 19. Design Day Criteria

Town/Area	Tennessee Service Territory	Weather Station	HDD	Wind Speed (mph)
Bristol	East	Tri-City Airport	68.6	13.6
Kingsport	East	Tri-City Airport	68.6	13.6
Johnson City	East	Tri-City Airport	68.6	13.6
Greenville	East	Tri-City Airport	68.6	13.6
Morristown	East	Tri-City Airport	68.6	13.6
Maryville	East	Knoxville	64.3	11.6
Shelbyville	East	Nashville	69.1	12.4
Columbia/Franklin/ Marlboro	Middle	Nashville	69.1	12.4
Union City	West	Dyersburg	64.1	11.2

Prior to 2016, it was the Company's standard methodology to use the coldest temperatures since 1970 as its design day HDD criteria for each weather station. For the wind speed criteria, Atmos generally utilized the actual wind speed on the coldest day. In Exeter's 2015 PBRM Report, Exeter found Atmos' design day criteria to be somewhat conservative compared to the criteria utilized by other gas distribution companies. Exeter's prior report noted that a American Gas Association (AGA) survey found that other gas distribution companies generally utilized a design day criteria with a probability of occurrence of once in 30 years or less.[5] Exeter's 2015 PBRM Report recommended that Atmos investigate selecting less conservative design day criteria.

[5] American Gas Association, LDC Supply Portfolio Management During the 2011-12 Winter Heating Season, (EA 2012-14), July 31, 2012.

In 2016, in response to Exeter's design day criteria recommendation in the 2015 PBRM Report, Atmos began using design day criteria with a probability of occurrence of once in 30 years to forecast the design day requirements of its sales customers. To determine the appropriate once-in-30-year criteria to utilize in its design day forecast, Atmos engaged Marquette Energy Analytics Gas Day Lab (Gas Day) (formerly Marquette University Gas Day Lab). To determine the once-in-30-year criteria for each of the weather stations identified in Table 19, Gas Day fitted a probability distribution function to historical HDD adjusted for wind speed for each weather station since 1950. The temperature and wind speed criteria reflected in Gas Day's analysis is based on hourly average temperatures observed during the gas day which is 9 A.M. to 9 A.M. in the Central time zone in which Atmos is located. Atmos engaged Gas Day to determine the appropriate design day criteria for each year of the review period using weather data since 1950. Therefore, the specific design day criteria used by Atmos varied during the review period; however, those variations were not material. Exeter finds Atmos' review period design day criteria selection process to be reasonable and more consistent with industry practice. Exeter notes that Atmos' tariff (5th Revised Sheet No. 45.6) specifies that the Company's projected design day requirements should be based upon the coldest day on record since 1970. Atmos' tariff should be modified to reflect the Company's current practice.

5.2 Design Day Forecast

Atmos develops a linear regression model from daily historical data to develop its design day forecasts for each of the towns or areas identified previously in Table 19. The dependent variable in the Company's models is daily firm sales sendout, and the independent variables include:

- Current-day HDD
- Current-day weather variable
- Prior-day HDD
- Prior-day sendout
- Current-day wind speed
- Day of the week
- Winter month

The current-day weather variable is calculated in the same manner as current-day HDD, but with a base temperature different than 65°F. The variable is selected iteratively as that temperature which results in the highest overall model R-squared. The net effect of this independent variable is that it allows for a bend in the temperature versus demand curve, providing for a better fit for colder temperatures in the data set and, therefore, a better model for use at design day conditions.

A separate regression model is developed to forecast prior-day sendout. The design day forecast reflects the estimate of the linear regression model plus a margin of error. The margin of error is developed using the standard error of each forecast and a 95% confidence interval. Table 20 summarizes Atmos' design day forecasts for the review period. Also identified are

the total capacity resources maintained by the Company to meet forecasted design day requirements and the effective reserve margin. Table 20 includes the forecasted design day demands and capacity resources for the Virginia portion of the East Tennessee service territory. Atmos' current tariff provides that the Company may maintain a 7.5% reserve margin.

A requirement of Exeter's audit is to analyze and evaluate the manner in which Atmos includes the effect of energy conservation in its forecast of design day demands. Exeter's investigation found that the Company does not specifically include conservation or efficiency variables in its design day models. Atmos claims that energy conservation and improved efficiency are implicitly reflected in the Company's design day models because the models include the most recent sendout data, and these data reflect any conservation and efficiency gains. It is Exeter's experience that explicitly including conservation and efficiency in a gas utility's design day projections would not have a material impact on those projections (i.e., approximately 1%).

Table 20. Summary of Review Period Design Day Forecasts (Dth)

Tennessee Service Territory	Winter Season		
	2017-2018	2018-2019	2019-2020
Design Day			
East	170,433	175,683	175,538
Middle	136,883	139,657	139,398
West	8,294	8,180	7,631
Total:	**315,610**	**323,520**	**322,567**
Available Capacity			
East	177,144	177,144	178,144
Middle	128,000	128,000	140,000
West	9,495	9,495	8,495
Total:	**314,639**	**314,639**	**326,639**
Reserve Margin			
East	3.9%	0.8%	1.5%
Middle	-6.5	-8.3	0.4
West	14.5	16.1	11.3
Total:	**-0.3%**	**-2.7%**	**1.3%**

5.3 Actual Peak Day Demands

Table 21 summarizes the natural gas requirements of Atmos' sales customers on the actual peak day observed during each winter season of the review period. Also presented is a comparison of actual peak day sales requirements and projected requirements under actual weather conditions using the Company's design day forecasting models, both exclusive and inclusive of the standard error. This provides an indication of the predictive capability of Atmos' design day forecasting models. Table 21 reveals that the Company's design day models have a tendency to underestimate actual demands during peak periods. Inclusion of

Table 21. Comparison of Projected and Actual Peak Day Sales Requirements

Town/Area	Service Territory	Current-Day HDD	Prior-Day HDD	Current-Day Wind Speed	Actual Firm Sales Sendout (Dth)	Excluding Standard Error (Dth)			Including Standard Error (Dth)		
						Projected Firm Sales Sendout	Deviation	Percent	Projected Firm Sales Sendout	Deviation	Percent
2017-2018 WINTER SEASON – JANUARY 17, 2018											
Bristol	East	53.2	38.4	3.7	18,657	17,985	(672)	-3.6%	18,940	283	1.5%
Kingsport	East	53.2	38.4	3.7	8,838	8,069	(769)	-8.7	8,497	(341)	-3.9
Johnson City	East	53.2	38.4	3.7	21,432	19,522	(1,910)	-8.9	20,693	(739)	-3.4
Greenville	East	53.2	38.4	3.7	5,617	5,234	(383)	-6.8	5,665	48	0.9
Morristown	East	53.2	38.4	3.7	10,067	9,484	(583)	-5.8	10,263	196	1.9
Maryville	East	52.2	45.0	4.4	21,122	20,153	(969)	-4.6	20,930	(192)	-0.9
Shelbyville	East	51.1	54.1	4.6	7,193	7,035	(158)	-2.2	7,492	299	4.1
Columbia/Franklin/Marlboro	Middle	51.1	54.1	4.6	108,683	106,004	(2,679)	-2.5	110,718	2,035	1.9
Union City	West	53.5	57.3	2.1	5,472	5,966	494	9.0	6,485	1,013	18.5
Total:					**207,081**	**199,452**	**(7,629)**	**-3.7%**	**209,683**	**2,602**	**1.3%**
2018-2019 WINTER SEASON – JANUARY 30, 2019											
Bristol	East	44.0	41.0	8.2	17,854	16,731	(1,123)	-6.3%	17,633	(221)	-1.2%
Kingsport	East	44.0	41.0	8.2	7,895	7,375	(520)	-6.6	7,880	(15)	-0.2
Johnson City	East	44.0	41.0	8.2	19,833	18,619	(1,214)	-6.1	19,597	(236)	-1.2
Greenville	East	44.0	41.0	8.2	5,097	4,923	(174)	-3.4	5,370	273	5.3
Morristown	East	44.0	41.0	8.2	8,870	8,632	(238)	-2.7	9,339	469	5.3
Maryville	East	41.0	41.0	6.9	16,679	16,495	(184)	-1.1	17,301	622	3.7
Shelbyville	East	45.0	38.0	6.9	5,688	6,002	314	5.5	6,576	888	15.6
Columbia/Franklin/Marlboro	Middle	45.0	38.0	6.9	92,627	92,043	(584)	-0.6	97,472	4,845	5.2
Union City	West	45.0	39.0	6.3	5,104	5,063	(41)	-0.8	5,574	470	9.2
Total:					**179,647**	**175,882**	**(3,765)**	**-2.1%**	**186,741**	**7,094**	**3.9%**
2019-2020 WINTER SEASON – JANUARY 20, 2020											
Bristol	East	42.0	37.0	6.4	16,267	15,099	(1,168)	-7.2%	16,047	(220)	-1.4%
Kingsport	East	42.0	37.0	6.4	6,908	6,429	(479)	-6.9	6,928	20	0.3
Johnson City	East	42.0	37.0	6.4	18,552	17,084	(1,468)	-7.9	18,126	(426)	-2.3
Greenville	East	42.0	37.0	6.4	4,786	4,342	(444)	-9.3	4,779	(7)	-0.1
Morristown	East	42.0	37.0	6.4	8,023	7,491	(532)	-6.6	8,227	204	2.5
Maryville	East	39.0	35.0	9.8	17,434	15,343	(2,091)	-12.0	16,167	(1,267)	-7.3
Shelbyville	East	41.0	38.0	8.4	6,190	5,323	(867)	-14.0	5,910	(280)	-4.5
Columbia/Franklin/Marlboro	Middle	41.0	38.0	8.4	95,242	84,538	(10,704)	-11.2	90,637	(4,605)	-4.8
Union City	West	40.0	37.0	7.5	4,366	4,416	50	1.1	4,784	418	9.6
Total:					**177,768**	**160,066**	**(17,702)**	**-10.0%**	**171,604**	**(6,164)**	**-3.5%**

a margin of error in the Company's design day forecast compensates for this tendency. Exeter's review of Atmos' design day models revealed that the tendency to underestimate actual results is likely attributable to the inclusion of all winter days in the Company's regression analysis, including relatively warm days. To improve the predictive capability of the Company's design day models, Exeter recommends that Atmos evaluate including only relatively cold days in its analysis (e.g., days with an average daily temperature of 32°F or below).

5.4 Balance of Capacity Resources and Customer Requirements

5.4.1 Combined Tennessee Service Territories

As shown previously in Table 20, the capacity resources available to meet design day demands and the forecasted design day demands for the Middle and East Tennessee service territories were in relative balance at the conclusion of the review period. For the West Tennessee service territory, capacity resources exceeded forecasted design day demands. The excess capacity maintained for the West Tennessee service territory is subsequently addressed in Section 5.4.2 of the Report. Atmos' PBRM tariff provides that a capacity reserve margin of 7.5% or less is presumed to be reasonable. As shown in Table 20, even with the significant capacity reserve margin in the West Tennessee service territory, Atmos' capacity reserve margin was less than 7.5% during the review period. The Company has indicated that for planning purposes, it will typically maintain a capacity reserve margin of between 0% and 5%, depending on whether the demand in a particular service territory is increasing, stable, or decreasing.

As shown in Table 20 and just explained, with the exception of the West Tennessee service territory, Atmos' design day capacity resources and requirements are in relative balance. However, the Company maintains capacity resources in excess of its requirements during all other times of the year. Atmos' total firm sales requirements during the winter of 2019-2020 were approximately 14,000,000 Dth.[6] Atmos' winter season capacity resources total approximately 35,000,000 Dth.[7] Atmos' total firm sales requirements during the year ended March 31, 2020 were approximately 19,000,000 Dth.[8] Atmos' annual capacity resources total approximately 85,000,000 Dth.[9] The potential for Atmos to adjust its capacity resources to better match its load requirements is addressed in Section 5.5 of this Report.

5.4.2 West Tennessee Service Territory

For the winters of 2017-2018 and 2018-2019, in its West Tennessee service territory, which is served exclusively by Texas Gas, Atmos maintained approximately 1,300 Dth more capacity than was required to meet the design day demands of sales customers. For these two winter seasons, Atmos maintained 7,495 Dth of Texas Gas capacity under Rate Schedule SGT and

[6] Based on the response to discovery request Set No. 1, Question No. 1-02.

[7] See Table 3 in Section 2.3.

[8] Based on the response to discovery request Set No. 1, Question No. 1-02.

[9] See Table 3 in Section 2.3.

2,000 Dth of Texas Gas capacity under Rate Schedule STF to meet the design day demands of customers in its West Tennessee service territory. No demand charges are assessed under Rate Schedule SGT and the current variable charge is approximately 66¢/Dth, while the variable charge under Rate Schedule STF is approximately 4¢/Dth. While no demand charges are assessed under Rate Schedule SGT, Texas Gas' FERC tariff provides for a Minimum Contribution to Fixed Costs (MCFC) for SGT customers by zone. If the MCFC for a particular zone is not met on an annual basis, SGT customers in that zone are billed for the deficiency. Thus, while Atmos' use of SGT capacity will affect its MCFC charges, use of SGT capacity by other customers also affects Atmos' MCFC charges. During the review period, Atmos was billed [redacted] in MCFC deficiency charges.

SGT capacity provides a valuable no-notice service for Atmos and this capacity is grandfathered by Texas Gas, meaning that any SGT capacity turned back to Texas Gas cannot be reacquired in the future. Atmos contracts for STF capacity to reduce SGT commodity charges.

In the prior audit conducted by Exeter, Atmos claimed that the combination of using Texas Gas SGT and STF capacity was less expensive during winters that are normal and colder than normal, and the MCFC charges incurred by Atmos during the review period in that prior audit were largely incurred during warmer-than-normal winters. Prior to the winter of 2019-2020, Atmos reduced its Texas Gas STF capacity from 2,000 Dth to 1,000 Dth, which reduced its total capacity for the West Tennessee service territory to 8,495 Dth. During the audit period, the forecasted winter design day demand for the West Tennessee service territory averaged 8,055 Dth, which would indicate a reserve margin of 460 Dth, or 5.4%. Given this reserve margin, Exeter recommends no further adjustments to Atmos' Texas Gas STF capacity entitlement.

5.5 Capacity Portfolio Modifications

The RFP Scope of Review for Exeter's evaluation included examination and identification of: (a) the cost of firm transportation utilized by Atmos during the review period to meet design day demands; (b) the potential cost of meeting peak demand with more seasonal firm transportation and less year-round firm transportation; and (c) the potential cost of meeting peak demand with more year-round firm transportation and less seasonal firm transportation. The Scope of Review also required examination of the availability of seasonal firm transportation, the term lengths offered, and the associated benefits and risks. Exeter interprets this aspect of the Scope of Review as requiring an evaluation of whether Atmos' annual interstate pipeline transportation demand charges can be reduced by modifying the Company's current capacity portfolio. Exeter also evaluated the costs associated with the various storage services purchased by Atmos.

The demand charges associated with each interstate pipeline firm transportation service contract in effect and each AMA delivered service available at the conclusion of the review period that was not exclusively utilized in conjunction with a storage service is summarized in Table 22. As shown in Table 22, these charges currently total approximately [redacted]

Table 22. Summary of Annual Delivery Service Demand Charges at the Conclusion of the Audit Period

	Contract No.	Service Territory	MDQ (Dth) Winter	MDQ (Dth) Summer	Demand Charge ($/Dth) Winter	Demand Charge ($/Dth) Summer	Annual Demand Charges
CITY GATE RESOURCES							
[redacted]							

[1] Charges prior to Virginia jurisdictional allocation.

[2] Daily rate converted to monthly rate.

per year. As indicated previously, Atmos maintains excess year-round firm transportation capacity. If possible, the Company could reduce its pipeline demand charges by decreasing year-round capacity and placing greater reliance on winter season capacity or delivered supply services.

Atmos has indicated that it has discussed the availability of multi-year, winter-only capacity with representatives of each of the interstate pipelines serving the Company's Tennessee service territories. Texas Gas was the only pipeline that would make a multi-year commitment to providing winter-only firm transportation under its STF service tariff, which Atmos is currently utilizing in its West Tennessee service territory. The Company has indicated that other pipelines may offer winter-only service one winter at a time when they have capacity at the end of the summer season that they would not be able to otherwise market. However, this does not provide for the long-term reliable service Atmos requires.

A natural gas utility such as Atmos cannot ensure service reliability by deferring contracting decisions until just prior to the beginning of a winter season. TGP, Texas Eastern, and Columbia Gulf have indicated that they do not offer new multi-year, winter-only capacity. Atmos currently reserves winter-only capacity on ETNG under FT-A Contract No. 30777. However, the use of this capacity is limited to the delivery of LNGS storage withdrawals under Contract No. 33245. Currently, there is no additional winter-only capacity available on ETNG. The Company's claims concerning the unavailability of winter season arrangements are consistent with Exeter's experience.

As previously discussed in Section 3.4 of the Report, Atmos has obtained discounts from the maximum FERC-approved demand charges under a number of the Company's firm transportation contracts. Therefore, Atmos is currently charged less for capacity under a number of its firm transportation contracts than the FERC-approved maximum charges. This is equivalent to paying the FERC-approved maximum charges for less than the entire year.

[redacted]

The charges associated with each of Atmos' contract storage arrangements at the conclusion of the review period are summarized in Table 23. Also, where applicable and exclusively used for the delivery of gas to and/or from storage, the costs of the associated firm transportation contracts are identified.

Table 23. Summary of Annual Contract Demand Storage Charges at the Conclusion of the Audit Period

			Storage Service			Transportation Service	
Pipeline/Provider - Service	Contract No.	Service Territory	Seasonal Capacity (Dth)	Annual Cost	Unit Cost ($/Dth)	Annual Cost	Unit Cost ($/Dth)
[redacted]							

[1] Service bundled with transportation service.

[2] No demand charges. Transported under Texas Gas SGT arrangement that also provides for the delivery of non-storage supplies.

[3] Delivered under ETNG FT-LNGS transportation Contract No. 30777.

[4] Charges prior to Virginia jurisdictional allocation.

[5] Transported under TGP FT-A arrangements that also provide for the delivery of non-storage supplies.

[6] Transported under Texas Eastern FT-1 Contract No. 91800 that also provides for the delivery of non-storage supplies.

[7] Delivered to the East Tennessee service territory by TGP and subsequently ETNG, and to the Middle Tennessee service territory by Texas Eastern.

[8] Transported under ETNG FT-A arrangements that also provide for the delivery of non-storage supplies.

[9] Delivered by exchange by the Asset Manager via Texas Gas, Columbia Gulf, and Texas Eastern.

[10] Delivered to the East Tennessee service territory by TGP and subsequently ETNG, and to the Middle Tennessee service territory by Columbia Gulf.

6. Assessment of PBRM Incentives and Design

Section 6 of Exeter's Report begins with a comparison of Atmos' PBRM with the gas procurement incentive mechanisms of Piedmont Natural Gas Company (Piedmont) and Chattanooga Gas Company (Chattanooga). This comparison is provided for informational purposes as well as to assist in addressing several aspects of Atmos' PBRM identified in the RFP Scope of Review. In addition to Tennessee, Exeter's experience in reviewing PBRM-type mechanisms in other jurisdictions includes the now terminated programs of Nicor Gas Company in Illinois; Vectren North, Vectren South, and Citizens Gas & Coke Utility in Indiana; and the ongoing program of Northern Indiana Public Service Company. In a number of jurisdictions in which Exeter performs gas cost procurement reviews, capacity release revenues, off-system sales margins, and AMA fees are subject to sharing with the utility. These jurisdictions include Delaware, Louisiana, Massachusetts, Ohio, and Pennsylvania. Section 6.2 examines the balance of incentives and cap under the PBRM.

6.1 Comparison of Atmos PBRM with Similar Incentive Mechanisms of Other Tennessee Natural Gas Distribution Companies

6.1.1 Atmos Performance Based Ratemaking Mechanism

Atmos' PBRM consists of a Gas Procurement Incentive Mechanism, a Capacity Management Incentive Mechanism, an Avoided Cost Incentive Mechanism, and an Off-System Sales Revenue Incentive Mechanism. The GPIM establishes a predefined benchmark index to which Atmos' actual commodity cost of gas is compared. On a monthly basis, Atmos' actual commodity cost of gas is compared to a benchmark amount. The benchmark amount is determined by multiplying actual monthly and daily purchase quantities in a month by the appropriate monthly and daily published index prices. The GPIM provides for a 75% sales customer and 25% Atmos sharing of the difference between actual and benchmark costs.

Under the CMIM, to the extent Atmos is able to release transportation or storage capacity, the associated revenues are shared by Atmos' sales customers and Atmos on a 75% / 25% basis, respectively. The CMIM also addresses the sharing of AMA fees which are shared between sales customers and Atmos on a 90% / 10% basis, respectively.

The ACIM is designed to encourage Atmos to explore ways to reduce upstream fixed and variable capacity costs associated with the transportation of gas supplies. Avoided costs can be achieved through delivered services, transportation discounts obtained from pipelines, the acquisition of discounted released capacity, variation from an existing transportation delivery path, or the acquisition of seasonal capacity that avoids year-round demand charges. ACIM savings are shared between sales customers and Atmos on an 85% / 15% basis, respectively.

The OSIM is designed to encourage the Company to generate revenue from the off-system sale of gas supplies. The net margins on off-system sales are determined based on published index prices and are shared between sales customers and the Company on a 75% / 25% basis, respectively. Atmos' total share of savings under the PBRM are capped at $2.0 million

per year. Atmos' share of PBRM savings was limited by the $2.0 million cap during each year of the review period evaluated in the Report.

An Incentive Plan Account Filing (IPA Filing) is submitted by Atmos to the TPUC for each Plan Year. TPUC Staff audits each IPA Filing and presents its findings in a Compliance Audit Report (Audit Report). TPUC Staff's Audit Reports for the review period identified no material findings. Table 7, presented in Section 3.1 of the Report, previously summarized Atmos' performance under the PBRM during the review period.

6.1.2 Piedmont Performance Incentive Plan

The incentive mechanism under which Piedmont operates is referred to as the gas cost Performance Incentive Plan (PIP). Piedmont's PIP consists of three components: (1) a commodity procurement cost component; (2) a supplier reservation fee component; and (3) a capacity management component. Under the commodity procurement cost component of the PIP, Piedmont's actual total monthly city gate (delivered) commodity cost of gas is compared to a monthly benchmark cost. The actual total city gate commodity cost of gas includes the amount paid for gas supply commodity purchases, plus the applicable pipeline fuel and variable transportation charges associated with delivering gas from the purchase (receipt) point to Piedmont's system. The commodity procurement cost component provides for a 75% ratepayer and 25% Piedmont sharing of the difference between actual and benchmark costs.

Under the commodity procurement cost component of the PIP, separate benchmarking procedures are used for first-of-the-month (FOM) and daily purchases. FOM benchmark costs are based on a price that reflects published index prices weighted by the amount of interstate pipeline receipt point capacity Piedmont reserves at each of its purchase locations. For example, if 60% of Piedmont's interstate pipeline capacity portfolio consisted of TGP capacity and the remaining 40% was Columbia Gulf capacity, Piedmont's FOM benchmark costs would be based on a 60% / 40% weighting of TGP and Columbia Gulf published FOM index prices, respectively. Daily spot market purchases are benchmarked against actual daily published index prices at the purchase location, similar to the approach used for Atmos' daily spot market purchases. City gate purchases are benchmarked in the same manner as daily spot market purchases, with the exception that the maximum interruptible pipeline transportation charges are included in the benchmark rather than only including variable firm transportation charges. During Exeter's most recent completed review of Piedmont's PIP, which encompassed the period July 1, 2017 through June 30, 2020, all of the rewards realized by Piedmont under the commodity procurement cost component were generated by FOM and citygate purchases.

Under the supplier reservation fee component of the PIP, Piedmont is entitled to recover 100% of its gas supply reservation fees with no gain or loss potential. Piedmont operated under AMAs during the audit period and did not incur any supplier reservation fees.

The capacity management component of Piedmont's PIP provides that the revenues (margins) realized from capacity release and off-system sales activities, as well as AMA fees, be subject to the same 75% ratepayer and 25% Piedmont sharing procedures as commodity

procurement cost component savings/losses. Piedmont's PIP includes a $1.6 million sharing cap. During the period most recently reviewed by Exeter, the $1.6 million sharing cap limited Piedmont's reward under the PIP in one year by a relatively insignificant amount.

6.1.3 Chattanooga Performance Based Ratemaking Mechanism

The gas cost incentive plan under which Chattanooga operates is also referred to as the Performance Based Ratemaking Mechanism. Chattanooga also operates under a separate Interruptible Margin Credit Rider (IMCR) that addresses the sharing of revenues (margins) generated from capacity release and off-system sales activities, as well as AMA fees.

Under Chattanooga's PBRM, each month, Chattanooga's actual commodity cost of gas is compared to a monthly benchmark amount. For FOM and daily purchases, the benchmark amount is based on the applicable published index price for the location at which the gas was purchased. For city gate purchases, Chattanooga's PBRM provides for the inclusion of the avoided transportation charges that would have been paid if upstream capacity were purchased versus the demand charges paid to the supplier.[10] If Chattanooga's total actual commodity gas costs for a plan year do not exceed the total benchmark amount by 1%, Chattanooga's gas costs are deemed prudent and the audit required by TRA Administrative Rule 1220-4-7-.05 is waived. If, during any month of a plan year, Chattanooga's commodity gas costs exceed the benchmark amount by greater than 2%, Chattanooga is required to file a report with the TRA fully explaining why costs exceeded the benchmark. There is no sharing of any savings or losses under Chattanooga' PBRM. Exeter's most recent review of Chattanooga's PBRM encompassed the period July 1, 2016 through March 31, 2019. For this review period, Chattanooga's actual gas costs were less than benchmark costs and did not exceed 1% during any plan year.

Chattanooga's IMCR provides for a 50% ratepayer, 50% company sharing of the revenues (margins) generated from capacity release and off-system sales activities, as well as AMA fees. There is no cap on the amounts eligible for sharing under the IMCR.

6.2 Balance of Incentives and PBRM Cap

6.2.1 Gas Procurement Incentive Mechanism

The GPIM provided for a 75% sales customer and 25% Atmos sharing of the difference between actual and benchmark costs. Under the PBRM that existed prior to the existing PBRM which was approved in Docket No. 16-00028, the GPIM provided for a 50% sales customer and 50% Atmos sharing. In its 2015 PBRM Report, Exeter found that the 50% / 50% sharing of the difference between actual and benchmark costs provided a reasonable balance of incentives and was consistent with the sharing procedures adopted in other jurisdictions. However, as initially explained in Section 2.2, Atmos was able to generate savings under the

[10] Chattanooga has interpreted upstream transportation charges to include variable charges, while Atmos has interpreted this provision to include demand charges. Inclusion of avoided demand charges in Chattanooga's PBRM calculation would not have changed Chattanooga's PBRM results.

GPIM as a result of the commodity index price discounts provided under the review period AMAs (see Table 4 in Section 2.3). Typically, AMAs provide for the payment of a fee by the Asset Manager rather than commodity index price discounts. The fees paid by an Asset Manager are subject to a 90% sales customer and 10% Atmos sharing under the CMIM component of the PBRM.

Exeter finds that the review period AMAs which provided for commodity index price discounts rather than the payment of a fee by the Asset Manager may have circumvented the intent of the sharing provisions included in the PBRM approved in Docket No. 16-00028. However, it is not Exeter's position that Atmos structured its review period AMAs to circumvent the intent of the PBRM sharing provisions. The RFPs issued by Atmos for AMA services provided potential bidders the opportunity to offer commodity price discounts, a fixed fee, or a combination of the two, and Atmos selected the AMAs providing the greatest benefit to its customers. Exeter recognizes that the AMA that was in effect during the period April 1, 2016 through March 31, 2019, went into effect prior to the PBRM approved in Docket No. 16-0028. Exeter is uncertain as to whether TRA Staff and CAD, which were parties to Docket No. 16-00028 and the settlement in that docket, were aware that the AMA in place at the time included the commodity index price discounts rather than an AMA fee. Absent the savings resulting from the commodity index price discounts, Exeter finds the 75% / 25% sharing provisions under the GPIM provide less of an incentive to similar incentive mechanisms in other jurisdictions. If the commodity index price discounts were shared on the same 90% / 10% basis as AMA fees, Atmos' share of PBRM review period savings would have been reduced by approximately [redacted]

6.2.2 Capacity Management Incentive Mechanism

Capacity release revenues are shared by sales customers and Atmos on a 75% / 25% basis, respectively. AMA fees are shared on a 90% / 10% basis, respectively. Exeter's 2015 PBRM Report found that the CMIM capacity release and AMA fee sharing percentages reasonable and consistent with the sharing percentages adopted in other jurisdictions. That finding remains unchanged in this report.

6.2.3 Avoided Cost Incentive Mechanism

ACIM savings are shared between sales customers and Atmos on an 85% / 15% basis, respectively. ACIM savings accounted for nearly 70% of total review period PBRM savings, and approximately 40% of the ACIM savings were associated with discounts from the FERC-approved maximum demand charges under Atmos' interstate pipeline firm transportation contracts. Demand charge discounts were not included in the PBRM reviewed by Exeter in its 2015 PBRM Report. Demand charge savings associated with delivered supplies were included in the PBRM reviewed in Exeter's 2015 PBRM Report, and are also included in the current PBRM.

Exeter has not encountered a gas cost incentive mechanism in another jurisdiction that provided for a sharing of savings associated with demand change discounts. It is Exeter's experience that gas utilities actively pursue demand charge discounts without an incentive

providing for the sharing of savings. The incentive programs of Piedmont and Chattanooga do not provide for a sharing of demand charge discount savings. Exeter recently conducted a review of the gas purchasing practices of another gas utility that was able to obtain demand charge discounts on an interstate pipeline that were identical to the discounts obtained by Atmos. The incentive program under which the other utility operated did not provide for the sharing of demand charge discounts. Interstate pipelines must offer demand charge discounts on a non-discriminatory basis.

An ongoing daily level of effort is not required to realize demand charge discount savings under contracts with multi-year terms. With respect to achieving a balance of incentives between ratepayers and the Company for discounted demand charges, an alternate sharing approach may be appropriate.

Currently under the ACIM, if Atmos replaces a current Benchmark Path transportation arrangement with a lower-cost arrangement, the Company is entitled to share these savings for a one-year period. Exeter believes similar sharing provisions for discounted demand charge savings would provide a more reasonable balance of incentives between Atmos and its ratepayers.

6.2.4 Off-System Sales Revenue Incentive Mechanism

Under the OSIM, net margins from off-system sales are shared between customers and the Company on a 75% / 25% basis, respectively. During the review period, Atmos operated under AMAs which provided for the assignment of all of its interstate pipeline capacity to an Asset Manager and, therefore, Atmos did not maintain pipeline capacity to engage in off-system sales activities. Nevertheless, consistent with findings in the 2015 PBRM Report, Exeter finds the current OSIM sharing percentages reasonable and consistent with those approved in other jurisdictions.

6.2.5 Performance Based Ratemaking Mechanism Cap

The current PBRM provides for a $2.0 million annual cap on Atmos' share of savings. During each year of the review period, Atmos' share of PBRM savings was limited by approximately 10% due to the $2.0 million cap. Exeter's review did not find that $2.0 million cap reduced Atmos' incentive or efforts to realize rewards under the PBRM, nor did it identify cost-savings opportunities that were not pursued by Atmos. In addition, as discussed above, the AMA commodity rate discounts and associated savings realized by Atmos during the review period may have been inconsistent with the intent of the 2016 Settlement in Docket No. 16-00028, and the demand charge discount savings would have likely been realized by Atmos even if they were not included in the ACIM. For these reasons, Exeter recommends that the $2.0 million cap be maintained.

7. Findings of Fact, Summary of Conclusions, and Recommendations

7.1 Findings of Fact

Exeter's review period findings of fact are as follows:

- Atmos purchased firm transportation and storage services from Texas Gas Transmission, Columbia Gulf Transmission, Texas Eastern Transmission, Eastern Gas Transmission and Storage, Tennessee Gas Pipeline, Southern Natural Gas Company, East Tennessee Natural Gas, Saltville Storage Company, Monroe Gas Storage Company, and Jefferson Island Storage & Hub Company during the review period.
- During the review period, Atmos operated under two Asset Management Agreements selected through an RFP process that were approved by the TPUC.
- Atmos served an average of 147,300 sales and transportation customers during the review period, and annual throughput averaged nearly 26,200,000 Dth.
- PBRM savings during the review period totaled $35.2 million, and Atmos' share of PBRM savings was $6.0 million.
- Atmos assigned all of its interstate pipeline capacity to its Asset Managers during the review period and did not engage in off-system sales activity.
- Atmos did not engage in financial hedging activities to mitigate the volatility of its gas costs during the review period.

7.2 Summary of Conclusions

Exeter's investigation of Atmos' review period gas procurement activity under the PBRM has reached the following conclusions:

- Exeter's review found the published index prices utilized to price supplies purchased under Atmos' review period AMAs and the published index prices used in the calculation of the benchmarks under the PBRM to be reasonable and appropriate.
- The exclusion of Columbia Gulf cashout purchases from the GPIM is reasonable since they are largely attributable to factors beyond the Company's control.
- Atmos' gas supply commodity purchases during the review period were consistent with least-cost procurement standards.
- Exeter finds Atmos' review period design day criteria selection process to be reasonable and consistent with industry standards.

- Exeter finds that Atmos' review period AMAs, which provided for commodity index price discounts rather than the payment of a fee by the Asset Manager, may have circumvented the intent of the sharing provisions included in the PBRM approved in Docket No. 16-00028. However, it is not Exeter's position that Atmos structured its review period AMAs to circumvent the intent of the PBRM sharing provisions. The RFPs issued by Atmos for AMA services provided potential bidders the opportunity to offer commodity price discounts, a fixed fee, or a combination of the two, and Atmos selected the AMAs providing the greatest benefit to its customers. Exeter recognizes that the AMA that was in effect during the period April 1, 2016 through March 31, 2019, went into effect prior to the PBRM approved in Docket No. 16-00028. Exeter is uncertain as to whether TRA Staff and CAD, which were parties to Docket No. 16-00028 and the settlement in that docket, were aware that the AMA in place at the time included the commodity index price discounts rather than an AMA fee. Excluding the savings resulting from the commodity index price discounts, Exeter finds the 75% / 25% sharing provisions under the GPIM provide less of an incentive than similar incentive mechanisms in other jurisdictions. If the review period commodity index price discounts were shared on the same 90% / 10% basis as AMA fees, Atmos' share of PBRM review period savings would have been reduced by approximately [redacted]

- Atmos' design day forecasting models revealed a tendency to understate actual results during peak periods. The inclusion of a margin of error in the Company's forecasts compensates for this tendency.

- Atmos' design day capacity resources and requirements are in relative balance. Atmos maintains capacity resources in excess of its requirements during all other times of the year.

- Although a portion of Atmos' capacity portfolio currently consists of delivered supply services, Atmos could reduce its interstate demand charges by decreasing year-round pipeline capacity and placing greater reliance on delivered supply services or winter seasonal capacity; however, winter seasonal capacity alternatives to year-round capacity arrangements are not currently available. It should be recognized that Atmos has obtained discounts from the maximum FERC-approved demand charges under a number of the Company's firm transportation contracts. Therefore, Atmos is currently charged less for capacity under a number of its firm transportation contracts than the FERC-approved maximum charges. This is equivalent to paying the FERC-approved maximum charges for less than the entire year. For example, the discount applicable under Texas Eastern Contract No. 91193 is nearly equivalent to paying the FERC-approved maximum rates for winter-only capacity.

- Exeter finds the current Off-System Sales Revenue Incentive Mechanism sharing percentages to be reasonable and consistent with those approved in other jurisdictions.

- Atmos' tariff (5th Revised Sheet No. 45.6) specifies that the Company's projected design day requirements should be based upon the coldest day on record since 1970. During the review period, Atmos changed its design day criteria and began using design day criteria with a probability of occurrence of once every 30 years. Atmos' tariff should be modified to reflect the Company's current practice.

7.3 Recommendations

Exeter's recommendations concerning Atmos' PBRM are as follows:

- If, as a result of the recent increase in the volatility of gas commodity prices, the TPUC Staff and CAD believe it would be appropriate for Atmos to hedge a portion of its gas costs to mitigate gas cost rate volatility, Exeter believes it would be appropriate for the PBRM to be modified to ensure that hedging gains and losses are excluded from the calculation of GPIM savings or costs.

- Exeter's review found that Atmos' storage inventory planning criteria were generally reasonable, consistent with the criteria used by other gas distribution companies, and the Company generally adhered to those criteria. Therefore, Atmos' review period storage activity generally appears reasonable.

- Avoided Cost Incentive Mechanism savings are shared between sales customers and Atmos on an 85% / 15% basis, respectively. ACIM savings accounted for nearly 70% of total review period PBRM savings, and approximately 40% of the ACIM savings were associated with discounts from the FERC-approved maximum demand charges under Atmos' interstate pipeline firm transportation contracts. Exeter has not encountered a gas cost incentive mechanism in another jurisdiction that provided for a sharing of savings associated with demand charge discounts. It is Exeter's experience that gas utilities actively pursue demand charge discounts without an incentive, providing for the sharing of savings. The incentive programs of Piedmont and Chattanooga do not provide for a sharing of demand charge discount savings. Exeter recently conducted a review of the gas purchasing practices of another gas utility that was able to obtain demand charge discounts on an interstate pipeline that were identical to the discounts obtained by Atmos. The incentive program under which the other gas utility operated did not provide for the sharing of demand charge discounts. Interstate pipelines must offer demand charge discounts on a non-discriminatory basis. An ongoing daily level of effort is not required to realize demand charge discount savings under contracts with multi-year terms. With respect to achieving a balance of incentives between ratepayers and the Company for discounted demand charges, an alternate sharing approach may be appropriate. Currently under the ACIM, if Atmos replaces a current Benchmark Path transportation arrangement with a lower-cost arrangement, Atmos is entitled to share these savings for a one-year period. Exeter believes similar sharing provisions for discounted demand charge savings would provide a more reasonable balance of incentives between Atmos and its ratepayers.

- The current PBRM provides for a $2.0 million annual cap on Atmos' share of savings. During each year of the review period, Atmos' share of PBRM savings was limited by approximately 10% due to the $2.0 million cap. Exeter's review did not find that the $2.0 million cap reduced Atmos' incentive or efforts to realize rewards under the PBRM, nor did it identify cost-savings opportunities that were not pursued by Atmos. In addition, as discussed above, the AMA commodity rate discounts and associated savings realized by Atmos during the review period may have been inconsistent with the intent of the 2016 Settlement in Docket No. 16-00028, and the interstate pipeline demand charge discount savings would have likely been realized by Atmos even if they were not included in the PBRM. For these reasons, Exeter recommends that the $2.0 million cap be maintained.

Appendix A – RFP Scope of Review

The consultant should provide the following services for the period April 1, 2017 through March 31, 2020 (Review Period):

1. Review and analysis of the transactions and activities undertaken by Atmos Energy Corporation ("Atmos") during the Review Period under the PBRM including but not limited to, the following areas of transactions and activities: (a) natural gas procurement; (b) capacity management; (c) storage; (d) hedging; (e) reserve margin; and (f) off-system sales.

2. Identification of Atmos' city gates serving its Tennessee service area consisting of the points and measuring stations at which Atmos receives natural gas from each respective pipeline transmission company and identification of the meters measuring the amount of gas flowing into Atmos' Tennessee systems from those pipeline transmission companies.

3. Review and examination of the levels of peak and non-peak, as well as design day and non-design day, firm capacity under Atmos' pipeline transmission company contracts and assessment as to whether such capacity levels are reasonably appropriate in light of both actual and projected demand requirements.

4. Review, identification, and comparison of the transportation costs charged to Atmos' Tennessee customers with the costs charged to Atmos under its pipeline transmission company contracts.

5. Examination and identification of: (a) the manner in which Atmos forecasts its design day demand; (b) Atmos' forecast of peak demand for its Tennessee service area for the Review Period; and (c) actual peak demand for its Tennessee service area for the Review Period as metered at Atmos' city gates

6. Examination and identification of the various transportation commodity costs charged under each pipeline transmission company service contracted for by Atmos during the Review Period and the relationship between such tariff transportation commodity costs and the transportation commodity costs billed to Atmos' Tennessee ratepayers

7. Examination and identification of: (a) the cost of year-round firm transportation and seasonal firm transportation utilized by Atmos during the Review Period to meet peak demand; (b) the potential cost of meeting peak demand with more seasonal firm transportation and less year-round firm transportation; and (c) the potential cost of meeting peak demand with more year-round firm transportation and less seasonal firm transportation. Also examine the availability of seasonal firm transportation, the term lengths offered, and the associated benefits and risks.

8. Review and assessment of Atmos' decision not to engage in hedging during the review period.

9. Review of the published indexes used in the calculation of the benchmarks in Atmos' PBRM.

10. The appropriateness and calculation of any adjustments made for avoided transportation costs for city gate purchases (if any) versus the demand charges actually paid to suppliers.

11. Evaluation of the balance of incentives between consumers and Atmos under the PBRM.

Appendix B – Atmos Energy Corporation – Performance Based Ratemaking Mechanism Rider Tariff

PERFORMANCE BASED RATEMAKING MECHANISM RIDER

Applicability

The Performance-Based Ratemaking Mechanism (the PBRM) replaces the reasonableness or prudence review of the Company's gas purchasing activities overseen by the Tennessee Regulatory Authority (the Authority) in accordance with Rule 1220-4-7-.05, Audit of Prudence of Gas Purchases. This PBRM is designed to encourage the utility to optimize its gas purchasing activities consistent with efficient operations and service reliability, and will provide for sharing of benefits or costs between the Company and the Company's customers. Each plan year will begin April 1. The annual provisions and filings herein will apply to this annual period. The PBRM will continue until it is either (a) terminated at the end a plan year by not less than 90 days' notice by the Company to the Authority or (b) modified, amended or terminated by the Authority.

Overview of Structure

The Performance-Based Ratemaking Mechanism consists of four parts;

A. Gas Procurement Incentive Mechanism

B. Capacity Management Incentive Mechanism

C. Avoided Cost Incentive Mechanism

D. Off System Sales Revenue Incentive Mechanism

Gas Procurement Incentive Mechanism

The Gas Procurement Incentive Mechanism (the GPIM) establishes a predefined benchmark index to which the Company's commodity cost of gas is compared. It also addresses the use of financial instruments or private contracts in managing gas costs. For commodity costs, on a monthly basis, the Company will compare its commodity cost of gas to the appropriate benchmark amount. The benchmark amount will be computed by multiplying actual purchase quantities for the month, including quantities purchased for injection into storage, by the appropriate price index. For monthly baseload purchases, the price index will be the appropriate *Inside FERC Gas Market Report* first of the month price for that particular month. For incremental swing purchases, the published *Platts's Gas Daily daily mid- point price* for the business day of gas flow will be used as the index. The net incentive benefits or costs from the GPIM will be shared between the Company's customers and the Company on a 75%/25%basis.

Capacity Management Incentive Mechanism

The Capacity Management Incentive Mechanism (the CMIM) is designed to encourage the Company to market off-peak unutilized transportation and storage capacity on upstream pipelines in the secondary market. It includes all credits the Company receives through its transportation invoice from the release of portions of its transportation contracts via pipelines' electronic bulletin boards/customer activity websites. Net incentive benefits or costs from capacity release will be shared between the Company's customers and the Company on a 75%/25% basis. It also addresses the sharing of asset management fees paid by asset managers, and other forms of compensation received by the Company for the release and/or utilization of the company's transportation and storage assets by third-parties. The net incentive benefits from asset management fees will be shared between the Company's customers and the Company on a 90% /10% basis.

Avoided Cost Incentive Mechanism

The Avoided Cost Incentive Mechanism (the ACIM) is designed to encourage the Company to explore ways to reduce upstream fixed and variable capacity costs associated with the transportation of gas commodity. Avoided cost can be accomplished through delivered service, transportation discounts obtained directly with the pipeline, indirectly through the acquisition of discounted released capacity, through variation from the Benchmark Path, or through the acquisition of seasonal capacity that avoids year round demand charges. Avoided Cost equals, on an annual basis, Total Benchmark Transportation Cost less Total Actual Transportation Cost. Total Benchmark Transportation Cost equals the total demand and variable transportation costs to purchase transportation services for the Company's peak day requirement plus reserve margin at tariff max rates using the Benchmark Path. The initial Benchmark Path is the path followed by Atmos Energy's current contracts and is set-forth in the Settlement Agreement in Docket No. 16- 00028. If Atmos Energy changes the path or capacity on any of the contracts that form the Benchmark Path, then one year from the effective date of the change the path and capacity from the new contract will become part of the Benchmark Path. During that one year period, savings will be determined by comparing the actual transportation cost of the new contract with the cost using the path for the old contract (priced at published FERC tariff max rates for the old contract's path); provided, however, that if the total capacity of the new contract exceeds that of the old contract, then the old contract's path will be used for comparison only up to the capacity of the old contract, and above that the new contract's path will be used for comparison. Following that one year period, savings on the new contract will be determined by comparing the actual transportation cost for the new contract against the cost for the new contract's path and capacity priced at published FERC tariff max rates. The capacity amounts in the Benchmark Path may be adjusted by the Company to account for any change in the Company's peak day requirement plus reserve margin, with such changes to be filed no later than 60 days after such adjustment. Resulting changes to the Benchmark Path shall become effective coincident with the effective date of the incremental transportation agreement; and the actual path and capacity of the incremental transportation agreement will become part of the Benchmark Path. Total Actual Transportation Cost equals the Company's actual annual total demand and variable transportation costs. For avoidance of doubt, whenever savings are calculated under the ACIM, the benchmark price used for comparison will always be the published FERC tariff max rate. Net savings under this mechanism shall be shared between the Company's customers and the Company on an 85%/15% basis.

Off-system Sales Revenue Incentive Mechanism

The Off-system Sales Revenue Incentive Mechanism (the OSIM) is designed to encourage the Company to generate revenue from off-system sales of excess natural gas commodity. Off-system sales occur after the gas requirements of Atmos' sales customers have been met and include direct sales of gas to third parties who are not subject to gas cost adjustment under the Purchased Gas Adjustment Clause in the Company's tariff. Net Margin on such off-system sales will be defined as the difference between the sales proceeds and the total variable costs incurred by the Company in connection with the transaction, including transportation and gas costs, taxes, fuel or other costs. For this calculation, in computing gas costs the Company will impute such costs for its related supply purchases at the benchmark first-of-the-month or daily index, as appropriate, on the pipeline and in the zone in which the sale takes place. Net Margin will be shared between the Company's customers and the Company on a 75%/25% basis.

Affiliate Transactions

The following guidelines present the minimum conditions deemed necessary to ensure that affiliate transactions between the Company and its affiliate(s) do not result in a competitive advantage over others providing similar services. These guidelines will remain in effect as long as the Company is operating under a performance based ratemaking plan. These guidelines may fail to anticipate certain specific methods by which such advantages may be conferred by the Company on its marketing affiliates. All Parties should be aware that to the extent such instances arise in the future, they will be judged according to this stated intent.

Definitions:

Terms used in these guidelines have the following meanings:

1. Affiliate, when used in reference to any person in this standard, means another person who controls, is controlled by, or is under common control with, the first person.

2. Control (including the terms "controlling", "controlled by", and "under common control with"), as used in this standard, includes, but is not limited to, the possession, directly or indirectly and whether acting alone or in conjunction with others, of the authority to direct or cause the direction of the management or policies of a company. Under all circumstances, beneficial ownership of more than ten percent (10%) of voting securities or partnership interest of an entity shall be deemed to confer control for purposes of these guidelines of conduct.

3. Marketing, as used in this standard, means selling or brokering natural gas to any person or entity, including the Company, by a seller that is not a local distribution company.

Standards of Conduct:

The Company must conduct its business to conform to the following standards:

1. If there is discretion in the application of tariff provisions, then the Company must apply such provisions relating to any service being offered in a consistent manner to all similarly situated entities.

2. The Company must strictly enforce a tariff provision for which there is no discretion in the application of the provision.

3. The Company must process all similar requests for services in the same manner and within the same period of time.

4. The Company may not give its marketing affiliate preference over nonaffiliated companies in natural gas supply procurement activities.

5. The Company may not give its marketing affiliate preference over nonaffiliated companies in its upstream capacity release activities.

6. The Company may not disclose to its marketing affiliate any information that the local distribution company receives from a non-affiliated marketer, unless the prior written consent of the parties to which the information relates has been voluntarily given.

7. To the extent the Company provides information related to its natural gas supply activities and upstream capacity release activities, it must do so contemporaneously to all nonaffiliated marketers that have submitted a written request for such information to the Company.

8. To the extent the Company provides information related to natural gas services being offered to a marketing affiliate, it must do so contemporaneously to all non-affiliated marketers that have submitted a written request for such information to the Company.

9. In transactions that involve either the purchase or receipt of information, assets, goods or services by the Company from an affiliated entity, the Company shall document both the fair market price of such information, assets, goods, and services and the fully distributed cost to the Company to produce the information, assets, goods or services for itself.

10. When the Company purchases information, assets, goods or services from an affiliated entity, the Company shall either obtain competitive bids for such information, assets, goods or services or demonstrate why competitive bids were neither necessary nor appropriate.

11. To the maximum extent practicable, the Company's operating employees and the5 operating employees of its marketing affiliate must function independently of each other. For the purposes of these guidelines, operating employees are those who are in any way involved in identifying and contracting with customers, locating gas supplies, making any and all arrangements with intervening pipelines and in any way managing or facilitating those contracted services.

12. The Company must maintain its books of accounts and records separately from those of its affiliate.

13. If the Company offers a discount to an affiliated marketer, it must make a comparable offer contemporaneously available to all similarly situated non-affiliated marketers.

14. The Company may not condition or tie its agreement to release its dedicated, stored, inventoried or optioned gas or supply contracts or upstream transportation and storage contracts to an agreement with a producer, customer, end-user or shipper relating to any service by its marketing affiliate, any services offered by the Company on behalf of its marketing affiliate, or any services in which its marketing affiliate is involved.

15. Prearranged, non-posted, capacity release transactions may not be entered into with any affiliate of the Company in any two consecutive thirty-day periods.

16. The Company must maintain a written log of tariff provision waivers which it grants. It must provide the log to any person requesting it within 24 hours of request. Any waivers must be granted in the same manner to the same or similar situated persons.

17. The Company shall maintain sufficiently detailed records that compliance with these guidelines can be verified at any time.

Complaints:

Any party may file a complaint relating to violations of these guidelines.

1. Any customer, marketer, or other interested third-party may file a complaint with the Authority relating to alleged violations of the affiliate standards set forth in these guidelines. At or before the time of filing, the complainant shall serve a copy of the complaint on the Company.

2. Within 10 business days of service of the complaint upon the Company, the Company shall file a written response to the complaint with the Authority with a simultaneous copy provide to the Consumer Advocate.

3. The Authority may hold hearings on any complaint filed or may take such other action (as it may deem appropriate), including requesting further information from the parties or dismissing the complaint. The Consumer Advocate may participate in these hearings should it so elect.

4. After notice and opportunity for a hearing, should the Authority find that the Company has violated the standards contained in these guidelines, the Authority may impose any penalty or remedy provided for by law.

Reserve Margin

The Company may maintain a reserve of natural gas in excess of its projected peak day requirement and recover the cost of the reserve from their customers through the purchased gas adjustment (PGA). The projected peak day requirement shall be based upon the coldest day on record since 1970. All firm peak day capacity contracted for by the Company shall be considered as gas available to meet peak day demand. "Contract demand" shall be the amount of firm peak day capacity the Company is entitled to on a daily basis, pursuant to contract. The maximum peak day firm demand of the projected heating season shall form the base period demand to establish the Company's maximum peak day firm demand. A reserve margin of 7.5% or less in excess of the base period firm demand adjusted for specific gain or loss of customers and/or throughput on a specific case by case basis will be presumed reasonable.

All capacity available to meet the peak day demand in excess of an amount needed to meet the base period peak day demand plus a 7.5% reserve margin must be shown by the Company to be necessary to meet its customers' requirements before it can be included in the PGA. All capacity available to meet demand less than an amount of base period demand plus a 7.5% reserve margin is presumed to be reasonable unless a factual showing to the contrary is made.

Determination of Shared Savings

Each month during the term of the PBRM, the Company will compute any savings or costs in accordance with the PBRM. If the Company earns any savings, a separate below the line Incentive Plan Account (IPA) will be debited with such savings. If the Company incurs any costs, that same IPA will be credited with such costs.

Interest shall be computed on balances in the IPA using the same interest rate and methods as used in the Company's Actual Cost Adjustment (ACA) account. The offsetting entries to IPA savings or costs will be recorded to income or expense, as appropriate.

Savings or costs accruing to the Company under the PBRM will form the basis for a rate increment or decrement to be filed and placed into effect separate from any other rate adjustments to recover or refund such amount over a prospective twelve-month period. Total annual (April 1 through March 31) savings shall be capped at $2 million. For the avoidance of doubt, such net savings or costs shall not be included as revenue or costs in connection with, or otherwise impact the operations of, the Company's Annual Review Mechanism Tariff; provided, however, that this provision shall not limit consideration of any issue in the Company's next (or any subsequent) general rate case proceeding.

Each year, effective July 1, the rates for all sales customers will be increased or decreased by a separate rate increment or decrement designed to amortize the collection or refund of the March 31 IPA balance over the succeeding twelve month period. The rate increment or decrement will be established by dividing the March 31 IPA balance by the appropriate sales billing determinants for the twelve months ended March 31. During the twelve-month amortization period, the amount collected or refunded each month will be computed by multiplying the sales billing determinants for such month by the rate increment or decrement, as applicable. The product will be credited or debited to the IPA, as appropriate. The balance in the IPA will be tracked as a separate collection mechanism. Each July 1 the unamortized amount of the previous year's IPA balance will be trued-up in the new rate increment or decrement.

Filing with the Authority

The Company will file calculations of shared savings and shared costs quarterly with the Authority and a simultaneous copy to the Consumer Advocate not later than 60 days after the end of the quarter and will file an annual report not later than May 31. The Company will file calculations annually to verify the reasonableness of its reserve margin.

Review Process

A comprehensive review of the transactions and activities covered by this PBR Tariff shall be conducted by an outside independent consultant. The next such review shall begin in September 2021, with the consultant's final report to be completed by July 1, 2022. Subsequent reviews shall be completed every 3 years thereafter unless otherwise ordered by the TRA.

The consultant shall be selected as follows. The TRA Staff, the Consumer Advocate, and Atmos shall make an effort to maintain a list of no less than 5 mutually agreeable independent consultants or consulting firms qualified to conduct the aforementioned initial review. Any dispute concerning whether an independent consultant shall be added to the list shall be resolved by the TRA Staff, after consultation with Atmos and the Consumer Advocate. For the review, the TRA Staff shall select 3 prospective independent consultants from that list. Each such consultant shall possess the experience and expertise necessary to conduct the initial review. The TRA Staff shall provide the list of prospective independent consultants to Atmos and the Consumer Advocate via electronic mail. Atmos and the Consumer Advocate shall each have the right, but not the obligation, to eliminate 1 of the prospective independent consultants from the list by identifying the consultant to be eliminated in writing to the TRA Staff within 30 days from the date the list is e-mailed. The TRA Staff shall select the independent consultant from those remaining on the list after Atmos's and the Consumer Advocate's rights to eliminate have expired. The cost of the review shall be reasonable in relation to its scope. Any and all relationships between the independent consultant and Atmos, the TRA Staff and/or the Consumer Advocate shall be fully disclosed and the independent consultant shall have had no prior relationship with either Atmos, the TRA Staff, or the Consumer Advocate for at least the preceding 5 years unless Atmos, the TRA Staff and Consumer Advocate agree in writing to waive this requirement. The TRA Staff, the Consumer Advocate and Atmos may consult amongst themselves during the selection process; provided, however, that all such communications between the Parties shall be disclosed to each Party not involved in such communication in advance so that each Party may participate fully in the selection process.

The scope of the review may include all transactions and activities covered by this PBR Tariff, and such additional matters as may be reasonably identified by Atmos, the TRA Staff, or the Consumer Advocate.

Atmos, the TRA Staff, or the Consumer Advocate may present documents and information to the independent consultant for the independent consultant's review (and subsequent reviews) and consideration. Copies of all such documents and information shall be presented simultaneously to the independent consultant and all other Parties.

The independent consultant shall complete and issue a written report of its findings and conclusions by the date ordered by the TRA. The report deadlines may be waived by the written consent of the TRA Staff, Atmos, and the Consumer Advocate. The independent consultant shall make findings of fact, as well as identify and describe areas of concern and improvement, if any, that in the consultant's opinion warrant further consideration. Atmos, the TRA Staff, and/or the Consumer Advocate may cite the independent consultant's report to the Authority in support of recommendations or proposed changes, and the TRA Staff, Atmos, or the Consumer Advocate may support or oppose such recommendations or proposed changes.

The independent consultant's findings and/or recommendations shall not be binding on any Party or on the Authority, and in any proceeding in which the consultant's findings or recommendations may be considered, the Authority shall give all issues *de novo* consideration. Any changes to the Asset Management Agreement, the bidding process, the assets under management, or otherwise, whether adopted by agreement or pursuant to a ruling of the Authority, shall be implemented on a prospective basis only, and following the normal expiration of any affected agreements.

The reasonable and prudent cost of the independent consultant's review shall be paid initially by Atmos and recovered through the ACA account. In any subsequent proceeding in which discovery or testimony from the consultant is sought concerning the consultant's review or findings, reasonable and prudent fees paid to the consultant for such discovery or testimony shall similarly be paid initially by Atmos and recovered through the ACA account. The TRA Staff may continue its annual audits of the performance-based ratemaking (PBR) and the Annual Cost Adjustment (ACA) account, and the review shall not in any way limit the scope of such annual audits.