

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**ELECTRONIC EXAMINATION OF THE            )  
GAS SUPPLY CLAUSE OF LOUISVILLE        ) CASE NO. 2018-00302  
GAS AND ELECTRIC COMPANY                 )**

**RESPONSE OF  
LOUISVILLE GAS AND ELECTRIC COMPANY  
TO  
INFORMATION REQUESTED IN  
APPENDIX B OF COMMISSION'S ORDER  
DATED JULY 30, 2018**

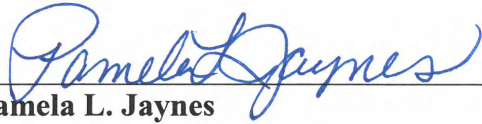
**FILED: SEPTEMBER 28, 2018**



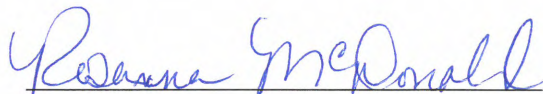
**VERIFICATION**

**COMMONWEALTH OF KENTUCKY )**  
**)**  
**COUNTY OF JEFFERSON )**

The undersigned, **Pamela L. Jaynes**, being duly sworn, deposes and says that she is Manager - Gas Supply for Louisville Gas and Electric Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

  
\_\_\_\_\_  
**Pamela L. Jaynes**

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 25<sup>th</sup> day of September 2018.

  
\_\_\_\_\_  
Notary Public

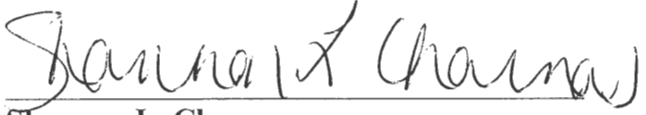
My Commission Expires:

7-21-22

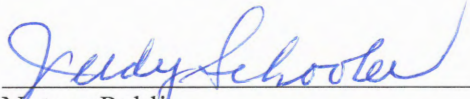
VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 )  
COUNTY OF JEFFERSON )

The undersigned, **Shannon L. Charnas**, being duly sworn, deposes and says that she is Director – Audit Services for LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

  
\_\_\_\_\_  
**Shannon L. Charnas**

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28<sup>th</sup> day of September 2018.

  
\_\_\_\_\_  
Notary Public

My Commission Expires:  
**Judy Schooler**  
**Notary Public, ID No. 603967**  
**State at Large, Kentucky**  
\_\_\_\_\_  
**Commission Expires 7/11/2022**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission’s Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 1**

**Witness: J. Clay Murphy**

- Q-1. Provide copies of all interstate pipeline transportation and storage contracts and tariffs utilized during the most recent year. Provide a comparison of the terms of these transportation arrangements with those that were utilized during the five previous calendar years. Explain all efforts to ensure that interstate pipeline transportation costs were and are as low as possible.
- A-1. LG&E purchases firm interstate pipeline capacity from two different interstate pipelines under three different rate schedules. These two interstate pipelines are Texas Gas Transmission, LLC (“Texas Gas”) and Tennessee Gas Pipeline Company, LLC (“Tennessee”). LG&E receives firm service from Texas Gas under its rate schedules for No-Notice Service (“NNS”) and Firm Transportation service (“FT”). LG&E receives firm service from Tennessee under its rate schedule for Firm Transportation service (“FT-A”). Both Texas Gas and Tennessee are interstate natural gas pipelines that are regulated by the Federal Energy Regulatory Commission (“FERC”).

In order to facilitate the description of the gas transportation agreements used by LG&E, maps of the interstate pipeline systems of Texas Gas and Tennessee are included herewith.

**Texas Gas Rate NNS Agreements:**

As of November 1, 2018, LG&E’s NNS contract demand levels in MMBtu/day are as follows:

	<u>NOV – MAR</u>	<u>APR</u>	<u>MAY – SEP</u>	<u>OCT</u>
TEXAS GAS NNS				
FLOWING GAS	147,000	60,000	60,000	72,000
STORAGE	37,900	18,950	0	26,530
<u>2-DAY 10% (1)</u>	<u>18,490</u>	<u>18,490</u>	<u>18,490</u>	<u>18,490</u>
TOTAL	184,900	97,440	60,000	117,020

(1) Except during the shoulder months of April and October, the “2-day/10%” cushion volumes are not additive to the total NNS contract demand.

LG&E must use its NNS contract demand levels within the constraints of its seasonal quantity entitlements. LG&E's Winter Seasonal Quantity Entitlements (November – March) are 26,220,000 MMBtu. LG&E's Summer Seasonal Quantity Entitlements (April – October) are 8,292,000 MMBtu.

LG&E's maximum NNS storage inventory is 4,548,000 MMBtu (37,900 MMBtu x 120 days). LG&E can withdraw up to 37,900 MMBtu from its NNS storage per day during the Winter Season from November 1 through March 31. LG&E has different storage withdrawal quantities for the shoulder months of April and October as indicated in the chart above. LG&E must withdraw at least 53% of its maximum storage inventory by March 31 of each year. The availability of storage withdrawal quantities is dependent upon the storage inventory, so that if storage inventory is not replaced by LG&E during the prior injection season, no withdrawal quantities are available.

LG&E can inject up to 59,124 MMBtu per day during the Summer Season. LG&E must refill its storage by October 31<sup>st</sup> of each year. As LG&E's NNS storage inventory increases, its ability to inject into storage decreases as follows:

<u>Storage Percent Full</u>	<u>Maximum Daily Injection Volume</u>
0 – 65%	59,124 MMBtu
65 – 90 %	50,028 MMBtu
>90%	27,288 MMBtu

NNS service provides daily and hourly delivery flexibility similar to that available from LG&E's storage. This service is well suited to meeting LG&E's highly temperature sensitive gas loads. NNS service is provided through a bundling of storage and pipeline facilities. NNS service has several features of value to LG&E: (1) no nomination is required for the storage portion of the service; (2) it provides a daily supply "cushion" equal to 10% of the daily winter NNS contract demand; (3) it provides for variable rates of flow of up to 1/16<sup>th</sup> of daily contract demand in any one hour; (4) it provides for the injection or withdrawal of natural gas from the NNS storage component during either the withdrawal or injection season in order to provide system balancing attributes; and (5) additional quantities are provided during the shoulder months to meet highly variable weather patterns.

One of the important aspects of Texas Gas's NNS service is the availability of a "cushion" volume. This cushion volume is equal to 10% of LG&E's NNS contract demand of 184,900 MMBtu per day (or 18,490 MMBtu per day). For a period not to exceed two consecutive days, this volume is available from Texas Gas in addition to the un-nominated daily storage volume of 37,900 MMBtu per day to the extent that LG&E is not making use of its flowing pipeline quantity of 147,000 MMBtu per day. This provision allows LG&E increased flexibility to use its NNS storage to meet variations in load due to rapid changes in weather conditions for up to two consecutive days. This service ability gives LG&E

time to nominate adequate supplies of gas to replace the cushion volume within the consecutive two-day availability period, thus increasing LG&E's supply reliability.

LG&E's service from Texas Gas under Rate NNS is divided into three contracts that act together under a single service. Individually, the contracts are referred to as the "2-year" agreement, the "5-year" agreement, and the "8-year" agreement based upon the initial term of each contract. As of November 1, 2018, LG&E's NNS contracts expire in equal portions on October 31, 2020 (the "2-year" agreement), 2021 (the "8-year" agreement), and 2023 (the "5-year" agreement). Each of LG&E's contracts with Texas Gas contain a provision providing for a unilateral extension of the contract for an additional five year period at the expiration of the base contract. These contracts require one year's prior written notice by LG&E to Texas Gas to cancel on the above expiration dates.

The gas supply that LG&E is able to access through its Rate NNS south-to-north capacity originates in traditional gas producing areas such as on-shore Gulf of Mexico, including Louisiana, East Texas, and Arkansas. These supply areas are generally encompassed by Texas Gas's Zone SL and Zone 1.

These agreements were and are subject to Texas Gas's tariff reservation rate for transportation service under Rate NNS for service to Texas Gas's Zone 4 where LG&E is located. The daily reservation charge is \$0.4190/MMBtu and the volumetric commodity charge is \$0.0614/MMBtu plus all applicable tariffed surcharges and fuel.

During the last five years, LG&E has not changed the contract demand or other service levels under these agreements. LG&E has extended these agreements for additional 5-year rollover terms. Specifically, the "2-year" agreement was subject to termination October 31, 2015; this agreement was extended for an additional 5-year roll-over term through October 31, 2020. The "5-year" agreement was subject to termination October 31, 2013; this agreement was extended through October 31, 2018; and again it was extended for an additional 5-year roll-over term through October 31, 2023. The "8-year" agreement was subject to termination October 31, 2016; and it was extended for an additional 5-year roll-over term through October 31, 2021.

**Texas Gas Rate FT Backhaul (North-to-South) Agreement:**

As of November 1, 2018, LG&E has one Rate FT service agreement for north-to-south capacity on Texas Gas. This agreement has a contract demand of 60,000 MMBtu per day throughout the year. This contract has a primary term through October 31, 2026, and will roll-over for an additional five years unless terminated by LG&E with one-year's prior written notice.

Texas Gas's Rate FT service provides a "no frills" firm transportation service that requires LG&E to nominate the receipt and delivery of natural gas supplies. FT service requires that gas flow at uniform hourly rates (i.e., at an hourly rate of 1/24th of daily nominated and scheduled gas flows).

The gas supply that LG&E is able to access through its Rate FT capacity originates in the Marcellus and Utica shale production areas in Ohio, Pennsylvania, and West Virginia. These supplies are delivered by upstream pipelines into Texas Gas's Zone 4 where LG&E is located.

Prior to the Texas Gas Rate FT Backhaul (North-to-South) transportation agreement, LG&E had a number of different transportation agreements in place with Texas Gas. These earlier transportation agreements allowed LG&E to source gas from the same sources in Louisiana, East Texas, and Arkansas to which LG&E has access under its Rate NNS transportation agreements. While LG&E did have and use its access to Marcellus and Utica shale gas through the terminus of Texas Gas's system at Lebanon, Ohio, this access was available only on a secondary basis.

As of November 1, 2012, LG&E had year-round forward haul capacity under Rate FT of 10,000 MMBtu/day from Texas Gas's Zone SL under Contract #29909.<sup>1</sup> This contract also allowed LG&E to flow an additional 10,000 MMBtu/day from Lebanon using secondary backhaul rights. Using these secondary backhaul rights allowed LG&E to access gas from the Marcellus and Utica production areas. As of November 1, 2011, the daily reservation charge under this agreement for service was discounted from the tariff reservation rate of \$0.3142/MMBtu to \$.2050/MMBtu during the Winter Season (November through March) and \$0.1600/MMBtu during the Summer Season (April through October). The tariff volumetric commodity charge was \$0.0528/MMBtu plus all applicable tariffed surcharges and fuel.

To supplement that year-round agreement, LG&E also had forward haul capacity under Rate STF<sup>2</sup> of 18,000 MMBtu/day (Summer Season only) from Texas Gas's Zone SL with secondary backhaul rights to Marcellus and Utica gas at Lebanon under Contract #26788<sup>3</sup> and then under Contract #32591.<sup>4</sup> The daily reservation charge for service under both of these agreements was the applicable tariff reservation rate for Summer Season service under Rate STF of \$0.2042/MMBtu. The tariff volumetric commodity charge was \$0.0528/MMBtu plus all applicable tariffed surcharges and fuel. Using the secondary backhaul rights under these agreements essentially allowed LG&E to double its capacity access without increasing the pipeline demand charges.

LG&E also had forward haul capacity under Rate STF in the amount of 35,000 MMBtu/day from Texas Gas's Zone 1 for January 2015 only (Contract #34157) and forward haul capacity under Rate STF in the amount of 30,000 MMBtu/day from Texas Gas's Zone 1 for January 2016 only (Contract #34919). The daily reservation charge for service under both of these agreements was the applicable tariff reservation rate for Winter Season

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<sup>1</sup> Contract #29909 was effective from November 1, 2011, through October 31, 2016.

<sup>2</sup> Texas Gas Rate STF (Short-Term Firm) has the same service characteristics as Texas Gas's Rate FT. However, Texas Gas is permitted to provide service thereunder using seasonally differentiated rates.

<sup>3</sup> Contract #26788 was effective from November 1, 2008, through October 31, 2013.

<sup>4</sup> Contract #32591 was effective from November 1, 2013, through October 31, 2016.



service under Rate STF of \$0.4252/MMBtu. The tariff volumetric commodity charge was \$0.0508/MMBtu plus all applicable tariffed surcharges and fuel.

Traditionally, LG&E purchased gas in the Gulf production areas (both onshore and offshore, including Louisiana, East Texas, and Arkansas) and used its interstate pipeline capacity to deliver that gas by forward haul to its gas distribution system in Kentucky. Due to the increasing availability of gas supplies outside of the traditional production areas, LG&E was able to supplement forward haul transportation of natural gas purchased in the Gulf with gas purchased at the terminus of Texas Gas's system at Lebanon, Ohio (which is north of LG&E's system). Gas purchased at the terminus of Texas Gas's system was delivered to LG&E's system by displacement using the secondary backhaul capabilities then-available in LG&E's interstate pipeline capacity.

In late December 2013, Texas Gas initiated its "Ohio-Louisiana Access" ("OHLA") Project Open Season for firm pipeline capacity designed to provide its customers (such as LG&E) with firm access to gas supplies from the Marcellus and Utica Shale production areas. Because it was becoming increasingly apparent that LG&E would be unable to continue using its secondary backhaul rights to access those supplies under existing forward haul agreements with any certainty, LG&E participated in Texas Gas's Open Season in order to gain firm primary access to gas from the Marcellus and Utica supply areas at Lebanon, Ohio. On January 16, 2014, LG&E was notified that it had been awarded 60,000 MMBtu/day under Contract #34951. The term of the capacity agreement runs from June 1, 2016, through October 31, 2026. LG&E terminated service under its Rate FT Contract #29909 and its Rate FT Contract #32591 effective November 1, 2016 by giving the required one-year's prior written notice on October 28, 2015.

Pursuant to Texas Gas's OHLA Project Open Season, LG&E was required to enter into a negotiated rate agreement at the Zone 4 to 4 rates then specified in Texas Gas's tariff. Those rates include a volumetric commodity charge of \$0.0360/MMBtu plus a daily reservation rate of \$0.1374/MMBtu in addition to any applicable fuel and other tariffed surcharges. This transportation arrangement provides LG&E with firm access to a new supply area under terms and conditions that are more advantageous than traditional forward haul transportation options.

**Tennessee Rate FT-A Agreement:**

As of November 1, 2018, LG&E's firm pipeline transportation contract demand under Tennessee's Rate FT-A is 20,000 MMBtu/day on a year-round basis. This agreement expires October 31, 2023. In almost all essential respects, the firm transportation services of Tennessee and Texas Gas are alike. Tennessee's firm transportation service is also a "no frills" firm transportation service which requires LG&E to nominate the receipt and delivery of natural gas supplies. FT-A service requires that gas flow at uniform hourly rates (*i.e.*, at a rate of 1/24th per hour of daily nominated and scheduled gas flows).

The gas supply that LG&E is able to access through its Rate FT-A capacity originates in the Eagle Ford shale production area (south Texas) with the potential to secure gas that ultimately originates in the Permian basin (West Texas). These supply areas are generally encompassed by Tennessee's Zone 0. LG&E is located in Tennessee's Zone 2.

During the last five years, LG&E has twice re-negotiated its gas transportation contract with Tennessee. Beginning November 1, 2012, LG&E had a transportation capacity agreement under Contract #95427 under Rate FT-A with a contract demand of 20,000 MMBtu/day. As of November 1, 2012, the monthly reservation charge under this agreement for service from Tennessee's Zone 0 to Tennessee's Zone 2 was discounted from the tariff reservation rate of \$16.3405/MMBtu to \$8.2134/MMBtu (this equates to daily reservation charges of \$0.5372/MMBtu and \$0.2700/MMBtu, respectively). The tariff volumetric commodity charge was \$0.0177/MMBtu plus all applicable tariffed surcharges and fuel. That contract expired October 31, 2014. LG&E renegotiated that contract, and a new transportation capacity agreement under Contract #111110 became effective from November 1, 2014, through October 31, 2018. As of November 1, 2014, the monthly reservation charge under this agreement for service from Tennessee's Zone 0 to Tennessee's Zone 2 has been discounted from the tariff reservation rate of \$16.0575/MMBtu to \$7.6042/MMBtu (this equates to daily reservation charges of \$0.5279/MMBtu and \$0.2500/MMBtu, respectively). The tariff volumetric commodity charge was \$0.0177/MMBtu plus all applicable tariffed surcharges and fuel.

During 2017, LG&E again re-negotiated its contract with Tennessee, and the current contract is effective November 1, 2018, through October 31, 2023.<sup>5</sup> As of November 1, 2018, the monthly reservation charge under this agreement for service from Tennessee's Zone 0 to Tennessee's Zone 2 has been discounted from the tariff reservation rate of \$15.5758/MMBtu to \$5.0188/MMBtu (this equates to daily reservation charges of \$0.5121/MMBtu and \$0.1650/MMBtu, respectively). The tariff volumetric commodity charge is \$0.0177/MMBtu plus all applicable tariffed surcharges and fuel. Since November 1, 2012, the contract demand level has been the same (*i.e.*, 20,000 MMBtu/day).

LG&E's gas supply planning process is fundamental to ensuring that adequate interstate pipeline transportation is under contract in order to reliably serve its firm sales loads. LG&E uses a multi-step process in order to ensure that it secures adequate firm pipeline capacity in order to reliably serve its firm gas sales customers at the lowest cost. These steps include the following:

- Perform Annual Load Forecast
- Determine Storage Operating Parameters
- Model Gas System Operating Constraints

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<sup>5</sup> The contract number did not change and remains Contract #111110.

- Model Potential Load Scenarios (Weather)
- Reflect Current Pipeline Contract Terms and Conditions
- Determine Capacity Required
- Request Proposals from Pipelines
- Evaluate Pipeline Proposals and Select the Best Option
- Memorialize Contractual Terms and Conditions

The results of this process ensure that:

- Adequate pipeline capacity is available to serve LG&E's firm gas sales customers under extreme weather conditions
- LG&E does not have excess capacity under contract
- System operating constraints can be satisfied using the lowest cost options available at the time

See LG&E's response to Commission Question No. 9 wherein LG&E describes its gas supply planning process.

This initial gas supply planning process (whether it involves pipeline capacity or gas commodity planning) is a basic and essential component in ensuring both low cost and reliable gas supplies. However, LG&E supplements this process by optimizing the gas supply and transportation contract options in its portfolio. By continually reviewing and developing gas supply and transportation dispatch plans in the wake of continually unfolding market and system load information, LG&E is able to take its pursuit of low cost and reliable supplies an additional step. Refer to LG&E's nomination and dispatching processes discussed in LG&E's response to Commission Question No. 6.

LG&E also takes other actions to optimize and minimize interstate pipeline costs. For example:

- Monitoring Regulatory Activity at FERC: LG&E intervenes at the Federal Energy Regulatory Commission ("FERC") in rate and other proceedings of Texas Gas and Tennessee. LG&E participates in FERC proceedings with the goal of minimizing the cost exposure of LG&E and its customers to the proceeding's outcome. In addition, LG&E seeks to ensure that the proceeding's outcome will not reduce the pipeline's ability to provide the flexibility and reliability currently associated with the pipeline services that LG&E subscribes to on behalf of its customers.

- Capacity Release: From time to time, LG&E may have interstate pipeline capacity under contract which, due to weather or other factors, may not be required. LG&E releases its interstate pipeline capacity to the extent that such releases do not impair or diminish reliability. The volume of capacity available for release is identified as a part of the monthly planning process discussed in LG&E's response to Commission Question No. 6. Because LG&E has been able to seasonalize its pipeline service levels (i.e., higher total pipeline demand levels in the winter and lower total pipeline demand levels in the summer), LG&E typically has little capacity to release. This lack of availability is compounded by the fact that LG&E will not release capacity under its Rate NNS service if the release will impair the use of some of the more flexible features of that service. Additionally, LG&E takes a very conservative approach to the release of its interstate pipeline capacity in order to ensure that service reliability is not impaired. Releases are limited to a maximum term of one month and are always made on a recallable basis. This approach has been justified by the fact that when LG&E has released capacity only meager revenue credits have been available. Furthermore, LG&E must ensure that any releases conform to the robust regulatory compliance regime imposed by FERC on capacity releases. In short, for LG&E there is little opportunity to release capacity, minimal reward for doing so, and considerable regulatory risk when capacity is released.
- City-Gate Deliveries: LG&E has purchased gas supplies delivered at LG&E's city-gate. These delivered supplies rely upon capacity held by the counterparty. To date, the availability of delivered supplies has allowed LG&E to avoid long-term commitments to potentially more expensive pipeline capacity without diminishing reliability. The availability of natural gas supplies delivered directly to the city-gate has increased significantly, particularly on the interstate pipeline system of Tennessee. LG&E continues to evaluate the long-term availability, cost-effectiveness, and reliability of these delivered supplies as the natural gas market continues to develop.
- Gas Supply Cost Performance-Based Ratemaking: LG&E's gas supply cost Performance-Based Ratemaking ("PBR") mechanism also acts to provide LG&E with an incentive to find creative ways in which to reduce its gas supply costs. LG&E's current PBR mechanism was approved by the KYSPC in Case No. 2014-00476 by Order dated June 30, 2015. LG&E's PBR mechanism has three components covering LG&E's gas supply procurement activities for each PBR Year. One of those components is an incentive mechanism for pipeline transportation costs. With this component, LG&E benchmarks its actual pipeline transportation costs against a benchmark that is calculated by using the transportation rates filed with FERC by either Texas Gas or Tennessee, as applicable. For example, to the extent that LG&E can negotiate pipeline transportation discounts or release pipeline capacity that it does not require to serve on-system loads, LG&E can achieve savings under this component of the PBR mechanism.

**The following information has been included as attachments to this response:**

- Annual Pipeline Statistics for November 1, 2012, through October 31, 2018
- System Map of Texas Gas Transmission, LLC
- Texas Gas Rate NNS (Pipeline Contract #29781)
  - “2-Year” Agreement dated November 11, 2009; currently expires October 31, 2020
  - “5-Year” Agreement dated November 11, 2009; currently expires October 31, 2023
  - “8-Year” Agreement dated November 11, 2009; currently expires October 31, 2021
- Texas Gas Tariff Sheets:
  - Rates for Service under Rate Schedule NNS
  - Fuel Retention Percentages for Service under Rate Schedule NNS
  - Rate Schedule NNS
- Texas Gas Rate FT (Pipeline Contract #34951)
  - Agreement dated August 31, 2015; currently expires October 31, 2026
  - Negotiated Rate Letter Agreement for Service under Rate FT dated August 31, 2015
- Texas Gas Tariff Sheets:
  - Rates for Service under Rate Schedule FT
  - Fuel Retention Percentages for Service under Rate Schedule FT
  - Rate Schedule FT
- System Map of Tennessee Gas Pipeline Company, LLC
- Tennessee Rate FT-A (Pipeline Contract #111110)
  - Agreement dated November 1, 2014, and amended effective November 1, 2018; currently expires October 31, 2023
  - Discounted Rate Agreement for Service under Rate FT-A dated September 6, 2017
- Tennessee Tariff Sheets:
  - Rates for Service under Rate Schedule FT-A
  - Fuel and EPCR for Service under Rate Schedule FT-A
  - Rate Schedule FT-A

**LOUISVILLE GAS AND ELECTRIC COMPANY  
GAS PIPELINE STATISTICS  
FOR THE 12 MONTHS ENDED OCTOBER 31, 2013**

**NATURAL GAS PIPELINE CAPACITY ENTITLEMENTS IN MMBTU/DAY**

	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR - OCT</u>
<u>TEXAS GAS TRANSMISSION</u>						
RATE NNS						
CONTRACT # 29781 *	184,900	184,900	184,900	184,900	184,900	60,000
RATE FT						
CONTRACT # 29909	10,000	10,000	10,000	10,000	10,000	10,000
RATE STF						
CONTRACT # 26788	100	100	100	100	100	18,000
SUB TOTAL	<u>195,000</u>	<u>195,000</u>	<u>195,000</u>	<u>195,000</u>	<u>195,000</u>	<u>88,000</u>
<u>TENNESSEE GAS PIPELINE</u>						
RATE FT-A						
CONTRACT # 95427	20,000	20,000	20,000	20,000	20,000	20,000
SUB TOTAL	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
TOTAL	<u><u>215,000</u></u>	<u><u>215,000</u></u>	<u><u>215,000</u></u>	<u><u>215,000</u></u>	<u><u>215,000</u></u>	<u><u>108,000</u></u>

\* EXCLUDES CERTAIN SHOULDER MONTH QUANTITIES FOR APRIL AND OCTOBER

LOUISVILLE GAS AND ELECTRIC COMPANY  
 GAS PIPELINE STATISTICS  
 FOR THE 12 MONTHS ENDED OCTOBER 31, 2014

NATURAL GAS PIPELINE CAPACITY ENTITLEMENTS IN MMBTU/DAY

		<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR - OCT</u>
<u>TEXAS GAS TRANSMISSION</u>							
RATE NNS							
	CONTRACT # 29781 *	184,900	184,900	184,900	184,900	184,900	60,000
RATE FT							
	CONTRACT # 29909	10,000	10,000	10,000	10,000	10,000	10,000
RATE STF							
	CONTRACT # 32591	0	0	0	0	0	18,000
	SUB TOTAL	<u>194,900</u>	<u>194,900</u>	<u>194,900</u>	<u>194,900</u>	<u>194,900</u>	<u>88,000</u>
<u>TENNESSEE GAS PIPELINE</u>							
RATE FT-A							
	CONTRACT # 95427	20,000	20,000	20,000	20,000	20,000	20,000
	SUB TOTAL	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
TOTAL		<u>214,900</u>	<u>214,900</u>	<u>214,900</u>	<u>214,900</u>	<u>214,900</u>	<u>108,000</u>

\* EXCLUDES CERTAIN SHOULDER MONTH QUANTITIES FOR APRIL AND OCTOBER

**LOUISVILLE GAS AND ELECTRIC COMPANY  
GAS PIPELINE STATISTICS  
FOR THE 12 MONTHS ENDED OCTOBER 31, 2015**

**NATURAL GAS PIPELINE CAPACITY ENTITLEMENTS IN MMBTU/DAY**

	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR - OCT</u>
<u>TEXAS GAS TRANSMISSION</u>						
RATE NNS						
CONTRACT # 29781 *	184,900	184,900	184,900	184,900	184,900	60,000
RATE FT						
CONTRACT # 29909	10,000	10,000	10,000	10,000	10,000	10,000
RATE STF						
CONTRACT # 32591	0	0	0	0	0	18,000
CONTRACT # 34157	0	0	35,000	0	0	0
SUB TOTAL	<u>194,900</u>	<u>194,900</u>	<u>229,900</u>	<u>194,900</u>	<u>194,900</u>	<u>88,000</u>
<u>TENNESSEE GAS PIPELINE</u>						
RATE FT-A						
CONTRACT # 111110	20,000	20,000	20,000	20,000	20,000	20,000
SUB TOTAL	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
TOTAL	<u><u>214,900</u></u>	<u><u>214,900</u></u>	<u><u>249,900</u></u>	<u><u>214,900</u></u>	<u><u>214,900</u></u>	<u><u>108,000</u></u>

\* EXCLUDES CERTAIN SHOULDER MONTH QUANTITIES FOR APRIL AND OCTOBER



**LOUISVILLE GAS AND ELECTRIC COMPANY  
GAS PIPELINE STATISTICS  
FOR THE 12 MONTHS ENDED OCTOBER 31, 2016**

**NATURAL GAS PIPELINE CAPACITY ENTITLEMENTS IN MMBTU/DAY**

		<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR - OCT</u>
<u>TEXAS GAS TRANSMISSION</u>							
RATE NNS							
	CONTRACT # 29781 *	184,900	184,900	184,900	184,900	184,900	60,000
RATE FT							
	CONTRACT # 29909	10,000	10,000	10,000	10,000	10,000	10,000
	CONTRACT # 34951 **	0	0	0	0	0	60,000
RATE STF							
	CONTRACT # 32591	0	0	0	0	0	18,000
	CONTRACT # 34919	0	100	30,000	0	0	0
	SUB TOTAL	194,900	195,000	224,900	194,900	194,900	148,000
<u>TENNESSEE GAS PIPELINE</u>							
RATE FT-A							
	CONTRACT # 111110	20,000	20,000	20,000	20,000	20,000	20,000
	SUB TOTAL	20,000	20,000	20,000	20,000	20,000	20,000
TOTAL		<u>214,900</u>	<u>215,000</u>	<u>244,900</u>	<u>214,900</u>	<u>214,900</u>	<u>168,000</u>

\* EXCLUDES CERTAIN SHOULDER MONTH QUANTITIES FOR APRIL AND OCTOBER

\*\* IN SERVICE EFFECTIVE JUNE 1, 2016

**LOUISVILLE GAS AND ELECTRIC COMPANY  
GAS PIPELINE STATISTICS  
FOR THE 12 MONTHS ENDED OCTOBER 31, 2017**

**NATURAL GAS PIPELINE CAPACITY ENTITLEMENTS IN MMBTU/DAY**

	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR - OCT</u>
<b><u>TEXAS GAS TRANSMISSION</u></b>						
RATE NNS						
CONTRACT # 29781 *	184,900	184,900	184,900	184,900	184,900	60,000
RATE FT						
CONTRACT # 34951	60,000	60,000	60,000	60,000	60,000	60,000
RATE STF						
	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
SUB TOTAL	<u>244,900</u>	<u>244,900</u>	<u>244,900</u>	<u>244,900</u>	<u>244,900</u>	<u>120,000</u>
<b><u>TENNESSEE GAS PIPELINE</u></b>						
RATE FT-A						
CONTRACT # 111110	20,000	20,000	20,000	20,000	20,000	20,000
SUB TOTAL	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
TOTAL	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>140,000</u></u>

\* EXCLUDES CERTAIN SHOULDER MONTH QUANTITIES FOR APRIL AND OCTOBER

**LOUISVILLE GAS AND ELECTRIC COMPANY  
GAS PIPELINE STATISTICS  
FOR THE 12 MONTHS ENDED OCTOBER 31, 2018**

**NATURAL GAS PIPELINE CAPACITY ENTITLEMENTS IN MMBTU/DAY**

	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR - OCT</u>
<u>TEXAS GAS TRANSMISSION</u>						
RATE NNS						
CONTRACT # 29781 *	184,900	184,900	184,900	184,900	184,900	60,000
RATE FT						
CONTRACT # 34951	60,000	60,000	60,000	60,000	60,000	60,000
RATE STF						
	0	0	0	0	0	0
SUB TOTAL	<u>244,900</u>	<u>244,900</u>	<u>244,900</u>	<u>244,900</u>	<u>244,900</u>	<u>120,000</u>
<u>TENNESSEE GAS PIPELINE</u>						
RATE FT-A						
CONTRACT # 111110	20,000	20,000	20,000	20,000	20,000	20,000
SUB TOTAL	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
TOTAL	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>264,900</u></u>	<u><u>140,000</u></u>

\* EXCLUDES CERTAIN SHOULDER MONTH QUANTITIES FOR APRIL AND OCTOBER





**FORM OF FIRM TRANSPORTATION AGREEMENT  
RATE SCHEDULE NNS**

Texas Gas Contract Number 29781

THIS AGREEMENT, dated November 11, 2009 made and entered into by and between Texas Gas Transmission, LLC, a Delaware limited liability company, hereinafter referred to as "Texas Gas," and Louisville Gas and Electric Company, a Kentucky corporation, hereinafter referred to as "Customer,"

WITNESSETH:

WHEREAS, Texas Gas desires to provide and Customer desires to receive no-notice service under its NNS Rate Schedule on the terms and conditions set forth herein;

WHEREAS, Texas Gas and Customer desire that effective December 1, 2009, this Agreement will supersede and replace the previously effective NNS Agreement No. 415 between Louisville Gas and Electric Company and Texas Gas (originally referred to as the 2-year agreement) dated November 1, 1993 as amended;

NOW THEREFORE, Texas Gas and Customer agree as follows:

1. Service: Pursuant to the terms and conditions of this Agreement and Texas Gas' Rate Schedule NNS, Customer agrees to deliver or cause to be delivered to Texas Gas at the Point(s) of Receipt in Exhibit "A" hereunder, gas for transportation and Texas Gas agrees to receive, transport, and redeliver to Customer at the Point(s) of Delivery in Exhibit "B" hereunder, the daily and seasonal quantities of gas set forth herein. The parties agree that the transportation service provided hereunder shall be a firm service provided by combining pipeline capacity (the "Nominated" portion of the service) and storage capacity (the "Unnominated" portion of the service) into a single transportation service as defined in Section 2 of the NNS Rate Schedule.

2. Quantities: Customer's applicable Contract Quantities shall be as set forth below:

Daily Contract Demand			Time Periods
Winter	61,633	MMBtu/D	Each November 1 through March 31
Summer	20,000	MMBtu/D	Each May 1 through September 30
Shoulder Month (April)	32,480	MMBtu/D	Each April 1 through April 30
Shoulder Month (October)	39,007	MMBtu/D	Each October 1 through October 31
 <u>Nominated Daily Quantity</u>			
Winter	49,000	MMBtu/D	Each November 1 through March 31
Summer (except October)	20,000	MMBtu/D	Each April 1 through September 30
October	24,000	MMBtu/D	Each October 1 through October 31
 <u>Unnominated Daily Quantity</u>			
Winter	12,633	MMBtu/D	
Shoulder Month (April)	6,316	MMBtu/D	
Shoulder Month (October)	8,843	MMBtu/D	
 <u>Excess Unnominated Daily Quantity</u>			
	6,163	MMBtu/D	
 <u>Seasonal Quantity Entitlement</u>			
Winter	8,740,000	MMBtu	Each November 1 through March 31
Summer	2,764,000	MMBtu	Each April 1 through October 31
 <u>Unnominated Seasonal Quantity</u>			
	1,516,000	MMBtu	

3. Points of Receipt: Customer's Primary Point(s) of Receipt shall be as set forth in Exhibit "A". Customer shall have access to available Secondary Points of Receipt, as listed on Texas Gas' Internet Website, in accordance with Section 6.3 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
4. Points of Delivery: Customer's Primary Point(s) of Delivery shall be as set forth in Exhibit "B". Customer shall have access to available Secondary Points of Delivery, as listed on Texas Gas' Internet Website, in accordance with Section 6.3 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
5. Supply Lateral Capacity: Customer's Supply Lateral Capacity Rights shall be as set forth in Exhibit "C".
- 6.1 Primary Term: This Agreement shall become effective December 1, 2009, and remain in full force and effect for a primary term beginning December 1, 2009, (with the rates and charges described in Paragraph 7 becoming effective on that date) and extending through October 31, 2015.
- 6.2 Evergreen/Rollover Term: At the end of such primary term, or any subsequent rollover term, this Agreement shall automatically be extended for an additional rollover term of five (5) years, unless Customer terminates this agreement at the end of such primary or rollover term by giving Texas Gas at least three hundred sixty-five (365) days advance written notice prior to the expiration of such primary or rollover term.
- 6.3 Contractual Right of First Refusal: At the end of this Agreement, Customer shall be granted a contractual right of first refusal to be exercised in accordance with Section 10.4 of the Texas Gas Tariff.
7. Contribution in Aid of Construction: To the extent this agreement is extended pursuant to Section 10.2(c) of the General Terms and Conditions of Texas Gas' FERC Gas Tariff, the terms and conditions related to the modification or construction of any associated delivery point facilities shall be set forth as Exhibit "D".
8. Rates: Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall pay the applicable maximum rates, charges and fees as prescribed by Rate Schedule NNS for service under this Agreement. Any negotiated or discount rate agreement, as may be agreed to from time to time, shall be set forth separately in writing.
9. Fuel, Use and Unaccounted for Retention: Customer shall reimburse Texas Gas for the quantity of gas required for fuel, company use, and unaccounted for associated with the transportation service hereunder in accordance with Section 9.2 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
10. Changes in Rates and Charges: It is further agreed that Texas Gas may, from time to time, seek authorization from the Federal Energy Regulatory Commission and/or other appropriate body for changes to any rate and/or term set forth herein or in Texas Gas' FERC Gas Tariff, as may be found necessary to assure Texas Gas just and reasonable rates. Nothing herein contained shall be construed to deny Customer any rights it may have under the Natural Gas Act, as amended, including the right to participate fully in rate proceedings by intervention or otherwise to contest increased rates in whole or in part.
11. Nominations and Scheduling: As respects the nominated portion of the no-notice service, periodic scheduling of the quantities of service requested shall be provided by Customer to Texas Gas at times and in accordance with the procedures specified in the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
12. Incorporation by Reference: The General Terms and Conditions of Texas Gas' FERC Gas Tariff and the provisions of Rate Schedule NNS, as either or both may change from time to time, are incorporated by reference.
13. Notices: Except as may be otherwise provided, any notice, request, demand, statement, or bill provided for herein or any notice which either party may desire to give the other shall be in writing and shall be given in accordance with Section 25.4 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff to the address or addresses set forth below:

Texas Gas

Customer

Texas Gas Transmission, LLC  
3800 Frederica Street  
Post Office Box 20008  
Owensboro, Kentucky 42304  
Attention: Gas Accounting (Billings and Statements)  
Marketing Services (Other Matters)  
Scheduling Services (Nominations)  
Fax: (270) 688-6817  
Internet Website Address: [www.gasquest.txgt.com](http://www.gasquest.txgt.com)  
Other:

Louisville Gas and Electric Company  
PO Box 32020  
Louisville, KY 40232-2020  
Attention: Mr. J. Clay Murphy  
Fax: (502) 627-3584  
Other:

The address of either party may, from time to time, be changed by a party mailing appropriate notice thereof to the other party or by posting such address change to Texas Gas' Internet Website.

14. Exhibits: As indicated below, the following Exhibits are attached hereto and made a part hereof:  
Exhibit "A", Primary Point(s) of Receipt  
Exhibit "B", Primary Point(s) of Delivery  
Exhibit "C", Supply Lateral Capacity  
Exhibit "D", Terms and Conditions of Contribution in Aid of Construction

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective representatives thereunto duly authorized.

LOUISVILLE GAS AND ELECTRIC COMPANY

TEXAS GAS TRANSMISSION, LLC

By J. Clay Murphy

By Thaddeus E. Ford

Title Director Gas Supply

Title SR VP Marketing & Origination

Date of Execution by Customer: 11/12/2009

Date of Execution by Texas Gas: 12/3/09

*JB 11/13/09  
Dwm*





EXHIBIT "B"  
 TO  
 NNS FIRM TRANSPORTATION AGREEMENT  
 BETWEEN  
 TEXAS GAS TRANSMISSION, LLC  
 AND  
 LOUISVILLE GAS AND ELECTRIC COMPANY

CONTRACT NUMBER: 29781  
 (Originally referred to as the 2-Year Agreement)

EXHIBIT "B" EFFECTIVE DATE: OCTOBER 6, 2014

PRIMARY POINT(S) OF DELIVERY

ZONE 4

CONTRACT QUANTITY(IES)/LOCATION(S)

LOCATION NO. 1529 CONTRACT DEMAND (MMBTU/D): 61,633 WINTER  
 32,480 APRIL  
 20,000 SUMMER  
 39,007 OCTOBER

Location or Meter No.*	Location or Meter Name	Facilities	MDP (psig)**
1529	Louisville Shipper Ded, Jefferson, KY		400
	Bardstown Road, Jefferson, KY		400
	Bedford-LG&E, Trimble, KY		400
	Crestwood, Oldham, KY		400
	Doe Run, Meade, KY		400
	Elder Park, Oldham, KY		400
	Ellingsworth Lane, Jefferson, KY		500
	Lagrange, Oldham, KY		400
	LG&E-English Station RD, Jefferson, KY		500
	Penile Road, Jefferson, KY		400
Preston Street Road, Jefferson, KY		400	

\*Available DRN numbers are posted on Texas Gas' internet website.

\*\*Minimum Delivery Pressure

Note: See Facilities Reference report on Texas Gas' internet website for explanation of facilities.

EXHIBIT "C"  
 TO  
 NNS FIRM TRANSPORTATION AGREEMENT  
 BETWEEN  
 TEXAS GAS TRANSMISSION, LLC  
 AND  
 LOUISVILLE GAS AND ELECTRIC COMPANY

CONTRACT NUMBER: 29781  
 (Originally referred to as the 2-Year Agreement)

EXHIBIT "C" EFFECTIVE DATE: APRIL 1, 2015

SUPPLY LATERAL CAPACITY

FIRM CONTRACT PATH: ORDER SEQUENCE NUMBER 1 THROUGH 40700

<u>Supply Lateral</u>	<u>Capacity Rights (MMBtu/D)</u>	
	Winter	Summer
 <i><u>Zone 1 Supply Lateral(s)</u></i>		
North Louisiana Leg:	<u>18,491</u>	<u>8,158</u>
Total Zone 1:	<u>18,491</u>	<u>8,158</u>
 <i><u>Zone SL Supply Lateral(s)</u></i>		
East Leg:	0	0
Southeast Leg:	0	0
South Leg:	0	0
Southwest Leg:	0	0
West Leg:	<u>0</u>	<u>0</u>
Total Zone SL:	<u>0</u>	<u>0</u>
Grand Total:	<u>18,491</u>	<u>8,158</u>



FORM OF FIRM TRANSPORTATION AGREEMENT  
RATE SCHEDULE NNS

Texas Gas Contract Number 29781

THIS AGREEMENT, dated November 11, 2009 made and entered into by and between Texas Gas Transmission, LLC, a Delaware limited liability company, hereinafter referred to as "Texas Gas," and Louisville Gas and Electric Company, a Kentucky corporation, hereinafter referred to as "Customer,"

WITNESSETH:

WHEREAS, Texas Gas desires to provide and Customer desires to receive no-notice service under its NNS Rate Schedule on the terms and conditions set forth herein;

WHEREAS, Texas Gas and Customer desire that effective December 1, 2009, this Agreement will supersede and replace the previously effective NNS Agreement No. 415 between Louisville Gas and Electric Company and Texas Gas (originally referred to as the 5-year agreement) dated November 1, 1993 as amended;

NOW THEREFORE, Texas Gas and Customer agree as follows:

1. Service: Pursuant to the terms and conditions of this Agreement and Texas Gas' Rate Schedule NNS, Customer agrees to deliver or cause to be delivered to Texas Gas at the Point(s) of Receipt in Exhibit "A" hereunder, gas for transportation and Texas Gas agrees to receive, transport, and redeliver to Customer at the Point(s) of Delivery in Exhibit "B" hereunder, the daily and seasonal quantities of gas set forth herein. The parties agree that the transportation service provided hereunder shall be a firm service provided by combining pipeline capacity (the "Nominated" portion of the service) and storage capacity (the "Unnominated" portion of the service) into a single transportation service as defined in Section 2 of the NNS Rate Schedule.

2. Quantities: Customer's applicable Contract Quantities shall be as set forth below:

Daily Contract Demand			Time Periods
Winter	61,633	MMBtu/D	Each November 1 through March 31
Summer	20,000	MMBtu/D	Each May 1 through September 30
Shoulder Month (April)	32,480	MMBtu/D	Each April 1 through April 30
Shoulder Month (October)	39,006	MMBtu/D	Each October 1 through October 31
<u>Nominated Daily Quantity</u>			
Winter	49,000	MMBtu/D	Each November 1 through March 31
Summer (except October)	20,000	MMBtu/D	Each April 1 through September 30
October	24,000	MMBtu/D	Each October 1 through October 31
<u>Unnominated Daily Quantity</u>			
Winter	12,633	MMBtu/D	
Shoulder Month (April)	6,317	MMBtu/D	
Shoulder Month (October)	8,843	MMBtu/D	
<u>Excess Unnominated Daily Quantity</u>			
	6,163	MMBtu/D	
<u>Seasonal Quantity Entitlement</u>			
Winter	8,740,000	MMBtu	Each November 1 through March 31
Summer	2,764,000	MMBtu	Each April 1 through October 31
<u>Unnominated Seasonal Quantity</u>			
	1,516,000	MMBtu	

3. Points of Receipt: Customer's Primary Point(s) of Receipt shall be as set forth in Exhibit "A". Customer shall have access to available Secondary Points of Receipt, as listed on Texas Gas' Internet Website, in accordance with Section 6.3 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
4. Points of Delivery: Customer's Primary Point(s) of Delivery shall be as set forth in Exhibit "B". Customer shall have access to available Secondary Points of Delivery, as listed on Texas Gas' Internet Website, in accordance with Section 6.3 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
5. Supply Lateral Capacity: Customer's Supply Lateral Capacity Rights shall be as set forth in Exhibit "C".
- 6.1 Primary Term: This Agreement shall become effective December 1, 2009, and remain in full force and effect for a primary term beginning December 1, 2009, (with the rates and charges described in Paragraph 7 becoming effective on that date) and extending through October 31, 2018.
- 6.2 Evergreen/Rollover Term: At the end of such primary term, or any subsequent rollover term, this Agreement shall automatically be extended for an additional rollover term of five (5) years, unless Customer terminates this agreement at the end of such primary or rollover term by giving Texas Gas at least three hundred sixty-five (365) days advance written notice prior to the expiration of such primary or rollover term.
- 6.3 Contractual Right of First Refusal: At the end of this Agreement, Customer shall be granted a contractual right of first refusal to be exercised in accordance with Section 10.4 of the Texas Gas Tariff.
7. Contribution in Aid of Construction: To the extent this agreement is extended pursuant to Section 10.2(c) of the General Terms and Conditions of Texas Gas' FERC Gas Tariff, the terms and conditions related to the modification or construction of any associated delivery point facilities shall be set forth as Exhibit "D".
8. Rates: Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall pay the applicable maximum rates, charges and fees as prescribed by Rate Schedule NNS for service under this Agreement. Any negotiated or discount rate agreement, as may be agreed to from time to time, shall be set forth separately in writing.
9. Fuel, Use and Unaccounted for Retention: Customer shall reimburse Texas Gas for the quantity of gas required for fuel, company use, and unaccounted for associated with the transportation service hereunder in accordance with Section 9.2 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
10. Changes in Rates and Charges: It is further agreed that Texas Gas may, from time to time, seek authorization from the Federal Energy Regulatory Commission and/or other appropriate body for changes to any rate and/or term set forth herein or in Texas Gas' FERC Gas Tariff, as may be found necessary to assure Texas Gas just and reasonable rates. Nothing herein contained shall be construed to deny Customer any rights it may have under the Natural Gas Act, as amended, including the right to participate fully in rate proceedings by intervention or otherwise to contest increased rates in whole or in part.
11. Nominations and Scheduling: As respects the nominated portion of the no-notice service, periodic scheduling of the quantities of service requested shall be provided by Customer to Texas Gas at times and in accordance with the procedures specified in the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
12. Incorporation by Reference: The General Terms and Conditions of Texas Gas' FERC Gas Tariff and the provisions of Rate Schedule NNS, as either or both may change from time to time, are incorporated by reference.
13. Notices: Except as may be otherwise provided, any notice, request, demand, statement, or bill provided for herein or any notice which either party may desire to give the other shall be in writing and shall be given in accordance with Section 25.4 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff to the address or addresses set forth below:

Texas Gas

Customer

Texas Gas Transmission, LLC  
3800 Frederica Street  
Post Office Box 20008  
Owensboro, Kentucky 42304  
Attention: Gas Accounting (Billings and Statements)  
Marketing Services (Other Matters)  
Scheduling Services (Nominations)  
Fax: (270) 688-6817  
Internet Website Address: [www.gasquest.txgt.com](http://www.gasquest.txgt.com)  
Other:

Louisville Gas and Electric Company  
PO Box 32020  
Louisville, KY 40232-2020  
Attention: Mr. J. Clay Murphy  
Fax: (502) 627-3584  
Other:

The address of either party may, from time to time, be changed by a party mailing appropriate notice thereof to the other party or by posting such address change to Texas Gas' Internet Website.

14. Exhibits: As indicated below, the following Exhibits are attached hereto and made a part hereof:  
Exhibit "A", Primary Point(s) of Receipt  
Exhibit "B", Primary Point(s) of Delivery  
Exhibit "C", Supply Lateral Capacity  
Exhibit "D", Terms and Conditions of Contribution in Aid of Construction

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective representatives thereunto duly authorized.

LOUISVILLE GAS AND ELECTRIC COMPANY

TEXAS GAS TRANSMISSION, LLC

By J. Clay Murphy

By Walden F. Ward

Title Director - Gas Supply

Title SR VP Marketing & Origination

Date of Execution by Customer: 12/2/09

Date of Execution by Texas Gas: 12/3/09

*JCB*  
*11/13/09*  
*DWM*





EXHIBIT "B"  
 TO  
 NNS FIRM TRANSPORTATION AGREEMENT  
 BETWEEN  
 TEXAS GAS TRANSMISSION, LLC  
 AND  
 LOUISVILLE GAS AND ELECTRIC COMPANY

CONTRACT NUMBER: 29781  
 (Originally referred to as the 5-Year Agreement)

EXHIBIT "B" EFFECTIVE DATE: OCTOBER 6, 2014

PRIMARY POINT(S) OF DELIVERY

ZONE 4

CONTRACT QUANTITY(IES)/LOCATION(S)

LOCATION NO. 1529 CONTRACT DEMAND (MMBTU/D): 61,633 WINTER  
 32,480 APRIL  
 20,000 SUMMER  
 39,006 OCTOBER

Location or Meter No.*	Location or Meter Name	Facilities	MDP (psig)**
1529	Louisville Shipper Ded, Jefferson, KY		
	Bardstown Road, Jefferson, KY		400
	Bedford-LG&E, Trimble, KY		400
	Crestwood, Oldham, KY		400
	Doe Run, Meade, KY		400
	Elder Park, Oldham, KY		400
	Ellingsworth Lane, Jefferson, KY		500
	Lagrange, Oldham, KY		400
	LG&E-English Station RD, Jefferson, KY		500
	Penile Road, Jefferson, KY		400
	Preston Street Road, Jefferson, KY		400

\*Available DRN numbers are posted on Texas Gas' internet website.

\*\*Minimum Delivery Pressure

Note: See Facilities Reference report on Texas Gas' internet website for explanation of facilities.

EXHIBIT "C"  
 TO  
 NNS FIRM TRANSPORTATION AGREEMENT  
 BETWEEN  
 TEXAS GAS TRANSMISSION, LLC  
 AND  
 LOUISVILLE GAS AND ELECTRIC COMPANY

CONTRACT NUMBER: 29781  
 (Originally referred to as the 5-Year Agreement)

EXHIBIT "C" EFFECTIVE DATE: APRIL 1, 2015

SUPPLY LATERAL CAPACITY

FIRM CONTRACT PATH: ORDER SEQUENCE NUMBER 1 THROUGH 40700

<u>Supply Lateral</u>	<u>Capacity Rights (MMBtu/D)</u>	
	Winter	Summer
<i><u>Zone 1 Supply Lateral(s)</u></i>		
North Louisiana Leg:	<u>18,491</u>	<u>8,158</u>
Total Zone 1:	<u>18,491</u>	<u>8,158</u>
<i><u>Zone SL Supply Lateral(s)</u></i>		
East Leg:	0	0
Southeast Leg:	0	0
South Leg:	0	0
Southwest Leg:	0	0
West Leg:	<u>0</u>	<u>0</u>
Total Zone SL:	<u>0</u>	<u>0</u>
Grand Total:	<u>18,491</u>	<u>8,158</u>



FORM OF FIRM TRANSPORTATION AGREEMENT  
RATE SCHEDULE NNS

Texas Gas Contract Number 29781

THIS AGREEMENT, dated November 11, 2009 made and entered into by and between Texas Gas Transmission, LLC, a Delaware limited liability company, hereinafter referred to as "Texas Gas," and Louisville Gas and Electric Company, a Kentucky corporation, hereinafter referred to as "Customer,"

WITNESSETH:

WHEREAS, Texas Gas desires to provide and Customer desires to receive no-notice service under its NNS Rate Schedule on the terms and conditions set forth herein;

WHEREAS, Texas Gas and Customer desire that effective December 1, 2009, this Agreement will supersede and replace the previously effective NNS Agreement No. 415 between Louisville Gas and Electric Company and Texas Gas (originally referred to as the 8-year agreement) dated November 1, 1993 as amended;

NOW THEREFORE, Texas Gas and Customer agree as follows:

1. Service: Pursuant to the terms and conditions of this Agreement and Texas Gas' Rate Schedule NNS, Customer agrees to deliver or cause to be delivered to Texas Gas at the Point(s) of Receipt in Exhibit "A" hereunder, gas for transportation and Texas Gas agrees to receive, transport, and redeliver to Customer at the Point(s) of Delivery in Exhibit "B" hereunder, the daily and seasonal quantities of gas set forth herein. The parties agree that the transportation service provided hereunder shall be a firm service provided by combining pipeline capacity (the "Nominated" portion of the service) and storage capacity (the "Unnominated" portion of the service) into a single transportation service as defined in Section 2 of the NNS Rate Schedule.

2. Quantities: Customer's applicable Contract Quantities shall be as set forth below:

Daily Contract Demand			Time Periods
Winter	61,634	MMBtu/D	Each November 1 through March 31
Summer	20,000	MMBtu/D	Each May 1 through September 30
Shoulder Month (April)	32,480	MMBtu/D	Each April 1 through April 30
Shoulder Month (October)	39,007	MMBtu/D	Each October 1 through October 31
<u>Nominated Daily Quantity</u>			
Winter	49,000	MMBtu/D	Each November 1 through March 31
Summer (except October)	20,000	MMBtu/D	Each April 1 through September 30
October	24,000	MMBtu/D	Each October 1 through October 31
<u>Unnominated Daily Quantity</u>			
Winter	12,634	MMBtu/D	
Shoulder Month (April)	6,317	MMBtu/D	
Shoulder Month (October)	8,844	MMBtu/D	
<u>Excess Unnominated Daily Quantity</u>			
	6,164	MMBtu/D	
<u>Seasonal Quantity Entitlement</u>			
Winter	8,740,000	MMBtu	Each November 1 through March 31
Summer	2,764,000	MMBtu	Each April 1 through October 31
<u>Unnominated Seasonal Quantity</u>			
	1,516,000	MMBtu	

3. Points of Receipt: Customer's Primary Point(s) of Receipt shall be as set forth in Exhibit "A". Customer shall have access to available Secondary Points of Receipt, as listed on Texas Gas' Internet Website, in accordance with Section 6.3 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
4. Points of Delivery: Customer's Primary Point(s) of Delivery shall be as set forth in Exhibit "B". Customer shall have access to available Secondary Points of Delivery, as listed on Texas Gas' Internet Website, in accordance with Section 6.3 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
5. Supply Lateral Capacity: Customer's Supply Lateral Capacity Rights shall be as set forth in Exhibit "C".
  - 6.1 Primary Term: This Agreement shall become effective December 1, 2009, and remain in full force and effect for a primary term beginning December 1, 2009, (with the rates and charges described in Paragraph 7 becoming effective on that date) and extending through October 31, 2016.
  - 6.2 Evergreen/Rollover Term: At the end of such primary term, or any subsequent rollover term, this Agreement shall automatically be extended for an additional rollover term of five (5) years, unless Customer terminates this agreement at the end of such primary or rollover term by giving Texas Gas at least three hundred sixty-five (365) days advance written notice prior to the expiration of such primary or rollover term.
  - 6.3 Contractual Right of First Refusal: At the end of this Agreement, Customer shall be granted a contractual right of first refusal to be exercised in accordance with Section 10.4 of the Texas Gas Tariff.
7. Contribution in Aid of Construction: To the extent this agreement is extended pursuant to Section 10.2(c) of the General Terms and Conditions of Texas Gas' FERC Gas Tariff, the terms and conditions related to the modification or construction of any associated delivery point facilities shall be set forth as Exhibit "D".
8. Rates: Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall pay the applicable maximum rates, charges and fees as prescribed by Rate Schedule NNS for service under this Agreement. Any negotiated or discount rate agreement, as may be agreed to from time to time, shall be set forth separately in writing.
9. Fuel, Use and Unaccounted for Retention: Customer shall reimburse Texas Gas for the quantity of gas required for fuel, company use, and unaccounted for associated with the transportation service hereunder in accordance with Section 9.2 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
10. Changes in Rates and Charges: It is further agreed that Texas Gas may, from time to time, seek authorization from the Federal Energy Regulatory Commission and/or other appropriate body for changes to any rate and/or term set forth herein or in Texas Gas' FERC Gas Tariff, as may be found necessary to assure Texas Gas just and reasonable rates. Nothing herein contained shall be construed to deny Customer any rights it may have under the Natural Gas Act, as amended, including the right to participate fully in rate proceedings by intervention or otherwise to contest increased rates in whole or in part.
11. Nominations and Scheduling: As respects the nominated portion of the no-notice service, periodic scheduling of the quantities of service requested shall be provided by Customer to Texas Gas at times and in accordance with the procedures specified in the General Terms and Conditions of Texas Gas' FERC Gas Tariff.
12. Incorporation by Reference: The General Terms and Conditions of Texas Gas' FERC Gas Tariff and the provisions of Rate Schedule NNS, as either or both may change from time to time, are incorporated by reference.
13. Notices: Except as may be otherwise provided, any notice, request, demand, statement, or bill provided for herein or any notice which either party may desire to give the other shall be in writing and shall be given in accordance with Section 25.4 of the General Terms and Conditions of Texas Gas' FERC Gas Tariff to the address or addresses set forth below:

Texas Gas

Customer

Texas Gas Transmission, LLC  
3800 Frederica Street  
Post Office Box 20008  
Owensboro, Kentucky 42304  
Attention: Gas Accounting (Billings and Statements)  
Marketing Services (Other Matters)  
Scheduling Services (Nominations)  
Fax: (270) 688-6817  
Internet Website Address: [www.gasquest.txgt.com](http://www.gasquest.txgt.com)  
Other:

Louisville Gas and Electric Company  
PO Box 32020  
Louisville, KY 40232-2020  
Attention: Mr. J. Clay Murphy  
Fax: (502) 627-3584  
Other:

The address of either party may, from time to time, be changed by a party mailing appropriate notice thereof to the other party or by posting such address change to Texas Gas' Internet Website.

14. Exhibits: As indicated below, the following Exhibits are attached hereto and made a part hereof:  
Exhibit "A", Primary Point(s) of Receipt  
Exhibit "B", Primary Point(s) of Delivery  
Exhibit "C", Supply Lateral Capacity  
Exhibit "D", Terms and Conditions of Contribution in Aid of Construction

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective representatives thereunto duly authorized.

LOUISVILLE GAS AND ELECTRIC COMPANY

TEXAS GAS TRANSMISSION, LLC

By J. Clay Murphy  
Title Director Gas Supply  
Date of Execution by Customer: 11/2/2009

By Wendy A. Kiri  
Title SR VP Marketing & Origination  
Date of Execution by Texas Gas: 11/3/09

*JK 11/3/09  
DW*



EXHIBIT "B"  
 TO  
 NNS FIRM TRANSPORTATION AGREEMENT  
 BETWEEN  
 TEXAS GAS TRANSMISSION, LLC  
 AND  
 LOUISVILLE GAS AND ELECTRIC COMPANY

CONTRACT NUMBER: 29781  
 (Originally referred to as the 8-Year Agreement)

EXHIBIT "B" EFFECTIVE DATE: OCTOBER 6, 2014

PRIMARY POINT(S) OF DELIVERY

ZONE 4

CONTRACT QUANTITY(IES)/LOCATION(S)

LOCATION NO. 1529 CONTRACT DEMAND (MMBTU/D): 61,634 WINTER  
 32,480 APRIL  
 20,000 SUMMER  
 39,007 OCTOBER

Location or Meter No.*	Location or Meter Name	Facilities	MDP (psig)**
1529	Louisville Shipper Ded, Jefferson, KY		
	Bardstown Road, Jefferson, KY		400
	Bedford-LG&E, Trimble, KY		400
	Crestwood, Oldham, KY		400
	Doe Run, Meade, KY		400
	Elder Park, Oldham, KY		400
	Ellingsworth Lane, Jefferson, KY		500
	Lagrange, Oldham, KY		400
	LG&E-English Station RD, Jefferson, KY		500
	Penile Road, Jefferson, KY		400
Preston Street Road, Jefferson, KY		400	

\*Available DRN numbers are posted on Texas Gas' internet website.

\*\*Minimum Delivery Pressure

Note: See Facilities Reference report on Texas Gas' internet website for explanation of facilities.



EXHIBIT "C"  
 TO  
 NNS FIRM TRANSPORTATION AGREEMENT  
 BETWEEN  
 TEXAS GAS TRANSMISSION, LLC  
 AND  
 LOUISVILLE GAS AND ELECTRIC COMPANY

CONTRACT NUMBER: 29781  
 (Originally referred to as the 8-Year Agreement)

EXHIBIT "C" EFFECTIVE DATE: APRIL 1, 2015

SUPPLY LATERAL CAPACITY

FIRM CONTRACT PATH: ORDER SEQUENCE NUMBER 1 THROUGH 40700

Supply Lateral	Capacity Rights (MMBtu/D)	
	Winter	Summer
<i><u>Zone 1 Supply Lateral(s)</u></i>		
North Louisiana Leg:	<u>18,491</u>	<u>8,157</u>
Total Zone 1:	<u>18,491</u>	<u>8,157</u>
<i><u>Zone SL Supply Lateral(s)</u></i>		
East Leg:	0	0
Southeast Leg:	0	0
South Leg:	0	0
Southwest Leg:	0	0
West Leg:	<u>0</u>	<u>0</u>
Total Zone SL:	<u>0</u>	<u>0</u>
Grand Total:	<u>18,491</u>	<u>8,157</u>





**Schedule of Currently Effective Fuel Retention Percentages  
 Pursuant to Section 6.9 of the General Terms and Conditions**

**NNS/NNL/SGT/SGL/SNS/WNS Rate Schedules**

<b><u>Delivery Fuel Zone</u></b>	<b><u>EFRP [1]</u></b>
South	1.31%
Middle	0.99%
North	1.32%

**FT/STF/IT Rate Schedules**

<b><u>Rec/Del Fuel Zone</u></b>	<b><u>EFRP</u></b>
South/South	0.61%
South/Middle	0.47%
South/North	0.78%
Middle/South	0.61%
Middle/Middle	0.15%
Middle/North	0.58%
North/South	1.16%
North/Middle	0.75%
North/North	0.75%

**FSS/FSS-M/ISS/ISS-M Rate Schedules**

<b><u>Injection / Withdrawal</u></b>
0.93%

**Swing Allocation Hybrid Rate  
 NNS/NNL/SGT/SGL/SNS/WNS**

<b><u>Delivery Fuel Zone</u></b>	<b><u>EFRP</u></b>
South	0.59%
Middle	0.46%
North	0.57%

[1] Effective Fuel Retention Percentage Schedule of Currently Effective Fuel Retention Percentages Pursuant to Section 6.9 of the General Terms and Conditions

**Rate Schedule NNS  
No-Notice Transportation Service**

1. Availability

This rate schedule is available for the firm transportation of natural gas by Texas Gas for any Customer:

1.1 Where Customer:

- (a) Has submitted a valid request for firm service pursuant to this Rate Schedule NNS;
- (b) Is the successful bidder for available capacity or for capacity released by a customer having an NNS service agreement pursuant to the terms and conditions of the Capacity Release Program in Section 6.16 of the General Terms and Conditions of this Tariff;
- (c) Has met the credit requirements of Section 6.5 of the General Terms and Conditions;
- (d) Will deliver or cause to be delivered natural gas to Texas Gas for delivery by Texas Gas to or for the account of Customer in one or more of Texas Gas' Service Zones; and
- (e) Has executed a Transportation Service Agreement with Texas Gas for service under Rate Schedules NNS-SL, NNS-1, NNS-2, NNS-3, NNS-4, or NNS-Fayetteville, or NNS-Greenville.

1.2 No-notice service under this Rate Schedule NNS is available only at an NNS Customer's primary delivery point(s).

1.3 Service under this Rate Schedule NNS is available to any Customer, provided that there are operational and/or administrative arrangements in place to meet the requirements of such service.

2. Applicability and Character of Service

2.1 The transportation service provided under this Rate Schedule is a firm service being offered in compliance with 18 C.F.R. Section 284.8(a)(4) and shall be performed under Subparts B or G of Part 284 of the Commission's regulations, or any other applicable commission regulations governing such no-notice transportation service.

2.2 The transportation service offered under this Rate Schedule is provided by combining pipeline capacity and storage capacity into a single no-notice service. Customer's seasonal Contract Demands are thus supplied by a combination of Nominated (pipeline) and Unnominated (storage) Quantities as more fully defined below and as set forth in Customer's NNS Service Agreement.

2.3 Notwithstanding anything else to the contrary in this Rate Schedule or Section 6.6[3] of the General Terms and Conditions of this Tariff, the parties may agree at the time of contract execution that the Contract Demand will increase by specified amounts at specific point in time.

2.4 Notwithstanding any other provision hereof, Customer shall be required to nominate any Unnominated Daily Quantity at a primary delivery point where an Operational Balancing Agreement is in effect.

3. Categories and Priorities of Transportation Services

Refer to Section 6.12 of the General Terms and Conditions of this Tariff.

4. Rates and Charges

The applicable rates per MMBtu under this Rate Schedule for firm transportation service to each zone are set forth on currently effective Section 4.4 and Section 4.16 of this Tariff, and these rates are incorporated herein by reference.

4.1 Rates

Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall pay to Texas Gas each month a Reservation Charge which shall consist of the applicable Contract Demand as specified in Customer's NNS Service Agreement multiplied by the applicable demand rate per MMBtu. The Reservation Charge shall be billed as of the effective date of the NNS Service Agreement. Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall also pay Texas Gas the Maximum Commodity Rate per MMBtu of gas delivered by Texas Gas for no-notice transportation services rendered to Customer up to Customer's applicable Contract Demand. For all gas quantities delivered in excess of Customer's applicable Contract Demand on any day, Customer shall pay the NNS Overrun Rate per MMBtu under this Rate Schedule. In addition, Customer shall pay any and all currently effective demand or commodity surcharges, including but not limited to, the FERC ACA Unit Charge, Texas Gas' Take-or-Pay surcharge, and Order 636 Transition Costs surcharge.

4.2 Fuel, Company Use, and Unaccounted For Quantities

Fuel, company use gas, and unaccounted for quantities shall be in accordance with Section 6.9[2] of the General Terms and Conditions of this Tariff.

4.3 Processing Rights

Processing rights and the transportation of liquids/liquefiabiles shall be in accordance with Section 6.22 of the General Terms and Conditions of this Tariff.

4.4 Adjustment of Rates

Texas Gas shall have the right to propose and file with the Commission or other body having jurisdiction, changes and revisions of any effective rate schedule, or to propose and file superseding rate schedules, for the purpose of changing the rate, charges, or other provisions thereof effective as to Customer.

4.5 Secondary Point(s) in Zone Outside Transportation Path

Customer may not designate a secondary point in a zone outside of its transportation path unless Customer enters into an Additional Zone Letter Agreement to also pay the Daily Demand reservation charge applicable to such zones as shown in Section 4.4 and Section 4.16 for the number of days the secondary point is used.

5. Minimum Monthly Bill

- 5.1 The minimum monthly bill for transportation service rendered hereunder on a firm basis shall consist of the monthly Reservation Charge as described in Section 5.4[4.1] of this Rate Schedule.
- 5.2 There shall be no minimum commodity bill for transportation service rendered hereunder on a firm basis.

6. Daily Overruns

6.1 Authorized Daily Overruns, Allowable Variation, and Unauthorized Contract Demand Overrun Quantity

(a) Authorized Daily Overrun

Where Customer has obtained Texas Gas' prior consent to transport quantities on any day in excess of its Daily Contract Demand, such excess quantities shall be considered authorized overruns. In such circumstances, Customer shall pay the NNS overrun rate for such authorized overruns and no penalty shall be assessed.

(b) Allowable Variation

Notwithstanding anything herein to the contrary, Customer takes between 100% of Contract Demand and 102% of Contract Demand shall be considered an allowable variation in the delivery of the Contract Demand and shall not require Texas Gas' prior consent. In such circumstances, the Customer shall pay the NNS Overrun Rate for such takes and no penalty shall be assessed. Customer may rely on daily operational information provided by Texas Gas to determine if its takes have exceeded its daily Contract Demand and, if so, whether such excess takes are within 102% of Contract Demand and shall be considered allowable variation. Texas Gas shall use the lesser of operational information or actual data to determine whether Customer's excess takes are allowable variation or unauthorized overrun quantity.

(c) Unauthorized Contract Demand Overrun Quantity

Customer takes in excess of 102% of the Contract Demand on any day, without Texas Gas' prior consent, shall constitute Unauthorized Contract Demand Overrun Quantity.

6.2 Unauthorized Contract Demand Overrun Penalty

In any month in which Customer takes an Unauthorized Contract Demand Overrun, Customer shall pay to Texas Gas the following penalties in addition to the charges otherwise payable hereunder:

- (a) A "Nominal Overrun Penalty" equal to twice the effective FT Overrun Rate for all Unauthorized Contract Demand Overrun Quantities taken on any day over 102% of the Contract Demand; and

- (b) An "Excess Overrun Penalty" of \$10.00 per MMBtu for all Unauthorized Contract Demand Overrun Quantities taken on any day in excess of 105% of Contract Demand.

In the event a Customer incurs an Excess Overrun Penalty, Texas Gas will credit any amounts collected as a Nominal Overrun Penalty against amounts collected as an Excess Overrun Penalty, so that the total Overrun Penalty collected does not exceed \$10.00 per MMBtu for overruns in excess of 105% of Contract Demand.

The payment of a penalty for Unauthorized Contract Demand Overrun by a Customer shall not under any circumstances be considered as giving such Customer the right to take Unauthorized Contract Demand Overrun nor shall such payment be considered as a substitute for any other remedies available to Texas Gas or any of Texas Gas' other Customers against the offending Customer for failure to respect its obligation to adhere to the provisions of its contract with Texas Gas.

Texas Gas shall have the right, without obligation, to waive, on a non-discriminatory basis, any Nominal Overrun Penalty for an Unauthorized Contract Demand Overrun if, on the day when the Unauthorized Contract Demand Overrun was taken, deliveries to Texas Gas' other Customers were not adversely affected by the taking of such Unauthorized Contract Demand Overrun or if Texas Gas' pipeline operations, including gas storage operations, were not impaired thereby. Texas Gas must waive any Excess Overrun Penalty if the Unauthorized Contract Demand Overrun occurs in a non-critical situation and does not cause operational problems.

Texas Gas shall be obligated to waive any penalty for Unauthorized Contract Demand Overrun:

- (i) when such overrun is taken under circumstances beyond the control of Customer due to emergency conditions on Texas Gas' facilities, or
- (ii) when such overrun is due to accident to or breakage of pipelines, machinery or equipment of the Customer; provided, however, Customer shall promptly and diligently take such action as may be necessary and practicable under the then existing circumstances to repair or otherwise remedy the situation and furnish Texas Gas satisfactory evidence that such accident or breakage was not due to Customer's gross negligence.

Whenever Texas Gas waives the penalty for Unauthorized Contract Demand Overrun, Customer shall pay Texas Gas the daily demand rate per MMBtu of the Unauthorized Contract Demand Overrun quantity in addition to the commodity charge payable hereunder. The daily demand rate is set forth on currently effective Section 4.4 and Section 4.16 of this Tariff.

## 7. Seasonal Quantity Entitlement Overrun Charge and Nominal Penalty

- 7.1 If Customer and Customer's Replacement Shipper(s) take quantities of gas during the five-month period commencing November 1 of each year in excess of the Winter Season Quantity Entitlement, or during the seven-month period commencing April 1 of each year in excess of the Adjusted Summer Season Quantity Entitlement, such excess shall constitute Seasonal Quantity Entitlement Overrun.



For all gas taken in excess of 100% of the applicable Seasonal Quantity Entitlement, there shall be a charge consisting of the daily demand rate for the applicable zone in addition to all other charges payable hereunder. The daily demand rate is set forth on currently effective Section 4.4 and Section 4.16 of this tariff.

- 7.2 In addition to the charge contained in Section 5.4[7.1] above and all other applicable charges, if Customer takes quantities of gas in any season in excess of 102% of the applicable Seasonal Quantity Entitlement, there shall be a penalty of twice the effective FT Overrun Rate; provided, however, such seasonal penalties shall be charged only for unauthorized seasonal overruns.

Texas Gas shall have the right, without obligation, to waive, on a non-discriminatory basis, any penalty under this Section 5.4[7.2] for Seasonal Quantity Entitlement Overrun if, as a result of such overrun, deliveries to Texas Gas' other Customers were not adversely affected or if Texas Gas' pipeline operations, including gas storage operations, were not impaired thereby.

- 7.3 Texas Gas will assess only one penalty for any infraction (i.e., a Customer will not incur both unauthorized Contract Demand overrun and seasonal quantity overrun charges or penalties based on a single infraction).

8. Reimbursement of Fees and Taxes

Customer shall reimburse Texas Gas for all fees, if any, required by the Commission or any regulatory body related to service provided under this Rate Schedule, including filing, reporting, and application fees. Provided, however, Texas Gas may waive filing fees for Customer on a non-discriminatory basis in the event of an administrative error.

9. Nominations, Receipts, and Deliveries

Customer shall be responsible for nominating gas supply into Texas Gas' system up to Customer's Nominated Daily Quantity, pursuant to Section 6.12 of the General Terms and Conditions. Receipts and deliveries under this Rate Schedule shall be governed by Section 6.6[3] of the General Terms and Conditions.

10. Winter Season Provisions

During the Winter Season, Texas Gas will deliver to Customer up to Customer's Winter Contract Demand and Customer's Winter Quantity Entitlement as set forth below.

- 10.1 Customer will only be required to nominate into Texas Gas' system a quantity of gas up to the Nominated Daily Quantity.
- 10.2 In addition to the Nominated Daily Quantity actually scheduled by Customer, Texas Gas will adjust deliveries from storage up to Customer's Unnominated Daily Quantity to meet Customer's city-gate requirements up to Customer's Winter Contract Demand.
- 10.3 In addition, Customer may exceed its Unnominated Daily Quantity by a quantity equal to its Excess Unnominated Daily Quantity (i.e. 10% of its Winter Contract Demand) for up to two (2) consecutive gas days without a penalty; however, total deliveries to the Customer may not exceed the Customer's Winter Contract Demand. Texas Gas will notify the Customer within four (4) hours of the end of the gas day in which Customer has exceeded its Unnominated Daily Quantity. If the Customer does not cease taking

such Excess Unnominated Daily Quantity from Texas Gas' storage after two (2) consecutive gas days, then Texas Gas may assess a penalty of \$15 per MMBtu of such excess gas taken and may issue an operational flow order requiring Customer to immediately inject additional gas supply and/or reduce city-gate deliveries so that the Customer is no longer exceeding its Unnominated Daily Quantity.

- 10.4 Monthly Maximum Withdrawal: No more than 50% of Customer's Unnominated Seasonal Quantity shall be withdrawn in any consecutive thirty (30) day period.
- 10.5 Seasonal Minimum and Maximum Withdrawal: No more than 105% of Customer's Unnominated Seasonal Quantity shall be withdrawn or otherwise diminished (e.g., through in-field transfers and/or releases of storage) by March 1 of any winter season; provided further, that no less than 53% and no more than 100% of Customer's Unnominated Seasonal Quantity shall be withdrawn or otherwise diminished (e.g., through in-field transfers and/or releases of storage) by April 1 (the end of the Winter Season).
- 10.6 Adjusted Unnominated Daily Quantity: As Customer's Unnominated Seasonal Quantity is withdrawn or otherwise diminished (e.g., through in-field transfers and/or releases of storage), that portion of Customer's Unnominated Daily Quantity available to Customer shall be adjusted. Customer's Adjusted Unnominated Daily Quantity shall be equal to the greater of its average winter daily unnominated quantity (i.e., the Customer's USQ divided by the total number of Winter days the UDQ is available) or the applicable percentage of its Unnominated Daily Quantity as set forth in the following table:

% USQ Withdrawn	% UDQ Available
75%	90%
80%	85%
85%	80%
90%	75%

- 10.7 During the Winter Season, Texas Gas will also inject gas into storage on a best efforts basis as part of NNS service. Although such injections will be done on a best efforts basis, Texas Gas will be presumed, unless it gives notice to the contrary, to be able to inject into storage such quantities of gas as to take into account routine variations in no-notice deliveries. If Texas Gas is unable to make such best efforts injections, it will advise Customer by posting on its Internet Website. However, no presumption will exist for non-routine situations (e.g. injections in excess of 15% of Customer's Winter Contract Demand or sustained injections of more than five days) and, in such non-routine situations, Customer must give 24 hours advance written notice to Texas Gas of quantities it desires to inject into storage, so that Texas Gas can determine the extent to which it can make such injections and adjust its operations accordingly.
- 11. Summer Season Provisions
  - 11.1 Texas Gas shall deliver to Customer at the city-gate during each Summer Season up to the Customer's Summer Contract Demand and Adjusted Summer Quantity Entitlement as nominated by Customer.
  - 11.2 Pursuant to the provisions set forth below, Customer shall deliver in kind to Texas Gas during each Summer Season a quantity of gas equal to that portion of Customer's Unnominated Seasonal Quantity actually utilized by Customer (including any in-field transfers pursuant to Section 6.16.6[c] of the General Terms and Conditions of this tariff)

during the prior Winter Season (as well as any Shoulder Month quantities delivered to Customer during the Summer Season). Customer shall reserve and utilize such portion of its Summer Contract Demand as necessary to redeliver such volumes into storage.

11.3 Maximum Daily Injection Quantity:

To protect the storage formations and allow uniform filling of the storage reservoirs, Customer will be required to adhere to certain injection limits (calculated as a percentage of the Unnominated Seasonal Quantity), throughout the summer injection period. During the Summer Season Customer may, on a daily basis, inject according to the following table, but not to exceed Customer's Summer Contract Demand:

% of Unnominated Seasonal Quantity Injected	Maximum Available Injection Rate (% of USQ)
0% - 65%	1.3%
65% - 90%	1.1%
>90%	0.6%

- 11.4 Inventory verification tests will be conducted as operationally necessary, but in no event less than once per calendar year. These tests require the temporary suspension of individual storage field activities (injections and withdrawals) for a period of approximately two (2) weeks. If conditions will not permit the full maximum daily injection or withdrawal quantity, Texas Gas may temporarily adjust the limit and allow make-up quantities on succeeding days. Texas Gas will provide at least 45 days notice on its Internet Website in regard to the scheduling of these shut-in periods to allow Customers to adjust for the interruption of storage.
- 11.5 During the Summer Season (except as provided in Section 5.4[11.6] below), Texas Gas will also withdraw gas from storage on a best efforts basis as part of the NNS service. Although such withdrawals will be done on a best efforts basis, Texas Gas will be presumed, unless it gives notice to the contrary, to be able to withdraw from storage such quantities of gas as to take into account routine variations in no-notice services. If Texas Gas is unable to make such best efforts withdrawals, it will advise Customer by posting on its Internet Website. However, no presumption will exist for non-routine situations (e.g. withdrawals in excess of 10% of Customer's Winter Contract Demand or sustained withdrawals of more than five days) and, in such non-routine situations, Customer must give 24 hours advance written notice to Texas Gas of quantities it desires to withdraw from storage, so that Texas Gas can determine the extent to which it can make such withdrawals and adjust its operations accordingly.
- 11.6 To assist Texas Gas' operational and maintenance scheduling through the Summer Season, Customer will notify Texas Gas by March 15 of each year, with updates monthly, of the quantities it intends to inject monthly during the immediately upcoming Summer Season; such injection schedule provided by Customer is a best efforts estimate and may be revised as necessary. Texas Gas will use its reasonable efforts to coordinate its test, maintenance, alteration and repair activities during such Summer Season to accommodate Customer's request.

12. Shoulder Month Flexibility

12.1 During the Shoulder Months of April and October, Texas Gas will deliver to Customer at the city-gate the Customer's Shoulder Month Contract Demand, which shall, unless otherwise agreed, be the sum of Customer's Summer Contract Demand, Customer's Excess Unnominated Quantity and the applicable percentage as set forth below of Customer's Unnominated Daily Quantity for the Winter Season:

Shoulder Month	Percent of Unnominated Daily Quantity
April	50%
October	70%

In the event that Customer's Unnominated Seasonal Quantity is available in quantities sufficient to support additional access to Customer's Unnominated Daily Quantity the applicable percentage available to Customer during such Shoulder Month will be as follows:

Shoulder Month	% of Unnominated Seasonal Quantity Withdrawn	% of Unnominated Daily Quantity Available
April/October	75%	90%
	80%	85%
	85%	80%
	90%	75%
	95%	70%

Such Shoulder Month Contract Demand shall be available during any day of the Shoulder Month for a minimum of fifteen (15) gas days during such month; provided, however, Shoulder Month Contract Demand shall be available for additional gas days to the extent operationally feasible.

12.2 In the event that Customer's Unnominated Seasonal Quantity has been exhausted prior to the April Shoulder Month period, Customer shall retain access to 50 % of its Unnominated Daily Quantity up to an aggregate monthly total equivalent to 10% of Customer's Unnominated Seasonal Quantity, as set forth above from that date until April 30.

13. Supply Lateral Capacity

The provisions of Section 6.8[6] of the General Terms and Conditions of this tariff, Supply Lateral Capacity, shall apply to NNS service, except that NNS Customers may be allocated or may bid on supply lateral capacity on the basis of their Nominated Daily Quantities rather than their Contract Demand.

14. Capacity Release

Customer may release and assign all or any part of its NNS Service pursuant to the provisions of Section 6.16.6 of Texas Gas' General Terms and Conditions; provided, however, Customer shall be responsible for retaining adequate capacity to meet its obligations under Section 5.4[11.2] of this Rate Schedule NNS to redeliver quantities into storage.

15. Hourly Deliveries

Texas Gas shall not be obligated to deliver to Customer at all points of delivery in any hour more than one-sixteenth of Customer's Contract Demand, subject to Section 6.18 of the General Terms and Conditions of this tariff.

16. Penalty for Failure to Redeliver Borrowed Gas Prior to Contract Termination

In the event Customer fails to deliver in kind to Texas Gas any portion of its Unnominated Seasonal Quantity it has borrowed from Texas Gas prior to termination of its contract for service under this Rate Schedule, Customer shall, within 30 days of contract termination, pay Texas Gas an amount equal to the greater of 200% of Texas Gas' book value of its working gas in storage or 200% of the highest monthly average index price calculated pursuant to Section 6.14 of the General Terms and Conditions, using a twelve month period ending on the date of contract termination.

17. General Terms and Conditions

All of the General Terms and Conditions of this Tariff are applicable to and are hereby incorporated as a part of this Rate Schedule NNS.



Request No. 7860

Rate Schedule FT  
Agreement No.: 34951  
Dated: August 31, 2015  
Backhaul Service

This Agreement is entered into by and between Texas Gas Transmission, L.L.C. ("Texas Gas") and Louisville Gas and Electric Company, ("Customer").

Services under this Agreement are provided pursuant to Subpart B or Subpart G, Title 18, of the Code of Federal Regulations. Service is subject to and governed by the applicable Rate Schedule and the General Terms and Conditions of the Texas Gas FERC Gas Tariff ("Tariff") as they exist or may be modified from time to time and such are incorporated by reference. In the event the language of this Agreement conflicts with Texas Gas' then-current Tariff, the language of the Tariff will control.

Receipt and Delivery Points: Primary Receipt and Primary Delivery Points shall be listed on Exhibit "A".

Contract Demand(s): 60,000 MMBtu/day

Term: This Agreement shall be effective beginning the later of (i) June 1, 2016, or (ii) the first day of the month following the month when Texas Gas' facilities are able to receive deliveries of Customer's then applicable Contract Demand at Customer's Primary Receipt Point(s) and redeliver such Contract Demand to the Primary Delivery Point(s) as designated in Exhibit A and shall continue in full force and effect through October 31, 2026.

At the end of such primary term, or any subsequent rollover term, this Agreement will rollover for a term of five years at the applicable maximum rate. Such rollover is automatic unless Customer notifies Texas Gas in writing at least one year in advance of the expiration of the primary term of this Agreement, or any subsequent rollover term, that it intends to exercise its right of first refusal or wishes to negotiate a different extension period.

Rate: The rate for this Agreement shall be the maximum applicable rate (including all other applicable charges Texas Gas is authorized to charge pursuant to its Tariff) unless the parties have entered into an associated discounted or negotiated rate letter agreement.

Exhibit(s): The following Exhibit(s) are attached and made a part of this Agreement:  
Exhibit A, Primary Points  
Exhibit B, Contract Notice Address

IF YOU ARE IN AGREEMENT WITH THE FOREGOING, PLEASE INDICATE IN THE SPACE PROVIDED BELOW.

Texas Gas Transmission, LLC

Signature:

*Stan Horton* (with initials in circle)

Date:

9-15-15

YB  
9/17/15

Name:

Stan Horton

Title:

CEO

Louisville Gas and Electric Company

Signature:

*J. Clay Murphy*

Date:

8-31-2015

Name:

J. CLAY MURPHY

Title:

Executive Vice President

Rate Schedule: FT  
Agreement No.: 34951  
Primary Point(s) of Receipt

Effective Date: The later of (i) June 1, 2016, or (ii) the first day of the month following the month when Texas Gas' facilities are able to receive deliveries of Customer's then applicable Contract Demand at Customer's Primary Receipt Point(s) and redeliver such Contract Demand to the Primary Delivery Point(s) as designated in Exhibit A

Exhibit A  
Primary Point(s)

Line	Receipt Point Meter No.	Receipt Point Meter Name	Zone	Daily Firm Capacity MMBtu/day
Mainline Pipeline	9045	Lebanon-REX	4	20,000
	9859	Texas Eastern-Leb Lateral	4	20,000
	8247	Lebanon-Dominion Receipt	4	20,000



EXHIBIT A

PRIMARY POINT(S)  
DELIVERY

AGREEMENT NO.: 34951

EFFECTIVE DATE: The later of (i) June 1, 2016, or (ii) the first day of the month following the month when Texas Gas' facilities are able to receive deliveries of Customer's then applicable Contract Demand at Customer's Primary Receipt Point(s) and redeliver such Contract Demand to the Primary Delivery Point(s) as designated in Exhibit A

Delivery Point Meter No.	Delivery Point Meter Name	Zone	*MDP (psig)
1529	Louisville Shipper Ded, Jefferson, KY	4	
	Bardstown Road, Jefferson, KY		400
	Bedford-LG&E, Trimble, KY		400
	Crestwood, Oldham, KY		400
	Doe Run, Meade, KY		400
	Elder Park, Oldham, KY		400
	Ellingsworth Lane, Jefferson, KY		500
	Lagrange, Oldham, KY		400
	LG&E-English Station RD, Jefferson, KY		500
	Penlie Road, Jefferson, KY		400
	Preston Street Road, Jefferson, KY		400

Backhaul Service:

Mainline Pipeline 41700 through Mainline Pipeline 40700

\*Minimum Delivery Pressure

EXHIBIT B

AGREEMENT NO.: 34951

EFFECTIVE DATE: The later of (i) June 1, 2016, or (ii) the first day of the month following the month when Texas Gas' facilities are able to receive deliveries of Customer's then applicable Contract Demand at Customer's Primary Receipt Point(s) and redeliver such Contract Demand to the Primary Delivery Point(s) as designated in Exhibit A

Contract Notices:

Customer Correspondence:

Louisville Gas and Electric Company  
PO Box 32020  
Louisville, KY 40232

Texas Gas Correspondence:

Texas Gas Transmission, LLC  
610 W. Second Street  
Owensboro, KY 42301

Attention: Contract Administration (Contractual matters)  
Commercial Accounting (Invoice matters)  
Customer Services (Scheduling and Allocation matters)

(270) 926-8686





610 West 2<sup>nd</sup> Street  
P.O. Box 20008  
Owensboro, KY 42304-0008  
270/926-8686

August 31, 2015

Mr. Clay Murphy  
Louisville Gas and Electric Company  
PO Box 32020  
Louisville, KY 40232-2020

Re: Negotiated Rates Letter Agreement to  
FT Service Agreement No. 34951  
between TEXAS GAS TRANSMISSION, LLC and  
LOUISVILLE GAS AND ELECTRIC COMPANY  
dated August 31, 2015

Dear Clay:

This Negotiated Rates Letter Agreement ("Agreement") specifies additional terms and conditions applicable to the referenced service agreement ("Contract") between Texas Gas Transmission, LLC ("Texas Gas") and Louisville Gas and Electric Company ("Customer"). This Agreement is subject to all applicable Federal Energy Regulatory Commission ("FERC") regulations. In the event the language of this Agreement conflicts with the Contract, the language of this Agreement will control. In the event the language of this Agreement conflicts with Texas Gas' FERC Gas Tariff currently in effect or any superseding tariff ("Tariff"), the language of the Tariff will control.

1. Texas Gas shall provide primary firm service under the Agreement from Primary Receipt Point(s) to the Primary Delivery Point(s) listed in the attached Exhibit A. The rates charged for this service also shall be set forth in Exhibit A.

- (a) The Contract Demand(s) for this Agreement shall be: 60,000 MMBtu per day.
- (b) The negotiated rate(s) for each Primary Point is reflected on Exhibit A. In addition to the rate(s) set forth in Exhibit A, Texas Gas shall charge and Customer shall pay all other applicable charges Texas Gas is authorized to charge pursuant to its Tariff.
- (c) In consideration of the negotiated rate described above, during the term of this Agreement, Customer will not file, initiate, or support any action filed pursuant to Section 5 of the Natural Gas Act against Texas Gas that would have the effect of reducing the specific rate(s) agreed to under this Agreement.

2. The rates in Exhibit A are applicable only for transportation service utilizing the Primary Point(s) specifically listed on Exhibit A, up to Customer's Contract Demand. The rates in Exhibit B are applicable only for transportation service utilizing the eligible secondary point(s) specifically listed on Exhibit B. If Customer utilizes any other receipt or delivery point, then the applicable maximum rate(s), including all other applicable charges Texas Gas is authorized to charge pursuant to its Tariff, shall apply unless the parties amend Exhibits A and/or B in writing, pursuant to the requirements of the Tariff and prior to nomination, to include such transportation service. If Customer or its Replacement Shipper(s) deliver gas to a point not listed on Exhibit A or B, Customer shall pay the maximum applicable rate for the quantity delivered to such point(s), up to Customer's Contract Demand.

3. This Agreement shall be effective beginning the later of (i) June 1, 2015, or (ii) the first day of the month following the month when Texas Gas' facilities are able to receive deliveries of Customer's then applicable Contract Demand at Customer's Primary Receipt Point(s) and redeliver such Contract Demand to the Primary Delivery Point(s) as designated in Exhibit A and shall continue in full force and effect through October 31, 2026.

4. The rates set forth in this Agreement shall stay in effect for the term of this Agreement without regard to any changes that may occur to Texas Gas' maximum/minimum rates, fuel charges, or surcharges other than ACA. Texas Gas shall have the unilateral right to file with the appropriate regulatory authority and make changes effective in the filed rates, charges, and services in Texas Gas' Tariff, including both the level and design of such rates, charges and services and the general terms and conditions therein.

5. Except as otherwise provided in the FERC's regulations, this Agreement may not be assigned without the express written consent of the other party. Any assignment shall be in accordance with the Tariff and FERC regulations. Such consent shall not be unreasonably withheld. Any assignment made in contravention of this paragraph shall be void at the option of the other party. If such consent is given, this Agreement shall be binding upon and inure to the benefit of the parties and their successors and assigns.

6. In the event any provision of this Agreement is held to be invalid, illegal or unenforceable by any court, regulatory agency, or tribunal of competent jurisdiction, the validity, legality, and enforceability of the remaining provisions, terms or conditions shall not in any way be affected or impaired thereby, and the term, condition, or provision which is held illegal or invalid shall be deemed modified to conform to such rule of law, but only for the period of time such order, rule, regulation, or law is in effect.

7. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED UNDER THE LAWS OF THE COMMONWEALTH OF KENTUCKY, EXCLUDING ANY PROVISION WHICH WOULD DIRECT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION.

If Customer agrees with the terms and conditions, please so indicate by signing the duplicate originals in the appropriate spaces provided below and returning the originals to Texas Gas.

Very Truly Yours,

TEXAS GAS TRANSMISSION, LLC

By: *Stan Horton* Rev 9/17/15

Name: Stan Horton

Title: CEO

Date: 9-15-15

ACCEPTED AND AGREED TO this 31st day of August, 2015.

LOUISVILLE GAS AND ELECTRIC COMPANY

By: *J. Cary Murphy*

Name: J. Cary Murphy

Title: Nuclear Gas Supply

Signature page to Negotiated Rates Letter Agreement, Agreement No. 34951, dated August 31, 2015.

**Rate Schedule FT**  
**Negotiated Rates Letter Agreement dated August 31, 2015**  
**to Agreement No.: 34951**

**EXHIBIT A**

**Primary Receipt Point(s)**

All effective primary receipt point(s) listed under the Contract.

**Primary Delivery Point(s)**

<u>Meter Name</u>	<u>Meter No.</u>	<u>Zone</u>	<u>MMBtu/d</u>
Louisville Shipper Ded	1529	4	60,000

**Rate(s)**

The following rates shall be applicable to any transaction utilizing (i) a Primary Receipt Point(s) or Eligible Secondary Receipt Point(s); and (ii) a Primary Delivery Point(s) or Eligible Secondary Delivery Point(s).

Demand:        \$0.1374 per MMBtu/day

Commodity:     \$0.036 per MMBtu plus applicable surcharges and fuel retention

**Rate Schedule FT  
Negotiated Rates Letter Agreement dated August 31, 2015  
to Agreement No.: 34951**

**EXHIBIT B**

**Eligible Secondary Receipt Point(s)**

**All secondary receipt points located in Texas Gas Rate Zone(s) 4**

**Eligible Secondary Delivery Point(s)**

**All secondary delivery points located in Texas Gas Rate Zone(s) 4**

**Rate(s)**

**The rates identified on Exhibit A shall be applicable to any transaction utilizing (i) a Primary Receipt Point(s) or Eligible Secondary Receipt Point(s); and (ii) a Primary Delivery Point(s) or Eligible Secondary Delivery Point(s).**





**Currently Effective Maximum Daily Demand Rates (\$ per MMBtu)  
For Service Under Rate Schedule FT**

**Currently Effective Rates [1]**

SL-SL	0.0794
SL-1	0.1552
SL-2	0.2120
SL-3	0.2494
SL-4	0.3142
1-1	0.1252
1-2	0.1820
1-3	0.2194
1-4	0.2842
2-2	0.1332
2-3	0.1705
2-4	0.2334
3-3	0.1181
3-4	0.1810
4-4	0.1374

Minimum Rates: Demand \$-0-

Backhaul rates equal forward haul rates from Zone SL to zone of delivery; provided, however, that intra-zone rates shall apply to intra-zone transportation, whether such intra-zone transportation is forward haul or backhaul.

[1] Currently Effective Rates are equal to the Base Tariff Rates.

Notes:

- The maximum reservation charge component of the maximum firm volumetric capacity release rate shall be the applicable maximum daily demand rate herein pursuant to Section 6.16 of the General Terms and Conditions.

**Currently Effective Maximum Commodity Rates (\$ per MMBtu)  
For Service Under Rate Schedule FT**

	<b>Base Tariff Rates</b>
SL-SL	0.0104
SL-1	0.0355
SL-2	0.0399
SL-3	0.0445
SL-4	0.0528
1-1	0.0337
1-2	0.0385
1-3	0.0422
1-4	0.0508
2-2	0.0323
2-3	0.0360
2-4	0.0446
3-3	0.0312
3-4	0.0398
4-4	0.0360

The above rates shall be increased to include the ACA unit charge pursuant to Section 6.9[7] of the General Terms and Conditions.

Minimum Rates: Commodity minimum base rates are presented in Section 4.12.

Backhaul rates equal forward haul rates from Zone SL to zone of delivery; provided, however, that intra-zone rates shall apply to intra-zone transportation, whether such intra-zone transportation is forward haul or backhaul.

**Schedule of Currently Effective Fuel Retention Percentages  
 Pursuant to Section 6.9 of the General Terms and Conditions**

**NNS/NNL/SGT/SGL/SNS/WNS Rate Schedules**

<u>Delivery Fuel Zone</u>	<u>EFRP [1]</u>
South	1.31%
Middle	0.99%
North	1.32%

**FT/STF/IT Rate Schedules**

<u>Rec/Del Fuel Zone</u>	<u>EFRP</u>
South/South	0.61%
South/Middle	0.47%
South/North	0.78%
Middle/South	0.61%
Middle/Middle	0.15%
Middle/North	0.58%
North/South	1.16%
North/Middle	0.75%
North/North	0.75%

**FSS/FSS-M/ISS/ISS-M Rate Schedules**

<u>Injection / Withdrawal</u>
0.93%

**Swing Allocation Hybrid Rate  
 NNS/NNL/SGT/SGL/SNS/WNS**

<u>Delivery Fuel Zone</u>	<u>EFRP</u>
South	0.59%
Middle	0.46%
North	0.57%

[1] Effective Fuel Retention Percentage Schedule of Currently Effective Fuel Retention Percentages Pursuant to Section 6.9 of the General Terms and Conditions

**Rate Schedule FT  
Firm Transportation Service**

1. Availability

This Rate Schedule is available for the transportation of natural gas by Texas Gas for any Customer:

1.1 Where Customer:

- (a) Has requested gas to be transported on a firm basis and is eligible for firm transportation pursuant to this Rate Schedule and Section 6.8 of the General Terms and Conditions;
- (b) Is the successful bidder for available capacity or for capacity released by a Customer having an FT Service Agreement pursuant to the terms and conditions of the Capacity Release Program in Section 6.16 of the General Terms and Conditions of this Tariff;
- (c) Has met the credit requirements of Section 6.5 of the General Terms and Conditions;
- (d) Will deliver or cause to be delivered natural gas to Texas Gas for delivery by Texas Gas to or for the account of Customer in one or more of Texas Gas' Service Zones; and
- (e) Has executed a Transportation Service Agreement with Texas Gas for service under Rate Schedules FT-SL, FT-1, FT-2, FT-3, FT-4, FT-Fayetteville, or FT-Greenville. Subject to the provisions of Section 5.1[3.3] of this FT Rate Schedule, the firm transportation Contract Demand must be a daily transportation quantity which is the same for each day of the contract term, which term must be for at least 12 consecutive months of service.

1.2 Customer, Texas Gas, and third-party transporters, have obtained, as appropriate, or will obtain all State and Federal approvals for services to be provided by Customer, Texas Gas, and third-party transporters related to those rendered under this Rate Schedule.

2. Supply Lateral Capacity

The provisions of Section 6.8[6] of the General Terms and conditions of this Tariff, Supply Lateral Capacity, shall apply to FT service.

3. Applicability and Character of Service

3.1 The transportation service provided under this Rate Schedule shall be performed under Subparts B, G, H or I of Part 284, or any other applicable commission regulation governing such transportation, including transportation performed on an "on behalf of" basis under Subpart B. Such service shall apply to all gas transported by Texas Gas for Customer under this Rate Schedule up to the transportation Contract Demand set forth in the Transportation Service Agreement.

3.2 Receipts and deliveries under this Rate Schedule shall be governed by Section 6.6[2] of the General Terms and Conditions of this Tariff.

3.3 Notwithstanding anything in the Rate Schedule or Section 6.6[2] of the General Terms and Conditions of this Tariff, the parties may agree at the time of contract execution that the Contract Demand will increase by specified amounts at specific points in time.

4. Categories and Priorities of Transportation Services

Refer to Section 6.12 of the General Terms and Conditions of this Tariff.

5. Rates and Charges

The applicable rates per MMBtu under this Rate Schedule for firm transportation service to each zone are set forth in currently effective Section 4.1 and Section 4.16 of this Tariff, and these rates are incorporated herein by reference.

5.1 Rates

Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall pay to Texas Gas each month a Reservation Charge which shall consist of the transportation Contract Demand as specified in Customer's Transportation Service Agreement multiplied by the applicable demand rate per MMBtu. The Reservation Charge shall be billed as of the effective date of the Transportation Service Agreement. Unless otherwise agreed to in writing by Texas Gas and Customer, Customer shall also pay Texas Gas the Maximum Commodity Rate per MMBtu of gas delivered by Texas Gas for firm transportation services rendered to Customer up to Customer's transportation Contract Demand. For all gas quantities delivered in excess of Customer's transportation Contract Demand on any day, Customer shall pay the FT Overrun Rate per MMBtu under this Rate Schedule. In addition, Customer shall pay any and all currently effective demand or commodity surcharges, including but not limited to, the FERC ACA Unit Charge.

5.2 Fuel, Company Use, and Unaccounted For Quantities

Fuel, company use gas, and unaccounted for quantities shall be in accordance with Section 6.9[2] of the General Terms and Conditions of this Tariff.

5.3 Processing Rights

Processing rights and the transportation of liquids/liquefiabiles shall be in accordance with Section 6.22 of the General Terms and Conditions of this Tariff.

5.4 Adjustment of Rates

Texas Gas shall have the right to propose and file with the Commission or other body having jurisdiction, changes and revisions of any effective rate schedule, or to propose and file superseding rate schedules, for the purpose of changing the rate, charges, or other provisions thereof effective as to Customer.

5.5 Secondary Point(s) in Zone Outside Transportation Path or Not Paid For

Customer may not designate a secondary point in zone(s) (i) outside of its transportation path or (ii) in which the Customer is not paying for service unless Customer enters into an Additional Zone Letter Agreement to also pay the Daily Demand reservation charge

applicable to such zone(s) as shown in Section 4.1 and Section 4.16 for the number of days the secondary point is used.

6. Minimum Monthly Bill

6.1 The minimum monthly bill for transportation service rendered hereunder on a firm basis shall consist of the monthly Reservation Charge as described in Section 5.1 of this Rate Schedule.

6.2 There shall be no minimum commodity bill for transportation service rendered hereunder on a firm basis.

7. Daily Overruns

7.1 Authorized Daily Overruns, Allowable Variation, and Unauthorized Contract Demand Overrun Quantity

(a) Authorized Daily Overrun

Where Customer has obtained Texas Gas' prior consent to transport quantities on any day in excess of its Daily Contract Demand, such excess quantities shall be considered authorized overruns. In such circumstances, Customer shall pay the FT overrun rate for such authorized overruns and no penalty shall be assessed.

(b) Allowable Variation

Notwithstanding anything herein to the contrary, Customer takes between 100% of Contract Demand and 102% of Contract Demand shall be considered an allowable variation in the delivery of the Contract Demand and shall not require Texas Gas' prior consent. In such circumstances, the Customer shall pay the FT Overrun Rate for such takes and no penalty shall be assessed. Customer may rely on daily operational information provided by Texas Gas to determine if its takes have exceeded its daily Contract Demand and, if so, whether such excess takes are within 102% of Contract Demand and shall be considered allowable variation. Texas Gas shall use the lesser of operational information or actual data to determine whether Customer's excess takes are allowable variation or unauthorized overrun quantity.

(c) Unauthorized Contract Demand Overrun Quantity

Customer takes in excess of 102% of the Contract Demand on any day, without Texas Gas' prior consent, shall constitute Unauthorized Contract Demand Overrun Quantity.

7.2 Unauthorized Contract Demand Overrun Penalty

In any month in which Customer takes Unauthorized Contract Demand Overrun Quantity, Customer shall pay to Texas Gas the following penalties in addition to the charges otherwise payable hereunder:

- (a) A "Nominal Overrun Penalty" equal to twice the effective FT Overrun Rate for all Unauthorized Contract Demand Overrun Quantities taken on any day over 102% of the Contract Demand; and
- (b) An "Excess Overrun Penalty" of \$10.00 per MMBtu for all Unauthorized Contract Demand Overrun Quantities taken on any day in excess of 105% of Contract Demand.

In the event a Customer incurs an Excess Overrun Penalty, Texas Gas will credit any amounts collected as a Nominal Overrun Penalty against amounts collected as an Excess Overrun Penalty, so that the total Overrun Penalty collected does not exceed \$10.00 per MMBtu for overruns in excess of 105% of Contract Demand.

The payment of a penalty for Unauthorized Contract Demand Overrun by a Customer shall not under any circumstances be considered as giving such Customer the right to take Unauthorized Contract Demand Overrun nor shall such payment be considered as a substitute for any other remedies available to Texas Gas or any of Texas Gas' other customers against the offending Customer for failure to respect its obligation to adhere to the provisions of its contract with Texas Gas.

Texas Gas shall have the right, without obligation, to waive, on a non-discriminatory basis, any Nominal Overrun Penalty for Unauthorized Contract Demand Overrun Quantity if on the day when Unauthorized Contract Demand Overrun Quantity was taken deliveries to Texas Gas' other customers were not adversely affected by the taking of such Unauthorized Contract Demand Overrun Quantity or if Texas Gas' pipeline operations, including gas storage operations, were not impaired thereby. Texas Gas must waive any Excess Overrun Penalty if the Unauthorized Contract Demand Overrun occurs in a non-critical situation and does not cause operational problems.

Texas Gas shall be obligated to waive any penalty for Unauthorized Contract Demand Overrun:

- (i) when such overrun is taken under circumstances beyond the control of Customer due to emergency conditions on Texas Gas' facilities, or
- (ii) when such overrun is due to accident to or breakage of pipelines, machinery or equipment of the Customer; provided, however, Customer shall promptly and diligently take such action as may be necessary and practicable under the then existing circumstances to repair or otherwise remedy the situation and furnish Texas Gas satisfactory evidence that such accident or breakage was not due to Customer's gross negligence.

Whenever Texas Gas waives the penalty for Unauthorized Contract Demand Overrun, Customer shall pay Texas Gas the daily demand rate per MMBtu of the Unauthorized Contract Demand Overrun Quantity in addition to the commodity charge payable hereunder. The daily demand rate is set forth on currently effective Section 4.1 and Section 4.16 of this Tariff.

## 8. Seasonal Quantity Entitlement Overrun Charge and Nominal Penalty

- 8.1 If Customer and Customer's Replacement Shipper(s) take quantities of gas during the five-month period commencing November 1 of each year in excess of the Winter

Season Quantity Entitlement, or during the seven-month period commencing April 1 of each year in excess of the Summer Season Quantity Entitlement, such excess shall constitute Seasonal Quantity Entitlement Overrun.

For all gas taken in excess of 100% of the Seasonal Quantity Entitlement, there shall be a charge consisting of the daily demand rate for the applicable zone in addition to all other charges payable hereunder. The daily demand rate is set forth on currently effective Section 4.1 and Section 4.16 of this Tariff.

- 8.2 In addition to the charge contained in Section 5.1[8.1] above and all other applicable charges, if Customer takes quantities of gas in any season in excess of 102% of Customer's Seasonal Quantity Entitlement, there shall be a penalty of twice the effective FT Overrun Rate; provided, however, such seasonal penalties shall be charged only for unauthorized seasonal overruns.

Texas Gas shall have the right, without obligation, to waive, on a nondiscriminatory basis, any penalty under this Section 5.1[8.2] for Season Quantity Entitlement Overrun if, as a result of such overrun, deliveries to Texas Gas' other Customers were not adversely affected or if Texas Gas' operations, including gas storage operations, were not impaired thereby.

- 8.3 Texas Gas will assess only one penalty for any infraction (i.e., a Customer will not incur both unauthorized Contract Demand overrun and seasonal quantity overrun charges or penalties based on a single infraction).

9. Reimbursement of Fees and Taxes

Customer shall reimburse Texas Gas for all fees, if any, required by the Commission or any regulatory body related to service provided under this Rate Schedule, including filing, reporting, and application fees. Provided, however, Texas Gas may waive filing fees for Customer on a nondiscriminatory basis in the event of an administrative error.

10. Capacity Release Program

Customer under the FT Rate Schedule may release and assign all or any part of its Contract Demand and Seasonal Quantity Entitlements pursuant to Section 6.16 of the General Terms and Conditions of this Tariff.

11. Uniform Flows

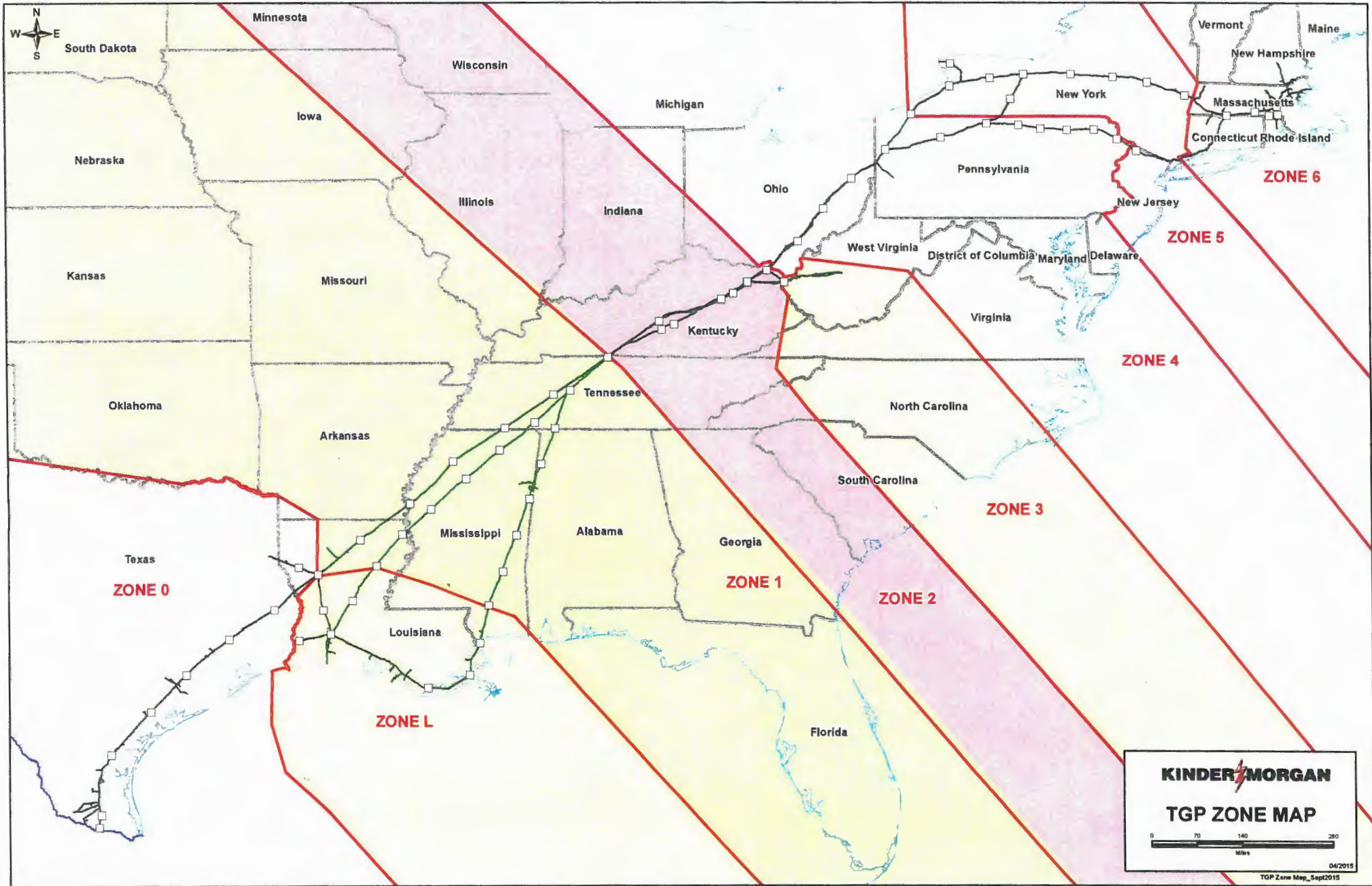
Customer shall deliver or cause to be delivered to Texas Gas and receive gas or cause to be received from Texas Gas in as nearly as possible uniform hourly quantities during any day and in as nearly as possible uniform daily quantities during any month.

12. General Terms and Conditions

All of the General Terms and Conditions of this Tariff are applicable to and are hereby incorporated as a part of this Rate Schedule FT.









GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule)

THIS AGREEMENT is made and entered into as of the 1st day of November, 2014, by and between TENNESSEE GAS PIPELINE COMPANY, L.L.C., a Delaware limited liability company, hereinafter referred to as "Transporter" and LOUISVILLE GAS AND ELECTRIC COMPANY, a KENTUCKY Corporation, hereinafter referred to as "Shipper." Transporter and Shipper shall collectively be referred to herein as the "Parties."

ARTICLE I

DEFINITIONS

- 1.1 TRANSPORTATION QUANTITY - shall mean the maximum daily quantity of gas which Transporter agrees to receive and transport on a firm basis, subject to Article II herein, for the account of Shipper hereunder on each day during the term hereof, as specified on Exhibit A attached hereto. Any limitations on the quantities to be received from each Point of Receipt and/or delivered to each Point of Delivery shall be as specified on Exhibit A attached hereto.
- 1.2 EQUIVALENT QUANTITY - shall be as defined in Article I of the General Terms and Conditions of Transporter's FERC Gas Tariff.

ARTICLE II

TRANSPORTATION

Transportation Service - Transporter agrees to accept and receive daily on a firm basis, at the Point(s) of Receipt from Shipper or for Shipper's account such quantity of gas as Shipper makes available up to the Transportation Quantity, and to deliver to or for the account of Shipper to the Point(s) of Delivery an Equivalent Quantity of gas.

ARTICLE III

POINT(S) OF RECEIPT AND DELIVERY

The Primary Point(s) of Receipt and Delivery shall be those points specified on Exhibit A attached hereto.

ARTICLE IV

All facilities are in place to render the service provided for in this Agreement.

ARTICLE V

QUALITY SPECIFICATIONS AND STANDARDS FOR MEASUREMENT

For all gas received, transported and delivered hereunder the Parties agree to the Quality Specifications and Standards for Measurement as specified in the General Terms and Conditions of Transporter's FERC Gas Tariff Volume No. 1. To the extent that no new measurement facilities are installed to provide service hereunder, measurement operations will continue in the manner in which they have previously been handled. In the event that such facilities are not operated by Transporter or a downstream pipeline, then responsibility for operations shall be

GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule) (continued)

deemed to be Shipper's

ARTICLE VI

RATES AND CHARGES FOR GAS TRANSPORTATION

- 6.1 TRANSPORTATION RATES - Commencing upon the effective date hereof, the rates, charges, and surcharges to be paid by Shipper to Transporter for the transportation service provided herein shall be in accordance with transporter's Rate Schedule FT-A and the General Terms and Conditions of Transporter's FERC Gas Tariff. Except as provided to the contrary in any written or electronic agreement(s) between Transporter and Shipper in effect during the term of this Agreement, Shipper shall pay Transporter the applicable maximum rate(s) and all other applicable charges and surcharges specified in the Summary of Rates in Transporter's FERC Gas Tariff and in this Rate Schedule. Transporter and Shipper may agree that a specified discounted rate will apply only to certain volumes under the agreement. Transporter and Shipper may agree that a specified discounted rate will apply only to specified volumes (MDQ, TQ, commodity volumes, Extended Receipt and Delivery Service Volumes or Authorized Overrun volumes) under the Agreement; that a specified discounted rate will apply only if specified volumes are achieved (with the maximum rates applicable to volumes above the specified volumes or to all volumes if the specified volumes are never achieved); that a specified discounted rate will apply only during specified periods of the year or over a specifically defined period of time; that a specified discounted rate will apply only to specified points, zones, markets or other defined geographical area; and/or that a specified discounted rate will apply only to production or reserves committed or dedicated to Transporter. Transporter and Shipper may agree to a specified discounted rate pursuant to the provisions of this Section 6.1 provided that the discounted rate is between the applicable maximum and minimum rates for this service.

In addition, a discount agreement may include a provision that if one rate component which was at or below the applicable Maximum Rate at the time the discount agreement was executed subsequently exceeds the applicable Maximum Rate due to a change in Transporter's Maximum Rates so that such rate component must be adjusted downward to equal the new applicable Maximum Rate, then other rate components may be adjusted upward to achieve the agreed overall rate, as long as none of the resulting rate components exceed the Maximum Rate applicable to that rate component. Such changes to rate components shall be applied prospectively, commencing with the date a Commission Order accepts revised tariff sheet rates. However, nothing contained herein shall be construed to alter a refund obligation under applicable law for any period during which rates that had been charged under a discount agreement exceeded rates which ultimately are found to be just and reasonable.

- 6.2 INCIDENTAL CHARGES - Shipper agrees to reimburse Transporter for any filing or similar fees, which have not been previously paid for by Shipper, which Transporter incurs in rendering service hereunder.
- 6.3 CHANGES IN RATES AND CHARGES - Shipper agrees that Transporter shall have the unilateral right to file with the appropriate regulatory authority and make effective changes in (a) the rates and charges applicable to service pursuant to Transporter's Rate Schedule FT-A, (b) the rate schedule(s) pursuant to which service hereunder is rendered, or (c) any provision of the General Terms and Conditions applicable to those rate schedules. Transporter agrees that Shipper may protest or contest the aforementioned filings, or may seek authorization from duly constituted regulatory authorities for such

GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule) (continued)

adjustment of Transporter's existing FERC Gas Tariff as may be found necessary to assure Transporter just and reasonable rates.

ARTICLE VII

BILLINGS AND PAYMENTS

Transporter shall bill and Shipper shall pay all rates and charges in accordance with Articles VI and VII, respectively, of the General Terms and Conditions of the FERC Gas Tariff.

ARTICLE VIII

GENERAL TERMS AND CONDITIONS

This Agreement shall be subject to the effective provisions of Transporter's Rate Schedule FT-A and to the General Terms and Conditions incorporated therein, as the same may be changed or superseded from time to time in accordance with the rules and regulations of the FERC.

ARTICLE IX

REGULATION

- 9.1 This Agreement shall be subject to all applicable and lawful governmental statutes, orders, rules and regulations and is contingent upon the receipt and continuation of all necessary regulatory approvals or authorizations upon terms acceptable to Transporter. This Agreement shall be void and of no force and effect if any necessary regulatory approval is not so obtained or continued. All Parties hereto shall cooperate to obtain or continue all necessary approvals or authorizations, but no Party shall be liable to any other Party for failure to obtain or continue such approvals or authorizations.
- 9.2 The transportation service described herein shall be provided subject to Subpart G, Part 284 of the FERC Regulations.

ARTICLE X

RESPONSIBILITY DURING TRANSPORTATION

Except as herein specified, the responsibility for gas during transportation shall be as stated in the General Terms and Conditions of Transporter's FERC Gas Tariff Volume No. 1.

ARTICLE XI

WARRANTIES

- 11.1 In addition to the warranties set forth in Article XI of the General Terms and Conditions of Transporter's FERC Gas Tariff, Shipper warrants the following:
- (a) Shipper warrants that all upstream and downstream transportation arrangements are in place, or will be in place as of the requested effective date of service, and that it has advised the upstream and downstream transporters of the receipt and delivery points under this Agreement and any quantity limitations for each point

GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule) (continued)

as specified on Exhibit "A" attached hereto. Shipper agrees to indemnify and hold Transporter harmless for refusal to transport gas hereunder in the event any upstream or downstream transporter fails to receive or deliver gas as contemplated by this Agreement.

- (b) Shipper agrees to indemnify and hold Transporter harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses (including reasonable attorneys fees) arising from or out of breach of any warranty by Shipper herein.
- 11.2 Transporter shall not be obligated to provide or continue service hereunder in the event of any breach of warranty.

ARTICLE XII

TERM

- 12.1 This contract shall be effective as of 1 November, 2014 and shall remain in force and effect, unless modified as per Exhibit B, until 31 October, 2018 ('Primary Term') and on a month to month basis thereafter unless terminated by either Party upon at least thirty (30) days prior written notice to the other Party; provided, however, that if the Primary Term is less than one year, then notice of termination may be provided via PASSKEY; provided further, that if the Primary Term is one year or more, then any rights to Shipper's extension of this Agreement after the Primary Term shall be governed by Article V, Section 4 of the General Terms and Conditions of Transporter's FERC Gas Tariff; and provided further, that if the FERC or other governmental body having jurisdiction over the service rendered pursuant to this Agreement authorizes abandonment of such service, this Agreement shall terminate on the abandonment date permitted by the FERC or such other governmental body.
- 12.2 Any portions of this Agreement necessary to resolve or cash out imbalances under this Agreement as required by the General Terms and Conditions of Transporter's Tariff shall survive the other parts of this Agreement until such time as such balancing has been accomplished; provided, however, that Transporter notifies Shipper of such imbalance not later than twelve months after the termination of this Agreement.
- 12.3 This Agreement will terminate automatically upon written notice from Transporter in the event Shipper fails to pay all of the amount of any bill for service rendered by Transporter hereunder in accord with the terms and conditions of Article VIII of the General Terms and Conditions of Transporter's FERC Gas Tariff.

ARTICLE XIII

NOTICE

Except as otherwise provided in the General Terms and Conditions applicable to this Agreement, any notice under this Agreement shall be in writing and mailed to the post office address of the Party intended to receive the same, as follows:

TRANSPORTER: Tennessee Gas Pipeline Company, L.L.C.  
P. O. Box 2511

GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule) (continued)

Houston, Texas 77252-2511

Attention: Director, Transportation Control

SHIPPER

NOTICES: LOUISVILLE GAS AND ELECTRIC COMPANY  
P. O. BOX 32020

LOUISVILLE, KY, USA-40232

Attention: DIRECTOR - GAS SUPPLY

BILLING: LOUISVILLE GAS AND ELECTRIC COMPANY  
P. O. BOX 32020

LOUISVILLE, KY, USA-40232

Attention: DIRECTOR - GAS SUPPLY

or to such other address as either Party shall designate by formal written notice to the other.

ARTICLE XIV

ASSIGNMENTS

- 14.1 Either Party may assign or pledge this Agreement and all rights and obligations hereunder under the provisions of any mortgage, deed of trust, indenture, or other instrument which it has executed or may execute hereafter as security for indebtedness. Either Party may, without relieving itself of its obligation under this Agreement, assign any of its rights hereunder to a company with which it is affiliated. Otherwise, Shipper shall not assign this Agreement or any of its rights hereunder, except in accord with Article VI, Section 1 of the General Terms and Conditions of Transporter's FERC Gas Tariff.
- 14.2 Any person which shall succeed by purchase, merger, or consolidation to the properties, substantially as an entirety, of either Party hereto shall be entitled to the rights and shall be subject to the obligations of its predecessor in interest under this Agreement.

ARTICLE XV

MISCELLANEOUS

- 15.1 THE INTERPRETATION AND PERFORMANCE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH AND CONTROLLED BY THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO THE DOCTRINES GOVERNING CHOICE OF LAW.
- 15.2 If any provision of this Agreement is declared null and void, or voidable, by a court of competent jurisdiction, then that provision will be considered severable at either Party's option; and if the severability option is exercised, the remaining provisions of the Agreement shall remain in full force and effect.



GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule) (continued)

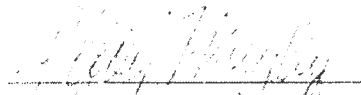
- 15.3 Unless otherwise expressly provided in this Agreement or Transporter's Gas Tariff, no modification of or supplement to the terms and provisions stated in this Agreement shall be or become effective until Shipper has submitted a request for change through PASSKEY and Shipper has been notified through PASSKEY of Transporter's agreement to such change.
- 15.4 Exhibit "A" attached hereto is incorporated herein by reference and made a part hereof for all purposes.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the date first hereinabove written.

TENNESSEE GAS PIPELINE COMPANY, L.L.C.

BY:   
Agent and Attorney-in-Fact

LOUISVILLE GAS AND ELECTRIC COMPANY

BY:   
TITLE: Health & Safety  
DATE: August 9, 2013

GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule)

EXHIBIT A  
AMENDMENT NO. 0  
TO GAS TRANSPORTATION AGREEMENT  
DATED November 1, 2014  
BETWEEN  
TENNESSEE GAS PIPELINE COMPANY, L.L.C.  
AND  
LOUISVILLE GAS AND ELECTRIC COMPANY

Amendment Effective Date: November 1, 2014

Service Package: 111110

Service Package TQ: 20,000 Dth

BEGINNING DATE	ENDING DATE	TQ
11/1/2014	10/31/2018	20000

BEGINNING DATE	ENDING DATE	METER	METER NAME	INTERCONNECT PARTY NAME	COUNTY	ST	ZONE	R/D	LEG	METER-TQ
11/1/2014	10/31/2018	011306	AGUA DULCE (DUAL 2 6081)	ENTERPRISE INTRASTATE L.P.	NUECES	TX	00	R	100	20000
11/1/2014	05/31/2015	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	0
11/1/2014	05/31/2015	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	20000
6/1/2015	10/31/2015	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	20000
6/1/2015	10/31/2015	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	0
11/1/2015	05/31/2016	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	0
11/1/2015	05/31/2016	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	20000

6/1/2016	10/31/2016	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	20000
6/1/2016	10/31/2016	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	0
11/1/2016	05/31/2017	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	0
11/1/2016	05/31/2017	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	20000
6/1/2017	10/31/2017	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	20000
6/1/2017	10/31/2017	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	0
11/1/2017	05/31/2018	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	0
11/1/2017	05/31/2018	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	20000
6/1/2018	10/31/2018	020843	MONROE SMS	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	02	D	100	20000
6/1/2018	10/31/2018	020844	CALVARY	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	02	D	100	0

Total Receipt TQ 20,000 Dth

Total Delivery TQ 20,000 Dth

Number of Receipt Points: 1

Number of Delivery Points: 2

Other Provisions Permitted By Tariff Under the Applicable Rate Schedule and/or General Terms and Conditions and Pursuant to Article XXXVI of the General Terms and Conditions of Tennessee's FERC Gas Tariff:

**Minimum Pressure**

- a. Pursuant to Article X, Section 1 of the General Terms and Conditions ("GT&C") of Transporter's Tariff, Transporter shall cause the delivery of natural gas to Shipper at Shipper's Primary Delivery Point as nearly as practicable to Transporter's line pressure, provided that such line pressure shall not be less than 500 pounds per square inch gauge at Monroe (Meter # 02-0843) and 600 pounds per square inch gauge at Calvary (Meter # 02-0844).
- b. Transporter shall be obligated to provide such minimum pressures only to the extent that capacity is reserved by Shipper and scheduled by Transporter at the Primary Delivery Point(s) described above and taken at a nearly even hourly rate over the 24 hour gas day. Such minimum pressure obligation is subject to the GT&C of Transporter's Tariff, including, but not limited to, Article X (Excuse of Performance).
- c. In the event Transporter is unable to maintain the minimum pressure(s) described herein but Shipper is still able to take receipt of the scheduled quantity at the Primary Delivery Point(s) described above, then Shipper shall be considered unharmed by Transporter's inability to maintain such minimum pressure(s). Subject to the foregoing, any failure on Transporter's part to deliver the scheduled quantity at the Primary Delivery Point(s) described above shall entitle Shipper to the limited remedy specified in Rate Schedule FT-A, Section 7 (Failure of Transporter).
- c. Damages resulting from lower pressures shall be limited to daily demand charge refunds.

**Contractual ROFR**

Notwithstanding anything in Article V, Section 4.1 of Transporter's Tariff to the contrary, Shipper shall have the right to extend the Primary Term of this Agreement pursuant to the procedures set forth in Article V, Section 4.2 of Transporter's Tariff. The rate for any such extension period shall be Transporter's then applicable maximum recourse rate.

Note: Exhibit A is a reflection of the contract and all amendments as of the amendment effective date.



Date: 9/6/2017

**DIRECTOR - GAS SUPPLY**  
LOUISVILLE GAS AND ELECTRIC COMPANY  
P. O. BOX 32020  
LOUISVILLE KY USA  
40232

RE: Amendment No. 8 to  
Gas Transportation Agreement  
Dated November 1, 2014  
Service Package No. 111110-FTATGP

Dear DIRECTOR - GAS SUPPLY:

TENNESSEE GAS PIPELINE COMPANY, L.L.C. and LOUISVILLE GAS AND ELECTRIC COMPANY (LOUISVILLE GAS AND ELECTRIC CO) agree to amend the Agreement effective Nov 1, 2018, to change the Primary Meters and the associated Meter Quantities as reflected in the Attached Revised Exhibit A.

Except as amended herein, all terms and provisions of the Agreement shall remain in full force and effect as written.

If the foregoing is in accordance with your understanding of the Agreement, please so indicate by electronically executing the amended exhibit below.

Should you have any questions, please do not hesitate to contact me at (713) 420-2382.

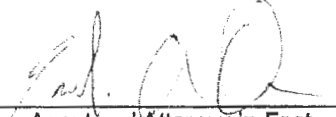
Best regards,

Lindsay Sanford  
Sr. Account Representative  
Transportation Services

Date: 9/6/2017

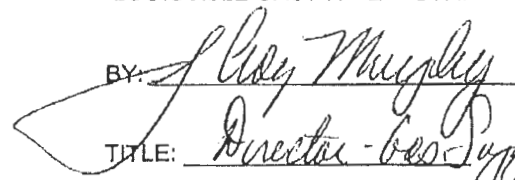
LOUISVILLE GAS AND ELECTRIC COMPANY  
Date: 9/6/2017  
Page 2  
Contract number: 111110-FTATGP  
Amendment number: 8  
Amendment effective date: Nov 1, 2018

TENNESSEE GAS PIPELINE COMPANY, L.L.C.

BY:   
Agent and Attorney-in-Fact

*RAM*  
*CP*

LOUISVILLE GAS AND ELECTRIC COMPANY

BY:   
TITLE: Director - Gas Supply  
DATE: September 11, 2017

GAS TRANSPORTATION AGREEMENT  
(For Use Under FT-A Rate Schedule)

EXHIBIT A  
AMENDMENT NO. 8  
TO GAS TRANSPORTATION AGREEMENT  
DATED November 1, 2014  
BETWEEN  
TENNESSEE GAS PIPELINE COMPANY, L.L.C.  
AND  
LOUISVILLE GAS AND ELECTRIC COMPANY

Amendment Effective Date: Nov 1, 2018

Service Package: 111110-FTATGP

Service Package TQ: 20000 Dth

BEGINNING DATE	ENDING DATE	TQ
11/01/2018	10/31/2023	20000

BEGINNING DATE	ENDING DATE	METER	METER NAME	INTERCONNECT PARTY NAME	COUNTY	ST	ZONE	R/D	LEG	METER-TQ
11/01/2018	10/31/2023	411306	ENTRPRSE/TGP AGUA DULCE NUECES	ENTERPRISE INTRASTATE L.P.	NUECES	TX	0	R	100	20000
11/01/2018	05/31/2019	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	20000
06/01/2019	10/31/2019	420843	LGE/TGP MONROE SMS HART	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	2	D	100	10000
06/01/2019	10/31/2019	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	10000
11/01/2019	05/31/2020	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	20000
06/01/2020	10/31/2020	420843	LGE/TGP MONROE SMS HART	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	2	D	100	10000
06/01/2020	10/31/2020	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	10000



11/01/2020	05/31/2021	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	20000
06/01/2021	10/31/2021	420843	LGE/TGP MONROE SMS HART	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	2	D	100	10000
06/01/2021	10/31/2021	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	10000
11/01/2021	05/31/2022	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	20000
06/01/2022	10/31/2022	420843	LGE/TGP MONROE SMS HART	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	2	D	100	10000
06/01/2022	10/31/2022	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	10000
11/01/2022	05/31/2023	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	20000
06/01/2023	10/31/2023	420843	LGE/TGP MONROE SMS HART	LOUISVILLE GAS AND ELECTRIC COMPANY	HART	KY	2	D	100	10000
06/01/2023	10/31/2023	420844	LGE/TGP CALVARY MARION	LOUISVILLE GAS AND ELECTRIC COMPANY	MARION	KY	2	D	100	10000

Total Receipt TQ 20000  
Total Delivery TQ 20000

Number of Receipt Points: 1  
Number of Delivery Points: 2

Other Provisions Permitted By Tariff Under the Applicable Rate Schedule and/or General Terms and Conditions and Pursuant to Article XXXVI of the General Terms and Conditions of Tennessee's FERC Gas Tariff:

**Minimum Pressure**

a. Pursuant to Article X, Section 1 of the General Terms and Conditions ("GT&C") of Transporter's Tariff, Transporter shall cause the delivery of natural gas to Shipper at Shipper's Primary Delivery Point as nearly as practicable to Transporter's line pressure, provided that such line

pressure shall not be less than 500 pounds per square inch gauge at Monroe (Meter # 420843) and 600 pounds per square inch gauge at Calvary (Meter # 420844).

b. Transporter shall be obligated to provide such minimum pressures only to the extent that Shipper has primary capacity at the meter and nominations by Shipper are scheduled by Transporter at the Primary Delivery Point(s) described above and taken in accordance with Section 4.11 of Rate Schedule FT-A. Such minimum pressure obligation is subject to the GT&C of Transporter's Tariff, including, but not limited to, Article X (Excuse of Performance).

c. In the event that Transporter is unable to maintain the minimum pressures stated above but Shipper takes receipt of all the scheduled quantities at the meters, then Shipper shall be considered unharmed by Transporter's inability to maintain the minimum pressures for such scheduled quantities that were taken by Shipper. If Shipper can only take a portion of the scheduled quantities, Shipper must demonstrate that it was unable to redeliver such quantities on its system solely as a result of Tennessee's inability to maintain the minimum pressures. Shipper's exclusive remedy for Transporter's inability to maintain the minimum pressures shall be to obtain from Transporter Reservation Charge Credits up to the TQ of this Agreement at the meters, in accordance with Article XII, Section 5 of the General Terms and Conditions of Transporter's FERC Gas Tariff, for those quantities that Shipper was unable to redeliver off of its system due to Transporter's inability to maintain the minimum pressures. Notwithstanding anything else herein to the contrary, Transporter shall not be liable to Shipper for any punitive, indirect, consequential, lost profit, loss of revenue or opportunity, special, or exemplary damages that may arise as a result of Transporter's failure to maintain the minimum pressures.

#### **Contractual ROFR**

PK 0 - Contractual ROFR

Notwithstanding anything in Article V, Section 4.1 of Transporter's Tariff to the contrary, Shipper shall have the right to extend the Primary Term of this Agreement pursuant to the procedures set forth in Article V, Section 4.2 of Transporter's Tariff. The rate for any such extension period shall be Transporter's then applicable maximum recourse rate.

Note: Exhibit A is a reflection of the contract and all amendments as of the amendment effective date.





Tennessee Gas Pipeline  
Company, L.L.C.  
a Kinder Morgan company

September 6, 2017

Louisville Gas and Electric Company  
820 West Broadway  
Louisville, Kentucky 40202  
Attention: J. Clay Murphy

RE: Discounted Rate Agreement, Amendment No. 1  
Rate Schedule FT-A Service Package No. 111110

Dear Clay:

This Amendment No. 1 will replace in its entirety and supersede the Discounted Rate Agreement in Service Package No. 111110 dated August 6, 2013. In response to the request of Louisville Gas and Electric Company ("LG&E") and pursuant to Section 5.1 of Rate Schedule FT-A of Tennessee Gas Pipeline Company, L.L.C.'s ("Tennessee") FERC Gas Tariff, as may be in effect from time to time ("Tariff"), Tennessee hereby agrees to adjust its then applicable Rate Schedule FT-A transportation rates for service provided under the above-referenced gas transportation agreement as follows:

1. a) If LG&E attempts to apply this Discounted Rate Agreement to any volumes or points not eligible for the discount and thereby fails to pay correctly invoiced and undisputed amounts, then, if such failure is not cured within thirty days of provision of notice by Tennessee to LG&E of such failure, Tennessee shall have the right, in its sole discretion, to immediately terminate this Discounted Rate Agreement with LG&E and/or to assess, from the date of such violation of the terms of this Discounted Rate Agreement, the applicable maximum rate on all transactions occurring under the Service Package for the month(s) in which such limits were exceeded.

b) For the period commencing November 1, 2018, and extending through October 31, 2023 for gas delivered by Tennessee on behalf of LG&E to the Monroe Meter (#420843) and/or the Calvary Meter (#420844) delivery meter(s) under the above referenced gas transportation agreement, the applicable Rate Schedule FT-A rates for up to 20,000 Dth/day received by Tennessee from any receipt meter in Zone 0, 1, L or 2 will be:

(i) A monthly reservation rate equal to the lesser of: (i) \$5.0188 per Dth, or (ii) Tennessee's applicable Base Reservation Rate per dekatherm under Rate Schedule FT-A.

and

(ii) Tennessee's applicable daily Base Commodity Rate per dekatherm.

In addition, LG&E shall also pay applicable Fuel and Loss Retention (F&LR), Electric Power Cost Recovery (EPCR), and all applicable surcharges as specified in Tennessee's Tariff.

c) Receipts from and/or deliveries to points other than those listed above during the term of this Discounted Rate Agreement shall result in LG&E being assessed Tennessee's applicable

September 6, 2017  
LOUISVILLE GAS AND ELECTRIC COMPANY  
CLAY MURPHY

Base Reservation Rate for the primary path divided by the number of days in the month for the entire contract TQ on the day(s) of such deliveries and the Base Commodity Rate under Rate Schedule FT-A as well as the applicable F&LR, EPCR, and all other applicable charges and surcharges.

d) Subject to the conditions set forth in Section 4.8 and 4.9 of Rate Schedule FT-A, Shipper shall have the right to nominate Extended Receipt Service ("ERS") and Extended Delivery Service ("EDS") subject to Tennessee's Base Reservation Rate for ERS and EDS.

2. Engaging an agent to manage LG&E's utilization of its gas transportation agreement shall not, on its own, cause LG&E to incur Transporter's Base Reservation Rate under Rate Schedule FT-A and Transporter's Base Commodity Rate under Rate Schedule FT-A; however, such agent's management of LG&E's gas transportation agreement shall be subject to all of the terms and conditions of the gas transportation agreement, the Discounted Rate Agreement and Transporter's Tariff.

3. If any terms of this Discounted Rate Agreement are disallowed by any order, rulemaking, regulation or policy of the Federal Energy Regulatory Commission, Tennessee may immediately terminate this Discounted Rate Agreement. If any terms of this Discounted Rate Agreement are in any way modified by order, rulemaking, regulation or policy of the Federal Energy Regulatory Commission, Tennessee and LG&E may mutually agree to amend this Discounted Rate Agreement in order to ensure that the original commercial intent of the parties is preserved. In the event that the parties cannot achieve mutual agreement, Tennessee reserves the right to immediately terminate this Discounted Rate Agreement.

If LG&E is interested in entering into the Discounted Rate Agreement for firm capacity in accordance with the terms proposed above, please have the authorized representative of LG&E execute this Discounted Rate Agreement, and return to the undersigned. The Discounted Rate Agreement will become binding upon the parties only after it is accepted and executed by Tennessee's authorized representative on the below "Agreed to and Accepted" portion. One fully executed copy will be returned for your records.

Sincerely,

Becky Mack  
Account Director

TENNESSEE GAS PIPELINE COMPANY

LOUISVILLE GAS AND ELECTRIC  
COMPANY

AGREED TO AND ACCEPTED  
THIS 12<sup>th</sup> DAY OF September, 2017.

AGREED TO AND ACCEPTED  
THIS 11<sup>th</sup> DAY OF September, 2017.

By: Ernest A. Dehon

By: J. Clay Murphy

Name: Ernest A. Dehon

Name: J. CLAY MURPHY

Title: Director, Marketing

Title: DIRECTOR- GAS SUPPLY



RATES PER DEKATHERM

FIRM TRANSPORTATION RATES  
 RATE SCHEDULE FOR FT-A

Base Reservation Rates	RECEIPT ZONE	DELIVERY ZONE							
		0	L	1	2	3	4	5	6
	0	\$5.5411		\$11.5794	\$15.5758	\$15.8514	\$17.4175	\$18.4879	\$23.1959
	L		\$4.9193						
	1	\$8.3417		\$7.9962	\$10.6413	\$15.0745	\$14.8460	\$16.7429	\$20.5878
	2	\$15.5759		\$10.5774	\$5.5014	\$5.1427	\$6.5803	\$9.0504	\$11.6830
	3	\$15.8514		\$8.3784	\$5.5458	\$4.0009	\$6.1457	\$11.1149	\$12.8437
	4	\$20.1259		\$18.5544	\$7.0708	\$10.7456	\$5.2598	\$5.6884	\$8.1265
	5	\$23.9973		\$16.8625	\$7.4172	\$8.9748	\$5.8432	\$5.4810	\$7.1353
	6	\$27.7603		\$19.3678	\$13.3296	\$14.6845	\$10.3726	\$5.4568	\$4.7237

Daily Base Reservation Rate 1/	RECEIPT ZONE	DELIVERY ZONE							
		0	L	1	2	3	4	5	6
	0	\$0.1822		\$0.3807	\$0.5121	\$0.5211	\$0.5726	\$0.6078	\$0.7626
	L		\$0.1617						
	1	\$0.2742		\$0.2629	\$0.3499	\$0.4956	\$0.4881	\$0.5505	\$0.6769
	2	\$0.5121		\$0.3478	\$0.1809	\$0.1691	\$0.2163	\$0.2975	\$0.3841
	3	\$0.5211		\$0.2755	\$0.1823	\$0.1315	\$0.2021	\$0.3654	\$0.4223
	4	\$0.6617		\$0.6100	\$0.2325	\$0.3533	\$0.1729	\$0.1870	\$0.2672
	5	\$0.7890		\$0.5544	\$0.2439	\$0.2951	\$0.1921	\$0.1802	\$0.2346
	6	\$0.9127		\$0.6367	\$0.4382	\$0.4828	\$0.3410	\$0.1794	\$0.1553

Maximum Reservation Rates 2 /, 3 /	RECEIPT ZONE	DELIVERY ZONE							
		0	L	1	2	3	4	5	6
	0	\$5.5627		\$11.6010	\$15.5974	\$15.8730	\$17.4391	\$18.5095	\$23.2175
	L		\$4.9409						
	1	\$8.3633		\$8.0178	\$10.6629	\$15.0961	\$14.8676	\$16.7645	\$20.6094
	2	\$15.5975		\$10.5990	\$5.5230	\$5.1643	\$6.6019	\$9.0720	\$11.7046
	3	\$15.8730		\$8.4000	\$5.5674	\$4.0225	\$6.1673	\$11.1365	\$12.8653
	4	\$20.1475		\$18.5760	\$7.0924	\$10.7672	\$5.2814	\$5.7100	\$8.1481
	5	\$24.0189		\$16.8841	\$7.4388	\$8.9964	\$5.8648	\$5.5026	\$7.1569
	6	\$27.7819		\$19.3894	\$13.3512	\$14.7061	\$10.3942	\$5.4784	\$4.7453

Notes:

- 1/ Applicable to demand charge credits and secondary points under discounted rate agreements.
- 2/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of \$0.0000.
- 3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of \$0.0216.

RATES PER DEKATHERM

COMMODITY RATES  
 RATE SCHEDULE FOR FT-A

Base  
 Commodity Rates

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0032		\$0.0115	\$0.0177	\$0.0219	\$0.2668	\$0.2546	\$0.3030
L		\$0.0012						
1	\$0.0042		\$0.0081	\$0.0147	\$0.0179	\$0.2269	\$0.2313	\$0.2641
2	\$0.0167		\$0.0087	\$0.0012	\$0.0028	\$0.0734	\$0.1178	\$0.1305
3	\$0.0207		\$0.0169	\$0.0026	\$0.0002	\$0.0982	\$0.1358	\$0.1482
4	\$0.0250		\$0.0205	\$0.0087	\$0.0105	\$0.0454	\$0.0642	\$0.1041
5	\$0.0284		\$0.0256	\$0.0100	\$0.0118	\$0.0639	\$0.0633	\$0.0787
6	\$0.0346		\$0.0300	\$0.0143	\$0.0163	\$0.0984	\$0.0533	\$0.0324

Minimum  
 Commodity Rates 1/, 2/

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0032		\$0.0115	\$0.0177	\$0.0219	\$0.0250	\$0.0284	\$0.0346
L		\$0.0012						
1	\$0.0042		\$0.0081	\$0.0147	\$0.0179	\$0.0210	\$0.0256	\$0.0300
2	\$0.0167		\$0.0087	\$0.0012	\$0.0028	\$0.0056	\$0.0100	\$0.0143
3	\$0.0207		\$0.0169	\$0.0026	\$0.0002	\$0.0081	\$0.0118	\$0.0163
4	\$0.0250		\$0.0205	\$0.0087	\$0.0105	\$0.0028	\$0.0046	\$0.0092
5	\$0.0284		\$0.0256	\$0.0100	\$0.0118	\$0.0046	\$0.0046	\$0.0066
6	\$0.0346		\$0.0300	\$0.0143	\$0.0163	\$0.0086	\$0.0041	\$0.0020

Maximum  
 Commodity Rates 1/, 2/, 3/

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0041		\$0.0124	\$0.0186	\$0.0228	\$0.2677	\$0.2555	\$0.3039
L		\$0.0021						
1	\$0.0051		\$0.0090	\$0.0156	\$0.0188	\$0.2278	\$0.2322	\$0.2650
2	\$0.0176		\$0.0096	\$0.0021	\$0.0037	\$0.0743	\$0.1187	\$0.1314
3	\$0.0216		\$0.0178	\$0.0035	\$0.0011	\$0.0991	\$0.1367	\$0.1491
4	\$0.0259		\$0.0214	\$0.0096	\$0.0114	\$0.0463	\$0.0651	\$0.1050
5	\$0.0293		\$0.0265	\$0.0109	\$0.0127	\$0.0648	\$0.0642	\$0.0796
6	\$0.0355		\$0.0309	\$0.0152	\$0.0172	\$0.0993	\$0.0542	\$0.0333

Notes:

- 1/ Rates stated above exclude the ACA Surcharge as revised annually and posted on the FERC website at <http://www.ferc.gov> on the Annual Charges page of the Natural Gas section. The ACA Surcharge is incorporated by reference into Transporter's Tariff and shall apply to all transportation under this Rate Schedule as provided in Article XXIV of the General Terms and Conditions.
- 2/ The applicable F&LR's and EPCR's, determined pursuant to Article XXXVII of the General Terms and Conditions, are listed on Sheet No. 32.
- 3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of \$0.0009.



FUEL AND EPCR

F&LR 1/, 2/, 3/, 4/

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	0.51%		1.54%	2.28%	2.86%	3.33%	3.75%	4.44%
L		0.26%						
1	0.63%		1.12%	1.92%	2.31%	2.82%	3.41%	3.88%
2	2.33%		1.19%	0.25%	0.46%	0.85%	1.43%	1.93%
3	2.86%		2.31%	0.46%	0.14%	1.17%	1.69%	2.20%
4	3.33%		2.62%	1.19%	1.41%	0.48%	0.73%	1.24%
5	3.88%		3.41%	1.44%	1.69%	0.72%	0.71%	0.91%
6	4.63%		4.02%	1.93%	2.20%	1.17%	0.57%	0.30%

EPCR 3/, 4/

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0039		\$0.0151	\$0.0233	\$0.0290	\$0.0350	\$0.0398	\$0.0477
L		\$0.0013						
1	\$0.0053		\$0.0105	\$0.0193	\$0.0236	\$0.0293	\$0.0359	\$0.0412
2	\$0.0233		\$0.0113	\$0.0012	\$0.0034	\$0.0076	\$0.0138	\$0.0190
3	\$0.0290		\$0.0236	\$0.0034	\$0.0000	\$0.0111	\$0.0164	\$0.0219
4	\$0.0350		\$0.0271	\$0.0113	\$0.0137	\$0.0036	\$0.0063	\$0.0118
5	\$0.0398		\$0.0359	\$0.0138	\$0.0164	\$0.0062	\$0.0061	\$0.0082
6	\$0.0477		\$0.0412	\$0.0190	\$0.0219	\$0.0110	\$0.0046	\$0.0017

- 1/ Included in the above F&LR is the Losses component of the F&LR equal to 0.10%.
- 2/ For service that is rendered entirely by displacement and for gas scheduled and allocated for receipt at the Dracut, Massachusetts receipt point, Shipper shall render only the quantity of gas associated with Losses of 0.10%.
- 3/ The F&LR's and EPCR's listed above are applicable to FT-A, FT-BH, FT-G, FT-GS, and IT.
- 4/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.

RATE SCHEDULE FT-A  
FIRM TRANSPORTATION SERVICE

1. AVAILABILITY

This Rate Schedule is available for the transportation of natural gas on a firm basis by Tennessee Gas Pipeline Company, L.L.C. (Transporter) for any Shipper:

- (a) which has executed a Transportation Contract wherein Transporter agrees to transport natural gas for Shipper's account up to a specific maximum daily Transportation Quantity; and
- (b) which has caused its supplier of gas, if such supplier has retained processing rights to the gas delivered to Shipper, to enter into a Transportation Contract for the transportation of any liquids and any PTR quantities associated with the processing of gas received at the Receipt Point(s) under Shipper's Transportation Contract after August 1, 1992.

2. APPLICABILITY AND CHARACTER OF SERVICE

- 2.1 Firm transportation service under this Rate Schedule shall be provided (i) to sales customers which have converted their firm sales entitlement to firm transportation service, (ii) to firm transportation customers who have converted their firm service under other rate schedules to service under this Rate Schedule, (iii) to the extent Transporter determines firm capacity is available, and (iv) if Shipper has satisfied the requirements of Articles IV and XXVI of the General Terms and Conditions; provided, however, Transporter shall not commence service until Transporter and Shipper have executed a Transportation Contract. Shipper shall have the right to enter into one or more transportation contracts for the service provided under this Rate Schedule.
- 2.2 Transporter shall not be required to install, operate or maintain any additional facilities in order to provide transportation service under this Rate Schedule.
- 2.3 Transporter shall not be required to transport gas where the total quantity of gas scheduled for transportation is less than that required to operate existing compression facilities necessary to provide the transportation service.

3. QUALIFICATION FOR SERVICE

- 3.1 All Shippers requesting firm transportation service must qualify pursuant to Article XXVI of the General Terms and Conditions of Transporter's FERC Gas Tariff.
- 3.2 All Shippers requesting firm transportation service must execute a Transportation Service Agreement in accord with the provisions of Article XXVI of the General Terms and Conditions of Transporter's FERC Gas Tariff.

4. DELIVERY AND RECEIPT POINTS; PRESSURE; UNIFORM QUANTITIES

- 4.1 Primary Receipt Points: Subject to the availability of capacity, any receipt point on Transporter's system, including storage service points and Pooling Area Points, shall be eligible for designation as a Primary Receipt Point for gas transported under this Rate Schedule. Transporter shall not be required under any circumstances to receive gas at any Receipt Point where the total quantity of gas for transportation scheduled for receipt on any day is less than that required for the accurate measurement of quantities to be received. Shipper's specific TQ shall be a uniform quantity throughout the term of the Transportation Service Agreement, except that Transporter may, on a not unduly discriminatory basis, agree to varying levels in Shipper's TQ over specified periods. Shipper's TQ and any varying levels in TQ, as well as the period of such varying TQ levels, shall be specified in the Transportation Service Agreement. The TQ shall be a uniform quantity throughout any month. With regard to Transportation Contracts entered into after June 25, 1991, Shipper shall be required to notify Transporter if both (i) a Shipper does not deliver gas at a Primary Receipt Point that is capacity constrained at an average daily quantity greater than 30% of Shipper's maximum daily quantity at that receipt point under Shipper's Transportation Contract under this Rate Schedule over any twelve calendar month period and (ii) the Shipper does not have a gas supply contract at that point which has demand, take-or-pay, deficiency or other fixed charge obligations.

Upon receipt of such notice, (i) Shipper's Transportation Contract will then be amended to reduce the maximum daily delivery quantity at that Primary Receipt Point to an amount equal to 10/3 of the average daily deliveries at such point for such twelve calendar month period and (ii) Transporter shall post on its Interactive Website the availability of that point for Primary Receipt Point designations. Shipper will be able to designate a replacement Primary Receipt Point on the same Supply Leg.

RATE SCHEDULE FT-A  
FIRM TRANSPORTATION SERVICE (continued)

4. DELIVERY AND RECEIPT POINTS; PRESSURE; UNIFORM QUANTITIES (continued)
- 4.2 Secondary Receipt Points: All receipt points on Transporter's system within Shipper's Transportation Path shall be available as Secondary Receipt Points up to the maximum daily quantity that is applicable to the Primary Receipt Points in Shipper's Transportation Path.
- 4.3 Primary Delivery Points: Subject to availability of capacity any delivery point on Transporter's system, including Pooling Area Points, that is covered by a Balancing Agreement ("eligible delivery point") shall be eligible for designation in Shipper's transportation agreement as a Primary Delivery Point for gas transported by Transporter under this Rate Schedule.
- 4.4 Secondary Delivery Points: A Shipper under this rate schedule may use as a Secondary Delivery Point any eligible delivery point on Transporter's system which is within the Transportation Path.
- 4.5 Contract Quantities at Delivery Points: Except as allowed by Section 4.6, the sum of the maximum daily delivery quantities applicable to all of a Shipper's Primary Delivery Points may not exceed the maximum daily quantity under the Shipper's Transportation Agreement.
- 4.6 Grandfathered Delivery Point Capacity: A Shipper which was receiving firm sales or transportation service on the day prior to the effective date of Fifth Revised Vol. No. 1 of this tariff may transfer to a new agreement the delivery point capacity and delivery point pressures stated in its former firm sales or transportation service agreement; the Shipper shall be allowed to divide that stated capacity among one or more new agreements so that the total aggregate delivery point capacity is preserved.
- 4.7 Change of Primary Points: Subject to agreement by Transporter and in accordance with Article XXVI of the General Terms and Conditions of Transporter's FERC Gas Tariff, a Shipper may elect to substitute new points for the Primary Delivery or Primary Receipt Points in its Transportation Service Agreement. Such changes may be affected by prior notice to Transporter of 30 days if in writing or 15 days if via Transporter's Interactive Website. All such changes must be reflected in an amended Transportation Service Agreement and shall be effective at the commencement of the following month unless otherwise agreed by Transporter. Transporter shall not be required to accept an amendment if there is inadequate capacity available to render the new service or if the change would reduce the reservation charges applicable to the Transportation Service Agreement.
- 4.8 Extended Receipts: Shipper may use points not in its Transportation Path as defined in Section 26 of Article I of the General Terms and Conditions subject to the priority specified in Section 3 of Article IV of the General Terms and Conditions. In order to use such points, Shipper must request Extended Receipt Service by designating the Extended Receipt Service zone from which Shipper desires to extend service ("Extension Zone") and nominating in Transporter's Interactive Website the following information: (i) the point at which Shipper desires to receive gas ("Extended Receipt Point") and (ii) the requested quantity to be received at the point. Termination of the underlying agreement shall terminate any Extended Receipt Service. This service will be subject to an additional usage charge from the Extension Zone to the Extended Zone containing the Extended Receipt Point as specified in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff.
- 4.9 Extended Deliveries: Shipper may use points not in its Transportation Path as defined in Section 26 of Article I of the General Terms and Conditions subject to the priority specified in Section 3 of Article IV of the General Terms and Conditions. In order to use such points, Shipper must request Extended Delivery Service by designating the Extended Delivery Service zone from which Shipper desires to extend service ("Extension Zone") and nominating in Transporter's Interactive Website the following information: (i) the point at which Shipper desires to deliver gas ("Extended Delivery Point") and (ii) the requested quantity to be delivered at the point. Termination of the underlying agreement shall terminate any Extended Delivery Service. This service shall be subject to an additional usage charge from the Extension Zone to the Extended Zone containing the Extended Delivery Point as specified in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff.

RATE SCHEDULE FT-A  
FIRM TRANSPORTATION SERVICE (continued)

4. DELIVERY AND RECEIPT POINTS; PRESSURE; UNIFORM QUANTITIES (continued)
- 4.10 Pressures: Shipper shall deliver gas to Transporter at the pressure required from time to time to enable the gas to enter Transporter's facilities at the Receipt Point(s). Transporter shall deliver gas to Shipper or Shipper's designee at Transporter's line pressure existing at the Delivery Point(s).
- 4.11 Uniform Quantities: As nearly as practicable, Shipper shall deliver and receive gas in uniform hourly quantities during any day. Subject to Transporter's operating conditions, during any given day Transporter will allow Shipper to deliver or receive gas at an hourly rate that may exceed 1/24th of Shipper's scheduled quantities.
5. RATES AND CHARGES
- 5.1 Applicable Rates: The applicable rates for service under the FT-A Rate Schedule are the applicable maximum FT-A rates shown in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff; provided, however, upon notice to Shipper, Transporter has the right at any time and from time to time to adjust the rates applicable to any transportation service to any level not less than the minimum or more than the maximum rates established for this Rate Schedule and set forth in the Summary of Rates and Charges of Transporter's effective FERC Gas Tariff. In the event that Transporter makes such an adjustment, such adjusted rates (a) shall apply solely to service at the receipt and/or delivery points agreed upon by Transporter, and (b) shall be applicable for the period agreed upon by Transporter. By mutual agreement between Transporter and Shipper, discounts may be limited consistent with the provisions of Section 6.1 of the pro forma service agreement applicable to this Rate Schedule FT-A.
- In the event the Shipper has designated multiple Primary Receipt and/or Delivery points, a Weighted Average Reservation Rate shall be applied to the total maximum daily transportation quantity specified in the Transportation Service Agreement; provided, however, that the addition of points to a Transportation Service Agreement shall not reduce the reservation charge otherwise applicable to the Transportation Service Agreement. The Weighted Average Reservation Rate shall be determined as follows: (1) for each Primary Receipt and Primary Delivery point combination available under the Transportation Service Agreement the applicable Reservation Rate shall be multiplied by the maximum daily transportation quantity applicable to that receipt and delivery point combination; (2) the sum of the amounts derived for each receipt and delivery point combination shall be divided by the total maximum daily transportation quantity specified in the Transportation Service Agreement. The sum of the maximum daily transportation quantities applicable to each receipt and delivery point combination shall not exceed the total maximum daily transportation quantity under the Transportation Service Agreement. In the event Transporter and Shipper agree to establish a fixed rate to be charged for the duration of the firm Transportation Service Agreement, said rate will be set forth in the Service Agreement. Transporter shall file with the Commission the required reports of any adjustment below the maximum Commodity and/or Reservation Rates for service under this Rate Schedule.
- 5.2 Facilities Charge: In addition to the other charges pursuant to Section 5.1 of this Rate Schedule, Transporter may charge Shipper an amount to reflect the cost of Tap Facilities or Tap and Connecting Facilities as provided in Article XIX of the General Terms and Conditions of Transporter's FERC Gas Tariff; provided, that if new facilities are necessary solely to enable Transporter to maintain existing service levels for Shipper, then no Facilities Charge will be assessed. Any applicable Facilities Charge may be stated in the Transportation Service Agreement.
- 5.3 Incidental Charges: In addition to the charges pursuant to Sections 5.1 and 5.2 of this Rate Schedule, Transporter shall charge Shipper an amount to recoup any filing or similar fees which Transporter incurs in rendering service hereunder, which have not been previously paid by Shipper. Transporter shall not use the amounts so collected either as revenues or costs in establishing its general system rates. The applicable Incidental Charges shall be stated in the Transportation Service Agreement.

RATE SCHEDULE FT-A  
FIRM TRANSPORTATION SERVICE (continued)

5. RATES AND CHARGES (continued)

- 5.4 Authorized Overrun Charge: If Shipper, upon receiving the advance approval of Transporter through Transporter's Interactive Website, should on any day take under this Rate Schedule a quantity of natural gas more than Shipper's maximum daily quantity under Shipper's Transportation Service Agreement, then such quantity shall constitute an Authorized Overrun. If Transporter has complete and unrestricted control over gas deliveries to Shipper, Shipper shall be deemed to have received the advance approval of Transporter for such excess takes.

NAESB Standard 1.3.19 states: Overrun quantities should be requested on a separate transaction. Therefore, all Shipper requests for Authorized Overruns must be nominated through Transporter's Interactive Website.

For all such Authorized Overruns, Shipper shall pay Transporter the rate set forth in the Summary of Rates and Charges of Transporter's FERC Gas Tariff times the excess quantities delivered to Shipper, unless the parties mutually agree otherwise.

- 5.5 Fuel and Losses. Shipper shall furnish the quantity of gas required for Fuel and Losses associated with rendering transportation service pursuant to this Rate Schedule. The quantity of gas retained by Transporter for Fuel and Losses shall be equal to the quantity of gas scheduled for delivery to Transporter multiplied by the applicable F&LR percentage shown in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff for the zone of receipt and zone of delivery applicable to the transportation service. However, for service that is rendered entirely by displacement and for gas scheduled and allocated for receipt at the Dracut, Massachusetts receipt point, Shipper shall furnish only that quantity of gas associated with Losses as shown in the Summary of Rates and Charges in Transporter's FERC Gas Tariff.

In addition, Shipper shall pay Transporter the applicable EPCR Component of the Fuel Adjustment Mechanism, shown in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff for the zone of receipt and zone of delivery applicable to the transportation service multiplied by the volume of gas scheduled for delivery by Transporter.

- 5.6 Notwithstanding any provision of Transporter's effective FERC Gas Tariff to the contrary, Transporter and Shipper may mutually agree in writing to rates, rate components, charges, or credits, for service under this Rate Schedule that differ from those rates, rate components, charges, or credits, that are otherwise prescribed, required, established or imposed by this Rate Schedule or by any other applicable provision of Transporter's effective FERC Gas Tariff. If Transporter agrees to such differing rates, rate components, charges, or credits (referred to hereinafter and in this Tariff as "Negotiated Rates"), then the Negotiated Rate[s] shall be effective only for the period agreed upon by Transporter. During such period, the Negotiated Rate shall govern and apply to the Shipper's service and the otherwise applicable rate, rate component, charge, or credit, which the parties have agreed to replace with the Negotiated Rate, shall not apply to, or be available to, the Shipper. At the end of such period, the otherwise applicable maximum rates or charges shall govern the service provided to Shipper. Only those rates, rate components, charges, or credits, identified by Transporter and Shipper in writing as being superseded by a Negotiated Rate shall be ineffective during the period that the Negotiated Rate is effective; all other rates, rate components, charges, or credits prescribed, required, established or imposed by this Rate Schedule or Transporter's Tariff shall remain in effect. Transporter shall make any filings at the FERC necessary to effectuate a Negotiated Rate.

RATE SCHEDULE FT-A  
FIRM TRANSPORTATION SERVICE (continued)

6. MONTHLY BILL

The Monthly Bill for deliveries shall be equal to:

- (a) Reservation Charge: A reservation charge equal to the product of the applicable Reservation Rate (or Weighted Reservation Rate) shown in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff multiplied by the Transportation Quantity specified in the Transportation Service Agreement; and
- (b) Commodity Charge: The applicable Commodity Rate set forth in the Summary of Rates and Charges in Transporter's effective FERC Gas Tariff multiplied by the quantity of gas scheduled in the month; and
- (c) Other Charges: If applicable, any New Facilities Charge, any Incidental Charges, any Authorized Overrun Charges, any Fuel and Losses Charge, and any applicable surcharges as shown in the Summary of Rates and Charges and any cash out charges resulting from imbalances incurred.

7. FAILURE OF TRANSPORTER

If Transporter fails to tender for delivery or schedule the quantity of natural gas nominated by Shipper for delivery from a primary Receipt Point to a primary Delivery Point during any one or more days up to the maximum quantity of gas which Transporter is obligated to deliver to Shipper, Transporter shall provide reservation charge credits, if any, as provided in Article XII, Section 5 of the General Terms and Conditions of Transporter's FERC Gas Tariff.

8. GENERAL TERMS AND CONDITIONS

Shipper shall provide Transporter with such information as is needed to meet the requirements placed on Transporter pursuant to 18 CFR Part 284. The General Terms and Conditions specified in Volume 1 of Transporter's FERC Gas Tariff are incorporated as part of this Rate Schedule.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**CONFIDENTIAL INFORMATION REDACTED**

**Question No. 2**

**Witness: J. Clay Murphy / Pamela L. Jaynes**

- Q-2. Provide copies of all current contracts for commodity supply. Provide a comparison of the terms of these commodity supply arrangements with those that were utilized during the five previous calendar years. Explain all efforts to ensure that commodity gas supply costs are/were the lowest possible cost, consistent with security of supply.
- A-2. Attached are copies of the following documents with respect to LG&E's contracts for gas commodity supply in effect from November 1, 2017, through October 31, 2018. These documents include the following:
- all base forms of agreement under which LG&E was able to purchase gas supplies; these base forms of agreement set forth the framework for a potential gas commodity transaction such as billing, payment, title transfer, etc., but do not include the specifics with respect to a particular transaction such as price, volume, or duration (term)
  - a summary of the key terms and conditions of the gas supply commodity transactions taken from the below referenced Nomination Schedules
  - all Nomination Schedules which reference and are Exhibits to the above base forms of agreement which memorialize gas supply transactions, including the specifics of each transaction with respect to price, volume, and duration (term), but excluding transactions for a single day or weekend

LG&E has not included Nomination Schedules associated with the purchase of any daily gas supplies simply because they are voluminous. However, the bid solicitations and the awards associated with each daily purchase is provided in LG&E's response to Commission Question No. 8. These purchases are made under the same base forms of agreements provided herewith and in order to satisfy either daily changes in load requirements or to optimize LG&E's gas supply portfolio as discussed, for example, in LG&E's response to Commission Question No. 6.

Certain aspects of LG&E's gas commodity supply arrangements have remained the same over the years, while others have evolved to meet new market conditions, address supply dynamics, or implement refinements and improvements.

For example, LG&E continues to rely upon a number of key contracting strategies that have been tested over the years and proven to be both useful and valuable:

- Development of Annual Gas Supply Plan: LG&E has and continues to develop a gas supply plan on an annual basis. The gas supply plan reflects recent developments in the natural gas market as well as changes specific to LG&E. The annual gas supply plan is focused primarily on the upcoming winter season but also looks forward for capacity planning purposes over the next five years. The annual gas supply plan takes into account any changes in forecasted loads, changes in on-system storage deliverability and system operating parameters, market trends and developments, and other factors. The annual gas supply plan is also used as a tool to manage capacity needs in the interstate pipeline capacity market. LG&E's annual gas supply plan is discussed in more detail in LG&E's response to Commission Question No. 9.
- Bid Solicitation Process: LG&E continues to rely upon a bidding program to award supply transactions. A bidding program allows LG&E to secure low cost reliable gas supplies. Additionally, a bidding program assists LG&E in gathering important information about developments in the gas supply marketplace. A more detailed discussion of LG&E's bid solicitation process can be found in LG&E's response to Commission Question No. 8.
- Market Responsive Pricing: LG&E continues to rely upon market-responsive pricing parameters in its contracting practices. These pricing mechanisms tie the cost of the gas commodity to well-established market indices reflective of the supply area in which LG&E is purchasing the natural gas supply. In this regard, LG&E also uses a mix of daily and first-of-month pricing. LG&E optimizes its portfolio to secure the lowest price by dispatching the supplies (either first-of-month or daily) that will produce the lowest cost for customers. These pricing arrangements are further supported by the guidance provided by the Commission in Administrative Case Nos. 297 and 384. LG&E has found that these kinds of pricing arrangements continue to be viable and supportive of LG&E's strategies to purchase gas at the lowest price consistent with reliability of supply.
- Supply Area Pricing: LG&E indexes the price of natural gas purchases to published indices (such as "Platts Gas Daily" or "Platts Inside FERC's Gas Market Report") associated with the various supply zones in which supplies are purchased. For example, gas supplies purchased in Tennessee's Zone 0 use the corresponding indices for that supply area. Purchases from Texas Gas's Zone 1 reference indices for that supply area. LG&E has found these kinds of pricing arrangements to be viable and supportive of



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Louisiana, East Texas, and Arkansas that originate in Texas Gas's Zones SL and 1. Incenting LG&E to maximize these kinds of opportunities is a key feature of LG&E's gas supply cost PBR mechanism discussed below.

- New Counterparties: LG&E has developed relationships with new suppliers as the supply areas accessible to LG&E have changed. The producers and marketers that are viable and reliable suppliers for gas supplies from the Gulf supply areas are not necessarily the same as those able to supply gas from the Marcellus and Utica shale areas. In short, LG&E's potential and actual counterparties have evolved with changes in marketplace dynamics and supply sources.
- New Pricing Arrangements: LG&E has implemented a new pricing arrangement that allows LG&E to take advantage of any downward price movement on a daily basis while preventing LG&E from being exposed to daily price movements in excess of the first-of-the-month price. LG&E has found that this pricing arrangement provides benefits to its customers and is continuing to test the viability of this pricing arrangement going forward.
- Regulatory Developments: Outside forces continue to impact LG&E's contracting practices. In response to commodity speculation in 2009, the Commodities Futures Trading Commission ("CFTC") was empowered to battle market manipulators by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. All market participants came under regulatory scrutiny by the CFTC. Initial market confusion over guidance related to "forward contracts with embedded volumetric optionality" created considerable uncertainty in the industry about the kinds of transactions that needed to be reported to the CFTC. As a result, potential counterparties were disinclined to offer certain pricing options with mid-month volume changes. LG&E worked with its suppliers to mitigate the impact of this regulation so that it could achieve supply options that allow for mid-month volume flexibility to respond to load changes. Therefore, regulatory changes in the marketplace can affect how market participants may choose to buy or sell gas.
- City-Gate Deliveries: LG&E has taken advantage of supplies delivered by suppliers to LG&E's city-gate when those supplies are a low cost alternative. City-gate deliveries require the supplier to use its own interstate pipeline capacity to deliver these supplies to LG&E. To date, the availability of these delivered supplies has allowed LG&E to avoid long-term commitments to potentially more expensive pipeline capacity without diminishing reliability. The availability of natural gas supplies delivered directly to the city-gate has increased significantly, particularly on the interstate pipeline system of Tennessee. However, the availability of this supply may decrease in the future as producers and marketers move toward exporting this natural gas either by pipeline to Mexico or overseas as LNG. In the meantime, LG&E plans to take advantage of delivered supplies when they are economical as a reliable option for serving system loads. LG&E will continue to evaluate the long-term availability, cost-effectiveness,

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Idm 10/02/2018

- Request Proposals from Potential Suppliers
- Evaluate Proposals and Select Best Option
- Memorialize Contractual Terms and Conditions

The results of this process ensure that:

- Adequate gas supply is available to serve LG&E's firm gas sales customers under extreme weather conditions
- LG&E does not have excess gas supply under contract
- System operating constraints can be satisfied using the lowest cost options available at the time

See LG&E's response to Commission Question No. 9 wherein LG&E describes its gas supply planning process.

This initial gas supply planning process (whether it involves pipeline capacity or gas commodity planning) is a basic and essential component in ensuring both low cost and reliable gas supplies. However, as a result of the incentives provided as a part of LG&E's gas supply cost PBR mechanism, LG&E supplements this process by optimizing its gas supply and transportation contract portfolio options. By continually reviewing and modifying gas supply and transportation dispatch plans in the wake of continually unfolding market and system load information, LG&E is able to take its pursuit of low cost and reliable supplies an additional step. Refer to LG&E's nomination and dispatching processes discussed in LG&E's response to Commission Question No. 6.

LG&E is encouraged to find new ways to optimize and minimize gas supply commodity costs by its gas supply cost PBR mechanism. For example:

- Gas Supply Cost Performance-Based Ratemaking Mechanism: LG&E's gas supply cost PBR mechanism also acts to provide LG&E with an incentive to find creative ways in which to reduce its gas supply costs. LG&E's current PBR mechanism was approved by the KYSPC in Case No. 2014-00476 by Order dated June 30, 2015. LG&E's PBR mechanism has three components covering LG&E's gas supply procurement activities for each PBR Year. One of those components is an incentive mechanism for gas commodity costs. With this component, LG&E benchmarks its actual gas commodity costs against a benchmark of industry-recognized price postings reflective of the market-price of gas. To the extent that LG&E can purchase gas at less than the established supply area benchmarks, LG&E can achieve savings under this component of the mechanism. If LG&E purchases gas in excess of those benchmarks, an expense

is created under this component of the PBR mechanism. LG&E's gas supply cost PBR mechanism also includes an incentive mechanism for off-system sales. In the event that LG&E has natural gas under contract that is not otherwise required to meet its on-system obligations, LG&E may be able to sell that gas in off-system markets to third parties at market-based rates in excess of LG&E's cost. This mechanism allows LG&E and its customers to share in any benefits arising from off-system sales of natural gas.

**The following information has been included as attachments to this response subject to a Petition for Confidential Treatment:**

- Annual Supply Statistics for November 1, 2012, through October 31, 2018
- A copy of all base form of agreements and related contractual documentation reflecting name changes and assignments
- A summary of all transactions in effect from November 1, 2017, through October 31, 2018, (excluding transactions lasting only a single day or weekend)
- The Nomination Schedules for each of the transactions from November 1, 2017, through October 31, 2018, (excluding transactions lasting only a single day or weekend)

The entire attachment is  
Confidential and  
provided separately  
under seal.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 3**

**Witness: J. Clay Murphy / Pamela L. Jaynes**

- Q-3. Provide gas supply and capacity contract summaries showing significant contract terms, daily/monthly/annual entitlements, and pricing. Identify any capacity changes (renegotiated and expired agreements, de-contracting, assignment, or long-term release) that took place during the most recent year.
- A-3. A discussion of LG&E's gas transportation contracts and capacity summaries is included in LG&E's response to Commission Question No. 1. That response includes a discussion of significant contract terms, daily/monthly/annual entitlements, and pricing. As discussed in LG&E's response to Commission Question No. 1, there have been no capacity changes (renegotiated and expired agreements, de-contracting, assignment, or long-term release) that have taken place during 2018.

A discussion of LG&E's gas supply contracts and related transactions is included in LG&E's response to Commission Question No. 2. That response includes a discussion of significant contract terms, daily/monthly/annual entitlements, and pricing.



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 4**

**Witness: J. Clay Murphy**

- Q-4. Provide LG&E's storage arrangements; state the maximum daily injection and withdrawal rates and the decline in deliverability that occurs as gas is withdrawn.
- A-4. LG&E's off-system storage arrangements are made under Texas Gas's No-Notice Service ("NNS") which is a bundled service that includes pipeline transportation capacity and storage service. As such, the injection and withdrawal parameters associated with off-system storage are discussed in LG&E's response to Commission Question No. 1.

Parameters associated with LG&E's on-system storage are included with the 2017 Annual Gas Supply Plan provided in LG&E's response to Commission Question No. 9. Specifically, LG&E's on-system storage injection parameters can be found in Exhibit V of Exhibit 4 of the 2017 Annual Gas Supply Plan; and LG&E's on-system withdrawal parameters can be found in Exhibit 7 of the 2017 Annual Gas Supply Plan.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 5**

**Witness: J. Clay Murphy**

- Q-5. Provide the capacity of any peaking arrangements.
- A-5. LG&E does not have any peaking arrangements other than the storage facilities, pipeline transportation services, and gas supply agreements identified in response to Commission Question Nos. 1, 2, 3, and 4. Specifically, LG&E does not have any LNG or other peak shaving facilities.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 6**

**Witness: J. Clay Murphy**

Q-6. Provide a copy of any written procedures in use by LG&E for nominations and dispatching.

A-6. Gas Control and Storage ("Gas Control") and Gas Management, Planning, and Supply ("Gas Supply") work closely together to ensure the dispatch of adequate gas supplies to and through LG&E's distribution system in an efficient manner. Gas Control has the responsibility for the operation of the distribution system including any deliveries made to or from LG&E's on-system storage facilities. Gas Supply has responsibility for managing natural gas supplies and interstate transportation services (including deliveries to and from any off-system storage) in order to ensure that adequate gas is delivered to LG&E's system in a reliable and cost-effective manner.

Prior to the beginning of each month, LG&E develops a monthly supply plan to serve gas system loads. These monthly plans build upon the results of the long-term planning process discussed in LG&E's response to Commission Question No. 9. Using scenario analysis, LG&E's monthly supply plan considers potential weather occurrences, potential pricing developments, current and projected gas storage inventory levels and targets, and end-use transportation deliveries. This analysis is used to develop potential responses to price and load changes that will enable LG&E to achieve both reliable service to customers and low cost deliveries. Following each month, a review is conducted in order to assist in the development of gas supply strategies on a going-forward basis.

Each day, Gas Control develops a daily system sendout forecast using expected temperatures and LG&E's current load forecast. Importantly, LG&E's gas supply plan is not a static one. LG&E must be prepared to address and respond to hourly and daily changes in system loads. Therefore, this sendout forecast is updated at least once each day, and more frequently if needed due to changing weather or other conditions.

Gas Control also establishes a daily operational plan which reflects system operations (such as planned pipeline maintenance); current storage field inventory targets; the planned date for achieving these inventory targets; and the approximate average daily storage withdrawal or injection rates based on the current inventory and the target inventory for each field. This is important because on-system gas storage deliverability is a function of

storage inventory levels and decreases as storage inventory is depleted. Target inventory levels over the winter operating period are established with the goal of maintaining adequate on-system storage deliverability to meet system supply requirements for a colder-than-normal winter weather pattern. Relying upon its operational plan, Gas Control determines the operational dispatch of deliveries from (or to) LG&E's on-system storage facilities. Any gas required to meet system sendout which is not delivered from LG&E's on-system storage must necessarily be delivered to LG&E's system via the interstate pipelines serving LG&E. Gas Control provides the Gas Supply Department with the daily volume of gas that must be delivered to LG&E via the interstate pipelines.

After reflecting expected deliveries to the LG&E system from its gas transportation customers, LG&E's Gas Supply Department determines the gas supplies that are necessary to be delivered to LG&E's system. As a part of this process, Gas Supply also determines the amount of gas to inject into, or withdrawal from, LG&E's Texas Gas Rate NNS storage.

LG&E's dispatch and purchase decisions are made within contractual and system operational parameters while considering the most economic dispatch of available supply options. With those factors in mind, Gas Supply develops a daily supply dispatch plan considering the volumes, pricing, and flexibility available under LG&E's existing gas supply and pipeline service contracts. Gas Supply determines the volumes to be dispatched under existing gas supply arrangements. Based on need or price, LG&E may also supplement the dispatch of existing supplies with purchases made through the short-term bidding process. Alternatively, Gas Supply may determine that supplies available through the short-term bidding process may be more economical than dispatching existing supplies available under contract.

LG&E's gas supply cost PBR mechanism encourages LG&E to address market changes in order to optimize its gas supply portfolio and achieve low cost results for its gas supplies. A simple example of portfolio optimization is to discontinue the purchase of one supply already flowing and then substitute a less expensive supply option – either under a different supply arrangement or by purchasing gas in the daily spot market. LG&E uses economic dispatch tools to help it evaluate potential alternatives and make decisions to address market changes.

At the time of dispatch or purchase, Gas Supply provides the supplier with the appropriate LG&E transportation contract number (applicable to the pipeline on which the supplies are being transported), so that the gas will be delivered to LG&E using the desired pipeline transportation service. In turn, the supplier provides any information required by LG&E to effectuate the nomination on the respective interstate pipeline. Gas Supply nominates its purchases from each supplier on the applicable pipeline's Internet Website. Gas Supply also confirms that each supplier has entered the correct and corresponding purchase volumes and transportation contract numbers on the pipeline's Internet Website to ensure supply delivery. The interstate pipeline must confirm and schedule the nomination in order for the gas to flow.

After the Gas Supply Department has completed the dispatching, purchasing, and nomination processes described above, the Gas Supply Department provides Gas Control with a plan of deliveries from the interstate pipeline system for the next day. This purchase plan sets forth the daily and hourly quantities available (within minimum and maximum tolerances) for each pipeline, daily and hourly deliveries by transport customers, and other related information.

**The following written procedures have been included as attachments and are used by LG&E's Gas Supply Department in support of its gas supply nomination and dispatching process:**

- Section 2.9: "Determination of Volumes of Natural Gas to Dispatch and Purchase"
- Section 2.10: "Compliance with Pipeline Services"
- Section 2.11: "Nominations to Texas Gas"
- Section 2.12(a): "Nominations to Tennessee Utilizing LG&E's Firm Pipeline Capacity"
- Section 2.12(b): "Verifying Supplier Nominations to Tennessee Utilizing Supplier's Pipeline Capacity"

<b>PROCEDURE NAME</b> Determination of Volumes of Natural Gas to Dispatch and Purchase		<b>SECTION NO.</b> 2.9
<b>VERSION NO.</b> 4	<b>DATE ISSUED</b> October 1, 2016	<b>PAGE</b> 1 of 3

**PURPOSE**

The purpose of this procedure is to outline the method used to determine the volumes of natural gas to purchase and/or dispatch.

The task of determining purchase volumes is governed by factors that include volumetric requirements and pricing considerations.

Gas Supply Department personnel meet with the Manager, Gas Control on a monthly basis to determine anticipated system requirements for the upcoming month. The Manager, Gas Control provides a Purchase Gas Estimate (Appendix 2-M) including forecasted minimum and maximum load expectations and on-system storage injection/withdrawal plans. The Gas Supply Department uses the Purchase Gas Estimate as provided by Gas Control to develop the natural gas purchase requirements for the upcoming month.

Gas Control provides a 5-Day System Sendout Forecast (Appendix 2-N) to the Gas Supply Department at least once daily and more often if needed due to changing weather or other conditions. The 5-Day System Sendout Forecast reflects anticipated system load, most recent temperature forecasts, available supply by pipeline, end-use customer requirements, on-system storage injection/withdrawal requirements by storage field, and total pipeline requirements.

Gas Supply Department endeavors to purchase natural gas at the lowest cost while accomplishing the following: (1) maintaining an adequate and reliable supply of natural gas, (2) purchasing natural gas with accountability and transparency, and (3) remaining in compliance with all contract terms.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Determination of Volumes of Natural Gas to Dispatch and Purchase		2.9
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
4	October 1, 2016	2 of 3

**RESPONSIBILITY**

**ACTION**

Gas Control Department

1. Forecasts total daily system requirements in the form of the Purchase Gas Estimate (Appendix 2-M) and gives same to the Gas Supply Department prior to the beginning of the month at monthly planning meeting. Purchase Gas Estimate includes monthly minimum and maximum daily requirements. Provides "5-Day System Sendout Forecast" of requirements to the Gas Supply Department each day. (Appendix 2-N.)

Gas Supply Department

2. Calculates total volume to purchase as follows: Pipeline Purchases = (a) Total Pipeline Requirements, less (b) Planned NNS Withdrawal Volume, plus (c) Planned NNS Injection Volume, less (d) Scheduled Deliveries by end-use transportation customers.
3. Determines volumes, in accordance with the Monthly Supply Plan (Report 6.2.2), to be purchased or dispatched under each supply agreement. Purchases gas in accordance with Section 2.8 or dispatches existing supply transactions executed in accordance with Section 2.4 after considering market price, contract price, and pipeline contract constraints. Notifies suppliers of volumes required and effective purchase date(s) in compliance with applicable contract provisions.

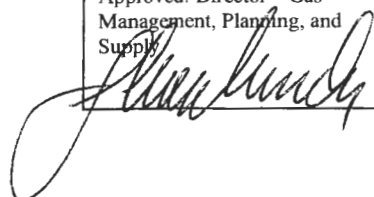
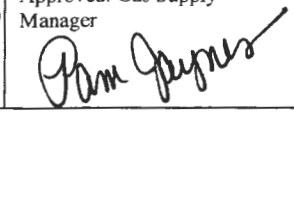
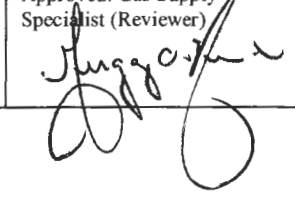
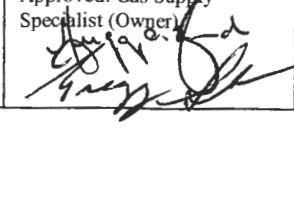
<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Determination of Volumes of Natural Gas to Dispatch and Purchase		2.9
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

4. Makes necessary pipeline nominations and confirmations in accordance with Sections 2.11, 2.12(a), or 2.12(b).
5. Documents volume and term of natural gas purchased or dispatched in Gas Supply Purchase Record and Daily Supply Plan (Supply) spreadsheets.
6. Provides appropriate Daily Supply Plan (Supply) to Gas Control in accordance with Report 6.1.5 and retains a copy of such Plan in the Gas Supply Department in an organized and secure manner.
7. Designates the Daily Supply Plan (Supply) and Gas Supply Purchase Record spreadsheets as "read-only" following the close of the applicable month.

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Compliance with Pipeline Services		2.10
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
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**PURPOSE**

The purpose of this procedure is to ensure LG&E is in compliance with the interstate pipelines’ transportation tariffs. Such compliance enhances the certainty of correct nominations, and ensures there are no penalties, adverse billing charges, or incurrence of penalties resulting from the violation of pipeline Operational Flow Orders (“OFOs”).

Below is a brief description of LG&E’s pipeline transportation agreements. A more complete description of the contracted terms and conditions, as well as the operational constraints associated with each service, is set forth in the applicable FERC-approved tariff of each pipeline transporter.

LG&E has a portfolio of firm pipeline services offering various features. LG&E currently has contracted for 20,000 MMBtu per day of annual service under Rate FT-A from Tennessee.

LG&E has contracted for service under Rate NNS and Rate FT from Texas Gas. Effective November 1, 2017, LG&E’s winter contract demand is equal to 244,900 MMBtu per day on Texas Gas. Of this winter contract demand, 184,900 MMBtu per day is the contract demand under NNS service, and 60,000 MMBtu per day is the contract demand under North-to-South FT service. Except during April and October, LG&E’s summer contract demand is equal to 120,000 MMBtu per day on Texas Gas. Of this summer contract demand, 60,000 MMBtu per day is the contract demand under NNS service, and 60,000 MMBtu per day is the contract demand under North-to-South FT service. For the months of April and October, LG&E has contracted for pipeline services to meet the flexibility requirements of these shoulder months.

Please note that these contract demand quantities do not include additional volumes that LG&E may contract for delivery to its city-gate meters utilizing the supplier’s transportation capacity.

The following table summarizes LG&E’s pipeline transportation services:

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**PURPOSE (cont.)**

**SUMMARY OF PIPELINE SERVICES (MMBTU)  
EFFECTIVE NOVEMBER 1, 2017**

	<u>WINTER</u>		<u>SUMMER</u>	
	<u>NOV - MAR</u>	<u>APR</u>	<u>MAY - SEP</u>	<u>OCT</u>
<b>TEXAS GAS NNS</b>				
FLOWING GAS	147,000	60,000	60,000	72,000
STORAGE	37,900 (1)	18,950	0	26,530
<u>2-DAY 10% (2)</u>	<u>18,490</u>	<u>18,490 (3)</u>	<u>18,490</u>	<u>18,490 (3)</u>
SUBTOTAL	184,900	97,440	60,000	117,020
<b>TEXAS GAS FT (North to South)</b>	60,000	60,000	60,000	60,000
<b>TENNESSEE FT-A</b>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
<b>TOTAL</b>	<u><u>264,900</u></u>	<u><u>177,440</u></u>	<u><u>140,000</u></u>	<u><u>197,020</u></u>

- (1) Available NNS storage withdrawal volume is adjusted progressively downward at various step intervals during the winter; steps begin when 75% of Unnominated Seasonal Quantity has been withdrawn.
- (2) Volumes taken pursuant to the "2-Day 10%" provision are available to the extent that pipeline capacity and storage volumes are available.
- (3) During shoulder months of April and October, the "2-Day 10%" is additive and the storage withdrawal quantities are limited to 15 days.

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Compliance with Pipeline Services		2.10
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**PURPOSE (cont.)**

Pipeline services can have substantially different characteristics. Texas Gas’s service under Rate FT and Tennessee’s service under Rate FT-A both provide a “no frills” service requiring LG&E to nominate the receipt and the delivery of natural gas volumes. Receipts and deliveries are made at uniform hourly rates of flow, that is, at 1/24<sup>th</sup> of the daily volume nominated and scheduled. On the other hand, NNS service provides, through a bundling of storage and pipelines facilities, a firm and flexible service to ensure the delivery of gas supplies. No nomination is needed to effectuate the delivery of the storage portion of the service. NNS also provides LG&E with variable hourly flow rates up to 1/16 of daily contract demand, a “cushion” volume equal to 10% of winter contract demand (or 18,490 MMBtu per day based on current contract demand levels), and the ability to inject or withdraw gas during the withdrawal or injection seasons (within certain limits), thereby providing significant shoulder month and year-round operational flexibility. LG&E is subject to a minimum withdrawal requirement applicable to the NNS storage quantity of 4,548,000 MMBtu (37,900 MMBtu x 120 days). LG&E also has the obligation to refill NNS storage during the Summer in order to ensure adequate delivery during the following winter season.

LG&E’s Seasonal Quantity Entitlement (“SQE”), the maximum quantity of gas which Texas Gas is obligated to transport and deliver to LG&E as a part of No-Notice Service, is 26,220,000 MMBtu for the Winter and 8,292,000 MMBtu for the Summer. Pursuant to Texas Gas’s Tariff, LG&E’s Summer SQE is adjusted upward to include any unused portion of its Unnominated Seasonal Quantity from the previous winter season.

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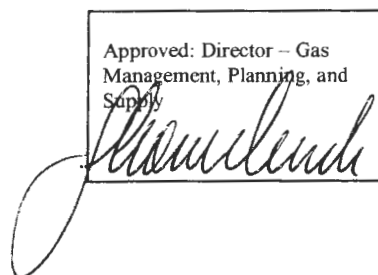
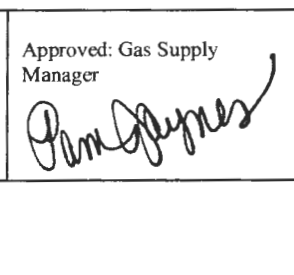
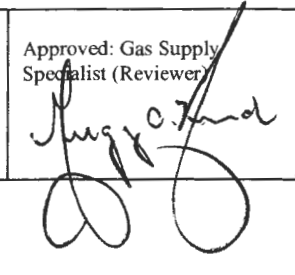
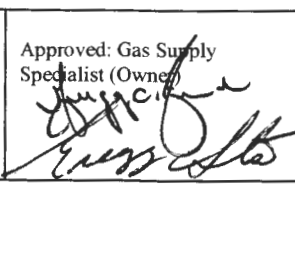
**RESPONSIBILITY**

Pipeline Transporter

Gas Supply Department

**ACTION**

1. Updates web site with volume and storage data.
2. Logs on to web site (**as listed below**) and verifies daily volumes nominated and delivered by contract, receipt points, and storage capacity.
  - a.) For Texas Gas, log on to "GasQuest" at [www.gasquest.txgt.com](http://www.gasquest.txgt.com).
  - b.) For Tennessee, log on to "DART" at <https://pipeportal.kindermorgan.com/PortalUI/DefaultKM.aspx?TSP=TGPD>.
3. Tracks Texas Gas's NNS storage balance maintained in the Daily Supply Plan (Supply) to ensure proper quantities are injected or withdrawn. Refer to Report 6.1.5.
4. Maintains departmental records to correspond with daily nominated volumes as confirmed by pipeline.
5. Maintains accurate records to ensure that nominated daily volumes are in compliance with transportation agreements, Texas Gas Tariff, Tennessee Tariff, supplier agreements, and adequate to meet delivery requirements.

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Nominations to Texas Gas		2.11
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**PURPOSE**

The purpose of this procedure is to outline the process for making nominations on the internet website of Texas Gas Transmission.

Texas Gas provides both “manual” and “auto-confirm” options for verifying transportation volumes nominated for delivery to LG&E’s city gate for system supply and by third parties for end-use customers. LG&E currently utilizes the “manual” confirmation method. LG&E has not selected the “auto-confirm” option because of the potential for changes to nominations by third parties for end-use customers. Without manual confirmation of these nominations by LG&E, supply reliability could be adversely impacted in the event that nomination changes made by or on behalf of end-use transportation customers are not detected.

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Nominations to Texas Gas		2.11
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8	April 1, 2018	2 of 8

**RESPONSIBILITY**

Gas Supply Department

**ACTION**

1. Logs onto the Texas Gas internet website (See Section 2.10) and selects “Nominations”. Submits nomination for each supplier by performing the following actions:

- a) Enter/Select appropriate LG&E transportation contract Number;
- b) Select effective beginning date and effective time of flow;
- c) Select Transaction Type (“TT”). For LG&E system supply, the appropriate TT is “01 Current Business”;

NOTE: In instances where LG&E determines to flow no volume on its NNS Contract #29781, at least one (1) MMBtu should be nominated on the contract (29781) using a TT 06 “Storage Injection” or TT 07 “Storage Withdrawal” in order for all flowing supplies to be properly allocated by the pipeline.

- d) Select “Create” in the upper right-hand portion of the screen;
- e) Select effective ending date and effective time of flow;
- f) Enter/Select Receipt Loc Meter Number;
- g) Enter/Select upstream supplier name;
- h) Enter/Select upstream contract number or, for Lebanon supplies, enter the appropriate GID number;
- i) Enter Receipt Qty (MMBtu);

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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

- j) Enter receipt rank (in the event of supply disruptions, a lower number is last to be cut), typically Champlin supply = Rank 1, longer-term and seasonal supplies = Rank 2, daily spot purchase = Rank 3, or higher;
- k) Enter/Select Delivery Loc Meter Number (typically Louisville Shipper Deduct 1529);
- l) Enter/Select downstream ID (LG&E's DUNS number - 006945505);
- m) Enter delivery rank (in the event of supply disruptions, a lower number is last to be cut), typically Champlin supply = Rank 1, longer-term and seasonal supplies = Rank 2, daily spot purchases= Rank 3, or higher;
- n) Enter Package ID name (optional);
- o) Select "Validate" in the upper right-hand portion of the screen. Delivery quantity will populate.

NOTE: Should nominations be entered which create circumstances outside of contractual limitations, i.e. surpassing daily contract demand, hourly flow restrictions, etc., (an) Error Message(s) will appear upon selecting "Validate".

- p) Assuming no error messages appear, select "Submit" in the upper right-hand portion of the screen.

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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

2. Confirms nominated volumes for the appropriate Location (1529), Nomination Cycle, Nomination Level (typically "Nom") and selecting "Y" ("yes") to "Confirm Subsequent Cycles", on "Confirmation" screen of the Texas Gas internet website by entering the volume to be confirmed, selecting the line-item to be confirmed and selecting "Confirm" in the upper right-hand portion of the screen.

Pipeline Transporter

3. Matches nomination from supplier and LG&E.  
4. Advises the Gas Supply Department, by phone and/or e-mail, of any discrepancies between supplier and LG&E nominations because LG&E has selected the Manual Confirm option.

Gas Supply Department

5. Contacts supplier to reconcile any discrepancies in nomination. Corrects any discrepancies by repeating any necessary Action 1 steps.

Supplier(s)

6. Notifies LG&E of any changes in supply volumes or receipt locations.

Gas Supply Department

7. Repeats necessary Action 1 steps for any nomination change. Such changes must be reflected in the Nomination Schedule, Daily Supply Plan (Supply), Gas Supply Purchase Record, Bill Calculation Letter, etc. (See Sections 2.5, 2.6, 2.8, and 2.13).



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**RESPONSIBILITY**

**ACTION**

Pipeline Transporter(s)

8. Texas Gas posts “Scheduled Quantities” Report for verification of scheduled volumes. Report includes gross receipts and net deliveries for each supplier by receipt point and pipeline contract. (Appendix 2-O.)

Gas Supply Department

9. Following each nomination cycle, verifies nomination of natural gas supplies made by all suppliers by viewing the “Confirmations” screen or by using the “Scheduled Quantities” report from Texas Gas internet website as necessary to identify discrepancies.
10. Contacts supplier to reconcile any discrepancies between posted nominations and scheduled quantities. Corrects any discrepancies by repeating any necessary Action 1 steps.

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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

11. Enters Predetermined Allocation (“PDA”) on “PDA” screen of the Texas Gas internet website to inform the pipeline how volumes of gas delivered to Louisville Shipper Deduct 1529 are to be allocated.
  - a). LG&E currently utilizes a Swing Allocation methodology for allocation of supplies into its system. With the Swing Allocation, only supplies scheduled for delivery on LG&E’s NNS contract #29781 are ranked on the pipeline website. All other supplies scheduled for delivery to LG&E’s city-gate “swing” on LG&E’s storage account, thereby allowing supplies other than those flowing on the NNS contract, specifically FT North-to-South supplies, to be injected into LG&E’s NNS Storage account.

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**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

12. When using a Ranking Allocation methodology, a PDA is entered for each natural gas contract, including system supply and end-use customer supply, scheduled and confirmed for delivery to LG&E’s city-gate on a given day.

a). With the ranking method for PDA entry, LG&E ranks gas supplies delivered to its system with the following allocation priorities:

Rank 1 - End-use customer supplies.

Rank 2 - All supplies scheduled for delivery on LG&E’s Firm Transportation (“FT North-to-South”) contract 34951.

Rank 3 - All supplies scheduled for delivery on LG&E’s Interruptible Transportation (“IT”) contract 29668.

Rank 4 - All supplies scheduled for delivery on LG&E’s No-Notice Service (“NNS”) contract 29781.

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**RESPONSIBILITY**

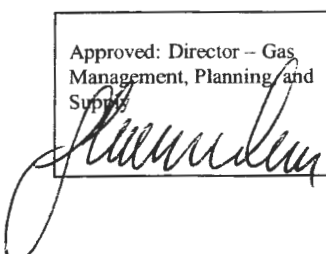
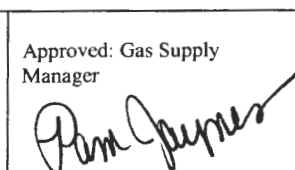
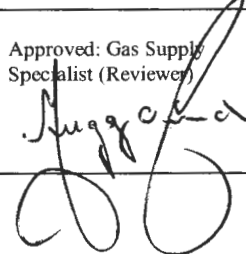
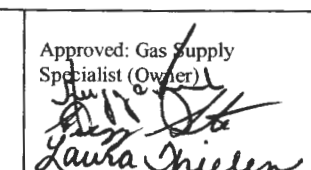
**ACTION**

Gas Supply Department (cont.)

13. Volumes associated with an existing nomination may be changed on the "Nominations" screen of any transportation contract by selecting the "Retrieve" button, selecting the line of the nomination to be changed, and selecting "Edit" in the upper right-hand portion of the screen.

Any other changes to an existing nomination (transportation contract number, receipt point, delivery point, etc.) require the cancellation of the existing nomination and the creation of a new nomination. (Action 1 above).

NOTE: Texas Gas Transmission utilizes Gas Day dates and times for scheduling rather than Calendar Day dates. As such, a nomination for a single day must be entered as beginning at 9:00 AM Central Time on the date of flow, and ending at 9:00 AM Central Time on the following day.

Approved: Director -- Gas Management, Planning and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Nominations to Tennessee Utilizing LG&E's Firm Pipeline Capacity		2.12 (a)
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
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**PURPOSE**

The purpose of this procedure is to outline the process for making nominations on the internet website of Tennessee Gas Pipeline for natural gas purchases to be delivered to LG&E utilizing LG&E's pipeline capacity.

Tennessee provides both "manual" and "auto-confirm" options for verifying transportation volumes nominated for delivery to LG&E's city-gate for system supply and by third parties for end-use customers. LG&E currently utilizes the "auto-confirm" method. LG&E has not selected the "manual-confirm" option because there is currently no activity at the city-gate associated with nominations by third parties for end-use customers. These procedures are written in light of the selection of that confirmation option by LG&E. If nomination activity by third parties for end-use customers becomes the standard mode of operation for LG&E, it will then be necessary to re-evaluate, and perhaps modify, the current option from "auto-confirm" to the "manual-confirm" option.

To verify supplier nominations of natural gas supplies to be delivered to LG&E utilizing the supplier's pipeline capacity, see Section 2.12 (b).

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Nominations to Tennessee Utilizing LG&E's Firm Pipeline Capacity		2.12 (a)
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**RESPONSIBILITY**

Gas Supply Department

**ACTION**

1. Logs onto the Kinder Morgan internet website (See Section 2.10).
2. From the main page, places cursor on the "Interstate" label and select "Tennessee Gas Pipeline" from the dropdown menu.
3. From the Tennessee Gas Pipeline home page, selects "DART Login".
4. Enters User Name and Password.
5. Clicks on "Navigation Panel" and selects "Nominations" from the dropdown menu. Selects "Nomination" and "Not Submitted". Submits nomination for each supply package by performing the following actions:
  - a) From "Batch List" screen, select "Add Batch";
  - b) Enter nomination beginning and ending date, beginning nomination time cycle (typically "Timely" or "Best Available"), and a brief description of the nomination. Confirm the "Shipper" button is highlighted and select "Save";

NOTE: Tennessee Gas Pipeline utilizes Calendar Day dates for scheduling rather than Gas Day dates and times. As such, a nomination for a single day must be entered as beginning, and ending on the same date.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

- c) A new window will appear indicating the batch was successfully saved. Select "Enter New Nominations";
- d) Enter receipt meter number (ex. 405345 – Zone 0 South Pool) and select the "New" button. The Nomination Matrix will appear;

NOTE: Any existing "upstream" nomination that requires modification may be changed at this time. The modification will remain in effect during the time specified for the new nomination "Batch" entered in Actions 5a and 5b above.

Modification of existing nominations outside the date range of the new nomination must be entered separately as a new "Unsubmitted" nomination.

- e) In the "Upstream Nominations" matrix, click the "Vol Type" field and select "Buy (Current Business)" from the dropdown menu;
- f) Tab to "Rec Loc Prop/Up ID Prop" column. Manually enter supplier Global Identification Number ("GID"), or double-click and select supplier GID.
- g) Tab to "Rec Qty (Gross)" field. Enter receipt quantity including volume for fuel retention.
- h) Tab to the "Del Qty (Net)" field, which will populate automatically.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
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**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

- i) Tab to "Up Rank/Del Rank" and enter the nomination rank (default is 500) and Package ID (if desired);

NOTE: If a package ID is desired, the "Package ID" box must be checked near the top of the screen.

- j) Go to the "Downstream Nominations" matrix and click the "Vol Type" field. Select "Transport (Current Business)" from the dropdown menu;
- k) Tab to the "Svc Req K" box and enter the appropriate LG&E transportation contract number, or double-click on the field and select the appropriate contract number from the dropdown menu;
- l) Tab to the "Del Loc Prop/Dn ID Prop" field and enter the delivery meter number (ex. 420843-Monroe, 420844-Calvary);
- m) Tab to the "Rec Qty (Gross)" field. Enter the gross volume (including fuel retention) and "Tab".
- n) Tab to the "Del Qty (Net)" field, which will be calculated automatically.
- o) Tab to "Dn Rank/Rec Rank" and enter the nomination rank (default is 500) and Package ID (if desired).
- p) Click the "Save" button at the top of the screen.



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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

- q) In the "Downstream Nominations" matrix, click the "GO" button to proceed to completion of downstream information. A new window will appear for downstream info.

NOTE: Any existing "downstream" nomination that requires modification may be changed at this time. The modification will remain in effect during the time specified for the new nomination "Batch" entered in Actions 5a and 5b above.

Modification of existing nominations outside the date range of the new nomination must be entered separately as a new "Unsubmitted" nomination.

- r) Click on the "Vol Type" field and select "Off-System Market" from the dropdown menu.
- s) Tab to the "Del Loc Prop/Dn ID Prop" field and enter LG&E's GID (1650).
- t) Tab to the "Rec Qty (Gross)" field. The volume to be entered must match the "Del Qty (Net)" volume in the "Upstream Nominations" field above.
- u) Tab to the "Del Qty (Net)" field, which will populate automatically.

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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

- v) Rank nomination (default is 500) and enter a Package ID, if desired.
- w) Click the "Save" button at the top of the screen.
- x) Click the "Batch Locations" button on the top-left side of the screen.
- y) Click the "Validate" button on the top-right side of the screen. Any errors to this point will appear in a new window to allow for correction.
- y) Click the "Submit" button to submit nominations to the pipeline.
- z) A message will appear at the bottom of the screen to confirm submission to the pipeline, or to indicate nomination errors requiring correction prior to final submission.

Pipeline Transporter

- 6. Matches nomination volumes from supplier and LG&E.
- 7. Posts nominated volumes on "Scheduled Quantities" report under the "Nominations" tab (Appendix 2-O) on DART website because LG&E has selected the Auto-Confirm option.

Supplier(s)

- 8. Notifies LG&E of any changes in supply volumes or receipt points.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department

9. Repeats any necessary Action 1 steps for any nomination change. Such changes must be reflected in the Nomination Schedule, Daily Supply Plan (Supply), Gas Supply Purchase Record, Bill Calculation Letter, etc. (See Sections 2.5, 2.6, 2.8, and 2.13).

Pipeline Transporter(s)

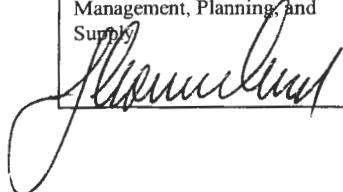
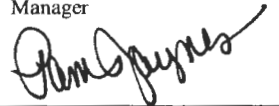
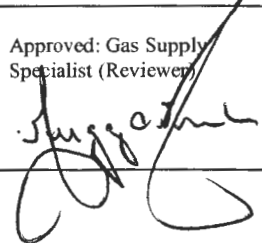
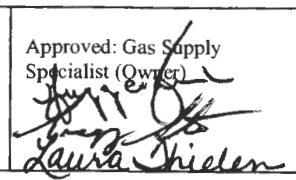
10. Tennessee posts "Schedules Quantities" report for verification of nominated and scheduled volumes. Report indicates volumes scheduled for delivery at each delivery location, by supplier. (Appendix 2-O.)

Gas Supply Department

11. Following each nomination cycle, verifies nomination of natural gas supplies made by supplier using "Scheduled Quantities" report from the DART website. (Appendix 2-O.)

NOTE: If viewing multiple days, DART requires a cycle time of 8 A.M.

12. Contacts supplier to reconcile any discrepancies between posted nominations and scheduled quantities. Corrects any discrepancies by repeating any necessary Action 1 steps.

Approved: Director – Gas Management, Planning and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Verifying Supplier Nominations to Tennessee Utilizing Supplier's Pipeline Capacity		2.12 (b)
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
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**PURPOSE**

The purpose of this procedure is to outline the process for verifying nominations made by suppliers on the internet website of Tennessee Gas Pipeline for LG&E natural gas purchases to be delivered to LG&E utilizing the supplier's pipeline capacity.

LG&E may, on occasion, elect to purchase delivered supply on Tennessee due to load requirements, operational limitations, economic benefits, or for other reasons. Such supplies are "delivered" to LG&E's city-gate meters, Monroe (420843) or Calvary (420844), by the supplier utilizing the supplier's own firm pipeline capacity. When making such purchases, LG&E is not required to either make a pipeline nomination or to confirm scheduled supplies because it has elected the "auto-confirm" option as described in Section 2.12 (a). However, LG&E can, and does, verify that purchased delivered supply has been scheduled on Tennessee's website (DART) by the supplier.

To verify nominations of natural gas supplies to be delivered to LG&E utilizing LG&E's pipeline capacity, see Section 2.12 (a).

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Verifying Supplier Nominations to Tennessee Utilizing Supplier's Pipeline Capacity		2.12 (b)
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
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**RESPONSIBILITY**

Gas Supply Department

**ACTION**

1. Logs onto the Kinder Morgan internet website (See Section 2.10).
2. From the main page, places cursor on the "Interstate" label and select "Tennessee Gas Pipeline" from the dropdown menu.
3. From the Tennessee Gas Pipeline home page, selects "DART Login".
4. Enters User Name and Password.
5. Click on "Navigation Panel" and selects "Nominations" from the dropdown menu.
6. Select "Scheduled Quantity" and then select "Sched Qty Oper".

NOTE: For this purpose, do not select either "Sched Qty Oper Detail" or "Sched Qty Oper Summary". "Sched Qty Oper Detail" produces a report showing only volumes scheduled by individual supplier. "Sched Qty Oper Summary" produces a report showing only total scheduled volumes, but no supplier information.

7. Enter the date and scheduling cycle to be reviewed into the appropriate locations.

NOTE: If viewing multiple days, DART requires a cycle time of 8 A.M.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Verifying Supplier Nominations to Tennessee Utilizing Supplier's Pipeline Capacity		2.12 (b)
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

8. Clicks "Retrieve" located in the upper right-hand corner of the screen.
9. Verifies total quantities nominated and scheduled for the selected time period.
10. To select a particular line item to be reviewed for additional detail, click on the line to be reviewed.
11. Click on "Sched Qty Op Matrix" button in the upper left-hand corner of the screen.
12. Verifies nominated and scheduled volumes by individual supplier.
13. Contacts supplier to reconcile any discrepancies between agreed-upon transaction volumes and those posted as being nominated and scheduled on the pipeline website.
14. Repeats Actions 1 – 13 as necessary until supplier scheduled volumes match the agreed-upon transaction volumes.

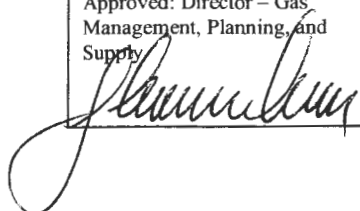
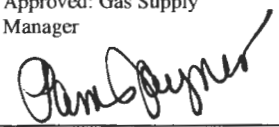
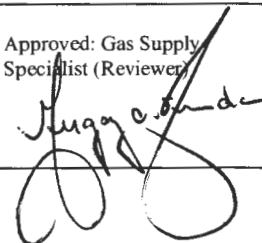
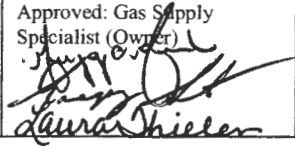
<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Verifying Supplier Nominations to Tennessee Utilizing Supplier's Pipeline Capacity		2.12 (b)
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

15. Any nomination changes must be reflected in the Nomination Schedule, Daily Supply Plan (Supply), Gas Supply Purchase Record, Bill Calculation Letter, etc. (See Sections 2.5, 2.6, 2.8, and 2.13).

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 7**

**Witness: J. Clay Murphy**

- Q-7. If LG&E has utilized gas marketing/trading organizations to obtain gas supplies over the last five years, indicate which organizations were so employed, gas volumes purchased, prices, terms, and current contractual arrangements between LG&E and these marketing firms.
- A-7. LG&E has not used a gas marketing or trading organization over the past five years to manage the purchase or delivery of natural gas to LG&E. LG&E's gas supply arrangements (which may include arrangements with both producers and marketers) are discussed in LG&E's response to Commission Question Nos. 1, 2, and 3.



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 8**

**Witness: J. Clay Murphy / Pamela L. Jaynes**

- Q-8. Provide a summary of the bidding/Request for Proposal process for gas supply for the last five years, providing the original bid documents, a listing of the suppliers that were contacted, the responses to the request for bid, the evaluation process that led to the selection of a supplier, and any written procedures that exist for this activity.
- A-8. Attached are copies of LG&E's gas commodity supply solicitations conducted between November 1, 2012, and August 31, 2018 (excluding any bids solicited for gas supplies commencing on or after November 1, 2018). The documentation is provided in the date order of the bid release. These documents include the original bid documents, a listing of the suppliers that were contacted, the responses to the request for bid, and the evaluation process that led to the selection of a supplier. The longer-term bid solicitations associated with the 2017 Annual Gas Supply Plan (including original bid documents, a listing of the suppliers that were contacted, the responses to the request for bid, and the evaluation process that led to the selection of a supplier) are included with LG&E's 2017 Annual Gas Supply Plan provided as a part of LG&E's response to Commission Question No. 9.

Gas supplies may be purchased for terms ranging from a single day up to a month or for multiple months or years. While certain aspects of the solicitation process may vary in detail depending on the duration of the intended purchase, fundamentally the process used for each supply purchase is the same.

The bidding process for gas commodity supplies can be summarized as follows:

- (1) LG&E enters into a base form of agreement with potential suppliers. The base form of agreement contains standard provisions related to the purchase and sale of natural gas. The base form of agreement does not include any specifics related to the price, volume, term, or other specifics related to an individual transaction.
- (2) LG&E monitors on an on-going basis the creditworthiness of its natural gas suppliers. Solicitations are sent only to suppliers that have the level of creditworthiness required to support the transaction described in the solicitation. Because different types of

transactions may require different credit limits, not all potential suppliers will qualify for all potential transactions.

- (3) Based on operational need or price, LG&E solicits bids from suppliers which have entered into base forms of agreement with the required credit limit for the kind of transaction contemplated. These solicitations depending on the duration of the transaction, may be either oral or written, and include the required volume, term, pricing arrangement, pipeline, or other specifications.

For supply packages with a term of one month or longer, a written “Request for Proposal” letter and “RFP Response Form” are prepared, reviewed, and approved by appropriate department personnel, and sent, via e-mail, to all qualifying suppliers. Potential suppliers complete the bid form and provide any additional information in writing. For supply packages with a term of less than one month, generally next-day gas supplies, the Gas Supply Department contacts qualifying suppliers, via telephone in order to receive oral bid responses and manually records the results.

- (4) LG&E evaluates the proposals received from responding suppliers. This evaluation includes the supplier’s price as well as other factors supporting the reliability of the supplier, including, for example, receipt point(s) or other delivery parameters.
- (5) LG&E selects the supplier with the best proposal whose response conforms to the bid invitation. The supplier with best proposal is contacted and awarded the transaction.
- (6) The transaction is memorialized through a Nomination Schedule which is executed in accordance with LG&E’s Authority Limit Matrix.
- (7) The supply is dispatched in accordance with the Nomination Schedule.

**The following written procedures have been included as attachments and are used by LG&E in support of its gas supply planning process:**

- Section 2.4: “Winter Season Gas Supply Plan and Bid Process”
- Section 2.5: “Negotiating and Executing a Nomination Schedule”
- Section 2.7: “Executing a Base Agreement for Natural Gas Sales and Purchases”
- Section 2.8: “Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases”
- Section 2.15: “Supplier Credit Assessment and Daily Net Exposure”

**The following information has been included as an attachment to this response subject to a Petition for Confidential Treatment:**

- Bid documentation for gas commodity supply solicitations conducted between November 1, 2012, and August 31, 2018, (excluding any bids solicited for gas supplies commencing on or after November 1, 2018)

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Winter Season Gas Supply Plan and Bid Process		2.4
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**PURPOSE**

The purpose of this procedure is to outline the method used for determining longer-term, winter season, and peaking gas supply requirements, developing bid invitations and evaluating supplier proposals. To the extent practicable, discussions related to these transactions between the Gas Supply Department and the potential supplier are made in (or reduced to) writing.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Winter Season Gas Supply Plan and Bid Process		2.4
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**RESPONSIBILITY**

Gas Supply Department

**ACTION**

1. Develops and documents supply strategies and Bid Evaluation Methodology for planning period.
2. Determines supply requirements for planning period based upon analysis utilizing the ABB SENDOUT® Model which reflects load forecast (see Section 2.1), pipeline services, storage operating parameters, and existing supplies. Documents ABB SENDOUT® analysis.
3. Determines supply packages to include in the annual Bid Invitation Letter for winter-season supplies. Determines any additional supply packages to be purchased through the shorter-term bid process outlined in Section 2.8.
4. Develops bid specifications (including volume, flexibility, term, pricing arrangements, etc.) and formulates Bid Invitation Letter and Gas Supply Proposal Form(s). Director – Gas Supply reviews and initials Bid Invitation Letter and distribution list.
5. Sends Bid Invitation Package, via e-mail, including Bid Invitation Letter, Gas Supply Proposal Form(s), and draft Nomination Schedule to qualified and creditworthy suppliers as identified on Approved Transaction List (Appendix 2-P).

NOTE: The Bid Invitation Package shall be labeled as “Confidential”.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Winter Season Gas Supply Plan and Bid Process		2.4
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**RESPONSIBILITY**

**ACTION**

Supplier

6. Provides Gas Supply Proposal Form(s) and proposed Nomination Schedule revisions by deadline as set forth in the Bid Invitation Letter.

Gas Supply Department

7. Reviews supplier proposal(s) and requests supplier clarification of proposal(s), if required.

Supplier

8. Clarifies any portion of supplier's proposal(s) as requested in Action 7.

Gas Supply Department

9. Evaluates supply proposals according to a pre-determined Bid Evaluation Methodology.

10. Selects supplier(s) subject to management approval. Notifies supplier(s) and begins negotiation of required contract documents.

11. Documents bid evaluation and supplier selection as a part of the annual Supply Plan. (Report 6.2.10).

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Winter Season Gas Supply Plan and Bid Process		2.4
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
6	October 1, 2016	4 of 5

**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

12. Negotiates a Base Agreement for Natural Gas Sales and Purchases (if applicable) in accordance with Section 2.7.

NOTE: Supplier and LG&E may mutually agree to perform the transaction under the base agreement already in effect between the parties, assuming the parties mutually agree to language to be included in the Nomination Schedule.

13. Negotiates a Nomination Schedule describing the transaction and makes sure to include any provisions required to update the supplier's existing base agreement in accordance with Section 2.5.
14. If the supplier sends a non-binding confirmation of the transaction, the confirmation is reviewed and, if accurate, initialed by the Gas Supply Manager on a timely basis and then filed in the supplier's contract binder. Any errors in the supplier's confirmation are reported to the supplier.

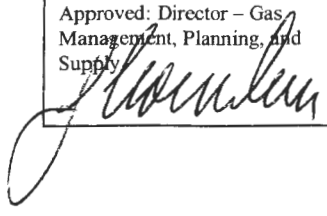
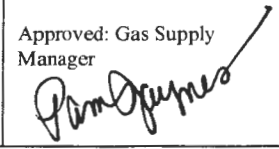
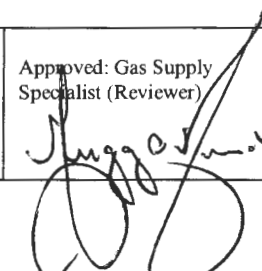
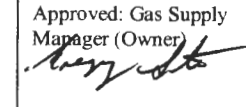
<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Winter Season Gas Supply Plan and Bid Process		2.4
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

15. Notifies Supplier Diversity Manager, via e-mail, of estimated bid value of the supply opportunity submitted for bid and actual supply awards made to Minority Business Enterprise (“MBE”) or Women-Owned Business Enterprise (“WBE”) suppliers, name and address of supplier, and date of bid. Such notification is sent on the first day of each calendar quarter pursuant to Report 6.1.4. Copy Director- Gas Supply and Gas Supply Manager on e-mail transmission.

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Manager (Owner) 
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<b>PROCEDURE NAME</b> Negotiating and Executing a Nomination Schedule		<b>SECTION NO.</b>  2.5
<b>VERSION NO.</b>  3	<b>DATE ISSUED</b>  March 1, 2018	<b>PAGE</b>  1 of 4

**PURPOSE**

The purpose of this procedure is to outline the method used to negotiate and execute a Nomination Schedule to confirm a transaction performed under the base natural gas sales and purchase agreement between LG&E and the counterparty.

The Nomination Schedule memorializes the agreement of LG&E and the counterparty to a specific supply transaction and is executed in accordance with LG&E's ALM described in the Preface to Section 2.

The Nomination Schedule for gas supply purchased on a "daily" basis will identify specific purchase information including the supplier name, effective date of the base agreement, the term of the transaction, the price (or index used to determine the price), the daily volume, transaction type, the name and meter number of the point of receipt/delivery, and the upstream contract/GID number, as applicable.

For purchases of a greater term, generally one month or longer, the Nomination Schedule will include the information above, as well as additional terms and conditions related to the transaction. These additional terms and conditions may include monthly demand charges, volumetric change flexibility, nomination dates and times, as well as any required provisions not included in the base agreement.

<b>PROCEDURE NAME</b> Negotiating and Executing a Nomination Schedule		<b>SECTION NO.</b> 2.5
<b>VERSION NO.</b> 3	<b>DATE ISSUED</b> March 1, 2018	<b>PAGE</b> 2 of 4

**RESPONSIBILITY**

Gas Supply Department

**ACTION**

1. **SARBANES-OXLEY KEY CONTROL (22.04.01)** - The Gas Supply Specialist prepares a Nomination Schedule(s) with specific transaction information including supplier information, term of transaction, price or indices, daily volume, type of transaction, receipt/delivery point name and meter number, and upstream contract/GID number, as applicable. (Appendix 2-L).
  
2. **SARBANES-OXLEY KEY CONTROL (22.04.01)** – Appropriate Gas Supply Specialists review the transaction on the Nomination Schedule and, if accurate, initial Nomination Schedule which is then executed in accordance with Page 1 of Section 2.5.

NOTE: Transactions entered into pursuant to Section 2.4 must be reviewed and initialed by the Gas Supply Manager.

3. In order to determine ALM compliance, the “Term and Tenor Calculations” form is completed for all transactions, with a term of one month or greater, using current natural gas NYMEX prices adjusted for any basis, discount, premium, or other factors as applied to the contract volumes for the term of the transaction.
  - a) Ensures compliance with the ALM by estimating contract value and reviewing term and tenor as specified in the ALM.

<b>PROCEDURE NAME</b> Negotiating and Executing a Nomination Schedule		<b>SECTION NO.</b> 2.5
<b>VERSION NO.</b> 3	<b>DATE ISSUED</b> March 1, 2018	<b>PAGE</b> 3 of 4

**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

b) Facilitates execution of the Nomination Schedule by appropriate LG&E personnel as described in the Preface of Section 2.

4. Prepares and sends a .pdf of the partially executed Nomination Schedule(s), via e-mail to the supplier for verification and execution, pursuant to the terms of the applicable base agreement. Saves the file in "G://GSUPPLY/Suppliers/" folder under the supplier name, and in the "/Nomination Schedules - Bill Calculations/" folder.

Supplier

5. Reviews Nomination Schedule.

a) If in agreement with the Nomination Schedule, executes and returns the fully executed document to Gas Supply, via e-mail by the date specified in the applicable base agreement. Skip Actions 6 and 7; Go to Action 8.

b) If not in agreement with Nomination Schedule, notifies the Gas Supply Department of any discrepancies in the Nomination Schedule by the date specified in the applicable base agreement. Go to Action 6.

Gas Supply Department

6. Negotiates the Nomination Schedule with supplier while consulting with appropriate counsel, as necessary.

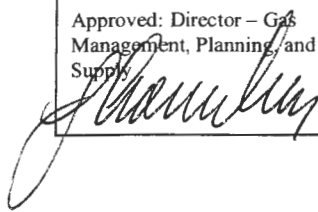
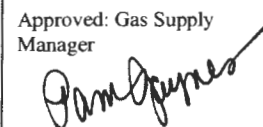
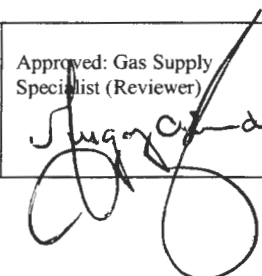
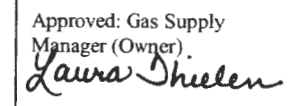
<b>PROCEDURE NAME</b> Negotiating and Executing a Nomination Schedule		<b>SECTION NO.</b> 2.5
<b>VERSION NO.</b> 3	<b>DATE ISSUED</b> March 1, 2018	<b>PAGE</b> 4 of 4

**RESPONSIBILITY**

Gas Supply Department

**ACTION**

7. Resolves any discrepancies associated with the Nomination Schedule. Prepares and e-mails supplier a .pdf of a revised Nomination Schedule. Back to Action 5 above.
8. **SARBANES-OXLEY KEY CONTROL (22.04.01)** – Maintains fully executed Nomination Schedule in an organized and secure fashion in the supplier’s contract binder.
9. Transactions required pursuant to the Winter Season planning process are described in the “Summary of Longer-Term Gas Supply Transaction Provisions” which is signed by preparer, reviewed by Gas Supply Manager and approved by the Director – Gas Supply (Appendix 2-F).
10. Prepares a .pdf file of the executed Winter Season Nomination Schedule and saves file in gassupply/Long Term Bidding/year contract was executed.
11. Reports new summer or winter seasonal transactions to VP – Gas Distribution in next monthly “Report of Key Performance Indicators” (Report 6.4.2).

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Manager (Owner) 
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<b>PROCEDURE NAME</b> Executing a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.7
<b>VERSION NO.</b>  11	<b>DATE ISSUED</b>  August 1, 2017	<b>PAGE</b>  1 of 5

**PURPOSE**

The purpose of this procedure is to outline the method used to execute a Base Agreement for Natural Gas Sales and Purchases or a NAESB Base Contract for Sale and Purchase of Natural Gas. Similar agreements, executed prior to July, 2016, were called the Natural Gas Sales and Purchase Agreement. For the purpose of this procedure, all base purchase agreements shall be referred to as a “Base Agreement For Natural Gas Sales and Purchases”. LG&E buys and sells natural gas under these agreements regardless of the term of the transaction.

The Base Agreement for Natural Gas Sales and Purchases is a base-form of agreement and does not define a specific transaction. Specific transactions entered into under the Base Agreement for Natural Gas Sales and Purchases are defined in a Nomination Schedule, which is executed by LG&E in accordance with the ALM as described in the Preface of Section 2.

Inasmuch as the Base Agreement for Natural Gas Sales and Purchases has no specific dollar value or term, such documents may be executed by the Director, Gas Supply.

<b>PROCEDURE NAME</b> Executing a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.7
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**RESPONSIBILITY**

**ACTION**

Supplier

1. Potential supplier requests a Base Agreement for Natural Gas Sales and Purchases.
2. Supplies any data requested by Gas Supply Department including:
  - a) Financial Statements
  - b) Supply Access Capabilities
  - c) Trade References

Gas Supply Department

3. Assesses supplier's data and determines whether or not supplier is qualified to be a potential supplier. Analysis of requested data includes the following:
  - a) Creditworthiness, as determined by the Credit Department at Gas Supply Department's request in accordance with Section 2.15,
  - b) Compatibility of supply access, and
  - c) Acceptable trade references at the discretion of the Gas Supply Department.
4. If the Credit Department or the Gas Supply Department determines the supplier is unacceptable, for any reason, the Gas Supply Department notifies supplier of unacceptable findings. If the Credit Department and the Gas Supply Department determine the supplier is acceptable, the Gas Supply Department begins the contract negotiation process by forwarding a draft copy of the Base Agreement for Natural Gas Sales and Purchases (Appendix 2-H) to the supplier.

<b>PROCEDURE NAME</b> Executing a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.7
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

NOTE: LG&E prefers to use the “Base Agreement for Natural Gas Sales and Purchases” developed in-house. However, LG&E will negotiate a NAESB agreement when a desired supplier will only agree to a NAESB agreement.

5. Negotiates agreement with supplier and makes acceptable revisions, if any, after consulting with appropriate counsel.
6. Sends two original negotiated Base Agreement for Natural Gas Sales and Purchases to supplier for execution. Sends appropriate Sales Tax Exemption Form to supplier (Appendix 2-I) and requests a copy of the supplier’s W-9 Form.

Supplier

7. Executes Agreements and returns both originals to the Gas Supply Department along with the appropriate Sales Tax Exemption Form, W-9 Form, and adequate assurance (if required) as described in Section 2.16.

Gas Supply Department

8. **SARBANES-OXLEY KEY CONTROL (22.04.01)** - When supplier has provided adequate assurance pursuant to Section 2.16, the agreement is reviewed and initialed by a Gas Supply Specialist and the Gas Supply Manager prior to execution by appropriate LG&E personnel as described on page 1 of Section 2.7. Returns one fully executed original Agreement to supplier for its records.

<b>PROCEDURE NAME</b> Executing a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b> 2.7
<b>VERSION NO.</b> 11	<b>DATE ISSUED</b> August 1, 2017	<b>PAGE</b> 4 of 5

**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

9. Prepares a .pdf of the executed Agreement, saves file in the “gassupply/GSUPPLY/Suppliers/” folder, and maintains original Agreement and related documents, by supplier, in an organized and secure fashion.
10. Adds supplier to list of Base Natural Gas Sales and Purchase Agreements which must be signed by the preparer, reviewed by a Gas Supply Specialist, and approved by the Director – Gas Supply. (Appendix 2-J.)
11. Adds supplier to Approved Transaction List and Credit Evaluation List (See Section 2.15).
12. Sends original Sales Tax Exemption Form to Billing Integrity and retains a copy in the supplier’s contract binder.
13. Completes pages 1 through 4 of “Request for the Addition of a Purchase Order Vendor to the Vendor Master Record” (Appendix 2-Z) and forwards, via e-mail, to Supply Chain (Report 6.3.21).
14. If applicable, immediately adds supplier to Counterparty Credit Exposure Report (Report 6.4.3), which is included as a tab in the Gas Supply Purchase Record.



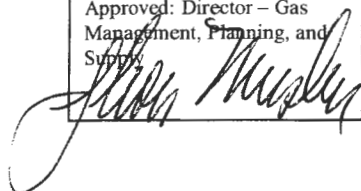
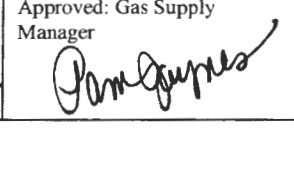
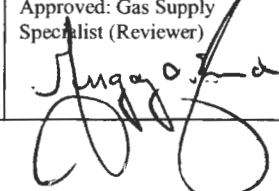
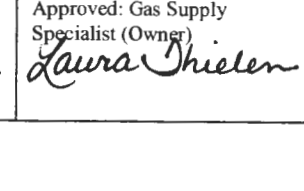
<b>PROCEDURE NAME</b> Executing a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b> 2.7
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**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

15. Immediately completes “FAS161 and Related MD&A Data Collection Form” (FASFORM) and sends to Financial Accounting and Analysis. Sends copy to Credit Department (Appendix 2-V).
16. Adds contract to next “Quarterly Credit Assurance Report” sent to Manager Credit and Contract Administration (Report 6.2.11).
17. Reports new contract to VP – Gas Distribution in next monthly “Report of Key Performance Indicators” (Report 6.4.2).
18. Reports new contract on quarterly contract list sent to the Company’s external auditor for auditing purposes (Report 6.2.8).
19. Gas Supply Manager reviews contract to ensure potential and actual purchases are in compliance with the “Normal Purchase Normal Sales” exemption for derivatives and reports outcome of review in quarterly report sent to Financial Accounting and Reporting (Report 6.2.8).

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
<b>VERSION NO.</b>  12	<b>DATE ISSUED</b>  June 1, 2018	<b>PAGE</b>  1 of 8

**PURPOSE**

The purpose of this procedure is to outline the RFP process used for the purchase of natural gas supplies under a Base Agreement for Natural Gas Sales and Purchases subject to appropriate management approval.

Transactions entered into as a result of the annual Bid Invitation Letter described in Section 2.4 are not covered in this procedure.

The Gas Supply Department purchases natural gas through the solicitation and acceptance of bids. The Gas Supply Department may solicit and accept supply offers through either an oral or written bid process.

For supply packages with a term of one month or longer, a written “Request for Proposal” letter and “RFP Response Form” are prepared, reviewed, and approved by appropriate department personnel, and sent, via e-mail, to all qualifying suppliers on the Approved Transaction List (“Written Bid Process”).

In the instance of supply packages with a term of less than one month, generally next-day gas supplies, the Gas Supply Department contacts qualifying suppliers on the Approved Transaction List, via telephone, manually records each supplier’s response (if any), and awards the bid to the supplier which offers the lowest price, consistent with reliability and creditworthiness (“Oral Bid Process”).

Under the oral bid process, LG&E may contract for gas supplies at a “market price”, represented by a published index or at a “fixed price”. When contracting for gas supplies at a “market price”, the Gas Supply Department contacts suppliers, via telephone, and continues making calls until a supplier is willing to provide supplies at the “market price” or below. Once a supplier is found agreeable to transacting at the index price specified by LG&E, no additional counterparties are contacted. When contracting for gas supplies at a “fixed price”, two or more responses are required in order to determine the lowest fixed price. Generally, fixed-price transactions are limited to next-day supplies and are never longer than one month.

All responses, to written or oral bid invitations, are documented, noting the method of such bid invitation in the “Summary of Responses to Natural Gas Bid Invitations”, which also acts as the “Sole Source” form, in accordance with the ALM as described in the Preface of Section 2.

LG&E’s ALM defines “Sole Source” solicitation for fuel purchases as any procurement process outside the formal bid process as outlined in the Purchasing Policy.

<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
<b>VERSION NO.</b>  12	<b>DATE ISSUED</b>  June 1, 2018	<b>PAGE</b>  2 of 8

**RESPONSIBILITY**

Gas Supply Department

**ACTION**

1. Determines bid requirements (volume) for specific term (e.g., seasonal, monthly, weekly, daily), and applicable pipeline (Texas Gas or Tennessee), based upon forecasted system requirements and price considerations.
  
2. For the Written Bid Process, generally for purchases of one month or more, formulates a Request for Proposal Letter and RFP Response Form and circulates to department personnel for review and approval. (Appendix 2-K). The Request for Proposal Letter is reviewed and initialed by the preparer and the Gas Supply Manager or Director – Gas Supply.

NOTE: The Request for Proposal Letter shall be labelled as “Confidential”.

3. Prepares, and initials, a supplier e-mail distribution list of qualified suppliers to which the Request for Proposal Letter will be sent. The distribution list is reviewed, and initialed, by another Gas Supply Specialist. The distribution list is based upon the Approved Transaction List which sets forth suppliers qualified by LG&E to bid on the transaction, based on the supplier’s credit.

<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
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**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

4. Distributes Request for Proposal.
  - a) For the Written Bid Process, sends RFP Letter and Response Form to qualified suppliers on the prepared supplier e-mail distribution list, and as identified on Approved Transaction List (See example in Appendix 2-P) via e-mail.
  - b) For the Oral Bid Process, where time is of the essence, or for purchases of less than one month, generally next-day gas supplies, the Gas Supply Specialist contacts suppliers via telephone rather than preparing a formal written request for proposal. In such situations, suppliers may provide verbal responses. If a supplier does not respond, continues to contact other potential suppliers. All verbal responses are manually recorded in a bid analysis document as outlined in Action 6 below.

<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
<b>VERSION NO.</b>  12	<b>DATE ISSUED</b>  June 1, 2018	<b>PAGE</b>  4 of 8

**RESPONSIBILITY**

**ACTION**

Supplier

5. Responds to LG&E's Request For Proposal.
  - a) For the Written Bid Process, responds by date and time provided on the Request for Proposal Letter with appropriate supply related information by faxing or e-mailing completed RFP Response Form.
  - b) For the Oral Bid Process, willing suppliers provide a verbal offer via telephone.

Gas Supply Department

6. For all Requests for Proposal, whether under the Written Bid Process or the Oral Bid Process, the Gas Supply Specialist prepares a "Summary of Responses to Natural Gas Bid Invitation" indicating the name of all suppliers contacted, volumes offered and purchased, date(s) of flow, receipt/delivery point, price, and bid acceptance/rejection comments. The "Summary of Responses to Natural Gas Bid Invitation" (See Report 6.1.1) includes the bid analysis.

<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
<b>VERSION NO.</b>  12	<b>DATE ISSUED</b>  June 1, 2018	<b>PAGE</b>  5 of 8

**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

7. Evaluates offers based on price, volume, receipt/delivery point compatibility, flexibility, supplier reliability, and supplier diversity. In the event of a tie between suppliers, past performance, reliability, creditworthiness, or other factors may be used as a tiebreaker.
8. The “Summary of Responses to Natural Gas Bid Invitation” is signed by the preparing Gas Supply Specialist and submitted to the Gas Supply Manager or the Director – Gas Supply for review and approval. Each summary is incorporated in the “Monthly Supply Purchase Summary” report in accordance with Report 6.2.1.
9. For the Written Bid Process, in order to determine ALM Compliance, a Gas Supply Specialist prepares the “Term and Tenor Calculations” form, which is completed using current natural gas NYMEX prices adjusted for any basis, discount, commodity premium/discount, or other factors applied to the volumes for the term of the transaction.

For the Oral Bid Process associated with next-day supply purchases, this step is excluded as it is impossible to exceed authority limits specified in the ALM.

<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

- a) The “Term and Tenor Calculations” form ensures compliance with the ALM by estimating transaction value and reviewing term and tenor as specified in the ALM.
  - b) The “Term and Tenor Calculations” form is prepared and initialed by a Gas Supply Specialist, and is submitted to a second Gas Supply Specialist who reviews and also initials the document.
  - c) The “Term and Tenor Calculations” form is then submitted to the Gas Supply Manager or the Director – Gas Supply for review and approval, and to ensure any additional required approvals are obtained in order to award the transaction and execute the Nomination Schedule in accordance with the ALM as described in the Preface to Section 2.
10. Contacts successful bidder to award supply transaction.
  11. Records purchase transaction details in the Gas Supply Purchase Record and the Daily Supply Plan (Supply) spreadsheet.

<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b>  2.8
<b>VERSION NO.</b>  12	<b>DATE ISSUED</b>  June 1, 2018	<b>PAGE</b>  7 of 8

**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

12. For the Written Bid Process, the Gas Supply Specialist prepares a "Supply Proposal Checklist" of all items included in the Written Bid Process. Items on the list will include the supplier e-mail distribution list, the approved Request for Proposal Letter, all supplier responses and Response Forms, approved "Summary of Responses to Natural Gas Bid Invitation", approved "Term and Tenor Calculations" form, and other purchase documentation, if any.

For the Oral Bid Process associated with next-day supply purchases, this step is excluded as the "Summary of Responses to Natural Gas Bid Invitation" serves as the only documentation and is filed in the Bid Invitations binder.

13. The Gas Supply Specialist completes and initials the "Supply Proposal Checklist". All documentation associated with the Written Bid Process is reviewed by another Gas Supply Specialist, who also initials the "Supply Proposal Checklist" prior to placing the documents in the Bid Invitations binder.
14. **SARBANES-OXLEY KEY CONTROL (22.04.01)** – A Gas Supply Specialist Prepares a Nomination Schedule(s) in accordance with Section 2.5.



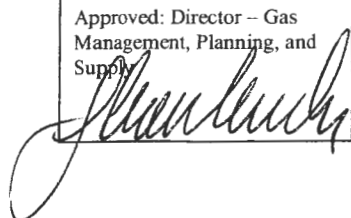
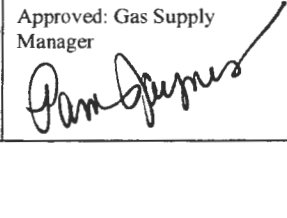
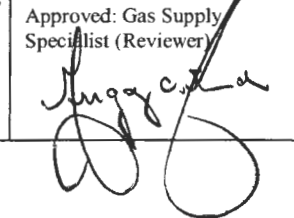
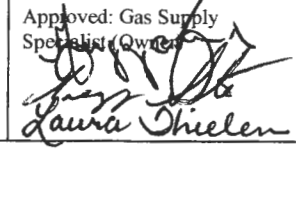
<b>PROCEDURE NAME</b> Purchase of Natural Gas Supplies Under a Base Agreement for Natural Gas Sales and Purchases		<b>SECTION NO.</b> 2.8
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

15. If the supplier sends a transaction confirmation, the confirmation is reviewed by the appropriate Gas Supply Specialists. If correct, it is initialed by those Gas Supply Specialists and is filed in the supplier's contract binder on a timely basis. If incorrect, discrepancies are reported to the supplier.
16. Reports seasonal transactions, of one month or more, to VP – Gas Distribution in next monthly "Report of Key Performance Indicators" (Report 6.4.2).

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
Supplier Credit Assessment and Daily Net Exposure		2.15
<b>VERSION NO.</b>	<b>DATE ISSUED</b>	<b>PAGE</b>
10	February 1, 2018	1 of 9

**PURPOSE:**

The LG&E and KU Energy, LLC Power Supply Credit Policy requires that a credit risk limit must be established for all counterparties with whom LG&E does business (See Exhibit 2-W).

The purpose of this procedure is to outline the methodology used to monitor, on an on-going basis, the creditworthiness of LG&E's natural gas suppliers. While the credit evaluation function is primarily the responsibility of LG&E's Credit Department, it is important for the Gas Supply Department to maintain current credit information within the Gas Supply Department for use in evaluating purchases from, or sales to, suppliers. The Gas Supply Department uses the Effective Credit Limit and Maximum Credit Limit to determine the type of natural gas transaction(s) that each supplier is qualified to enter into with LG&E. This determination is made by the Gas Supply Department using the methodology described in this procedure. As a result, Requests For Proposals ("RFPs") are sent only to suppliers that have the level of creditworthiness required to support the transaction described in the RFP.

LG&E monitors creditworthiness for two reasons. Firstly, LG&E must ensure that suppliers with which it transacts have the financial strength to stand behind transactions and pay damages to LG&E in the event of non-performance for reasons other than force majeure as defined in LG&E's gas supply agreements. Secondly, when LG&E does make a sale of natural gas in the off-system market, LG&E must ensure that the natural gas supplier (as a buyer) will be able to pay LG&E for the gas sold. By monitoring its purchase and sales transactions with suppliers, LG&E's exposure is further limited.

As a purchaser of natural gas, LG&E's exposure to the financial creditworthiness of a given supplier is limited because it is the supplier that extends credit to LG&E. Additionally, LG&E's exposure is limited since LG&E's purchases are made "at market". In instances where LG&E is a seller of gas, LG&E's credit exposure may be higher to the extent that such sales are not netted against purchases from the same supplier.

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Supplier Credit Assessment and Daily Net Exposure		2.15
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**RESPONSIBILITY**

**ACTION**

Gas Supply Department

1. Requests a credit evaluation of suppliers from the Credit Department. The Gas Supply Department may provide to the Credit Department any information (financial or otherwise) to which it has access in order to assist the Credit Department in its evaluation of suppliers.

Credit Department

2. Determines supplier's creditworthiness and establishes a Maximum Credit Limit. The Maximum Credit Limit considers, among other factors, Tangible Net Worth, the supplier's (or its guarantor's) credit rating, and the maximum amount of adequate assurance that a supplier could potentially provide to LG&E in the form of a Guaranty.
3. Determines and provides the Gas Supply Department with the rating agency's credit rating, effective date of such rating, and Maximum Credit Limit for each supplier.

NOTE: The Maximum Credit Limit is to be shared across all LKE entities and may not apply solely to LG&E or to transactions by the Gas Supply Department.

<b>PROCEDURE NAME</b>		<b>SECTION NO.</b>
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**RESPONSIBILITY**

**ACTION**

Credit Department (cont.)

4. In the absence of verifiable financial information which could otherwise be used to establish a credit limit, the supplier is required to provide adequate assurance. The Credit Department provides conditions and guidelines for the Gas Supply Department to use in obtaining adequate assurance from the potential supplier (e.g., parent guaranty, letter of credit, or other financial assurance, typically with a minimum amount of \$500,000 and preferably for a term of at least six months).

Gas Supply Department

5. If applicable, requests financial assurance from supplier satisfactory to LG&E.

Supplier

6. Provides adequate assurance. If adequate assurance is not provided, the Gas Supply Department notifies the supplier and no RFP's are sent to supplier until adequate assurance is provided. If negotiating with a potential supplier, then LG&E may cease contract negotiation.

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**RESPONSIBILITY**

Gas Supply Department

**ACTION**

7. Determines supplier's Effective Credit Limit which shall be equal to the lower of the supplier's Maximum Credit Limit or Adequate Assurance.

NOTE: The Effective Credit Limit is to be shared across all LKE entities and may not apply solely to LG&E or to transactions by the Gas Supply Department.

File Location: G:/GSUPPLY/Shared/Credit Information/Year.xlsx (Approved Transaction List tab).

8. After a Base Agreement for Natural Gas Sales and Purchases is executed (see Section No. 2.7), adds supplier to Approved Transaction List and Credit Evaluation List including credit information provided by Credit Department (See Report 6.4.4 and example in Appendix 2-P). Supplier qualifies to receive RFPs for various purchase or off-system sales transactions based upon supplier's Effective Credit Limit. The following guidelines apply to the Approved Transaction List:
  - (a) If supplier has no Effective Credit Limit, then supplier qualifies for no RFPs, purchases, or off-system sales transactions.

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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

- (b) If supplier's Effective Credit Limit is at least \$500,000 but less than \$2,000,000, then supplier qualifies for purchase transactions of one month or less, but no off-system sales transactions.
- (c) If supplier's Effective Credit Limit is at least \$2,000,000, then supplier qualifies for purchase transactions up to seven months and the winter-season Bid Invitation Letter (RFP), but no off-system sales transactions unless supplier meets credit limit described in (d), or unless off-system sales transactions with the supplier can be fully netted against purchases from the same supplier.

NOTE: In order to be awarded a winter-season purchase transaction, supplier must agree to provide additional adequate assurance if necessary to achieve the Effective Credit Limit required for the transaction.

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**RESPONSIBILITY**

Gas Supply Department (cont.)

**ACTION**

- (d) If supplier's Effective Credit Limit is at least \$5,000,000, then supplier qualifies for all purchase transactions as well as off-system sales transactions (assuming the contract with supplier provides for sales to supplier).

NOTE: The supplier does not qualify for off-system sales transactions if the Credit Department relied upon the counter-party's Tangible Net Worth in establishing the Maximum Credit Limit.

- 9. Monitors credit of all suppliers with which LG&E has gas supply agreements. Maintains current credit information on Credit Evaluation List which is an exhibit to the Approved Transaction List (See example included in Appendix 2-P) including supplier's S&P and Moody's ratings, Effective Credit Limit, Maximum Credit Limit, and, if applicable, type and amount of adequate assurance. Updates the Approved Transaction List (See Action 8 above) as required.

File Location: G:/GSUPPLY/Shared/Credit Information/Year.xlsx.

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**RESPONSIBILITY**

**ACTION**

Gas Supply Department (cont.)

10. Calculates, on a daily basis, LG&E's net exposure for suppliers to prevent transactions from exceeding the supplier's Effective Credit Limit. LG&E's net exposure is equal to the net dollar amount of natural gas purchases from and sales to a supplier under the agreements which LG&E and the supplier have agreed to net, if any. The net exposure amount for each supplier is compared to the supplier's Effective Credit Limit to ensure that the supplier's Effective Credit Limit is not exceeded. This calculation, included in the Gas Supply Purchase Record, is made available to other members of the Gas Supply Department and is reviewed prior to making off-system sales in accordance with Report 6.4.3.

Credit Department

11. If net exposure of all transactions under the agreements which LG&E and the supplier have agreed to net is positive (LG&E purchases > LG&E sales), then no action is required.
12. If net exposure of all transactions under the agreements which LG&E and the supplier have agreed to net is negative (LG&E sales > LG&E purchases) and such net exposure exceeds the Effective Credit Limit, the Credit Department is contacted to determine if the supplier's Effective Credit Limit can be increased.



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**RESPONSIBILITY**

**ACTION**

Credit Department (cont.)

13. Evaluates supplier's credit and notifies the Gas Supply Department of any change impacting the determination of the Effective Credit Limit, if any.

Gas Supply Department

14. If Effective Credit Limit can be increased to an amount that results in positive net exposure, then sales can be made to the counterparty; if Effective Credit Limit is maintained at or lowered to an amount that results in negative net exposure, the Gas Supply Department makes no sales to the counterparty.

15. Reviews trade publications for any references indicating supplier performance issues or credit rating changes and provides notification of such to the Credit Department.

16. Requests quarterly review and update of credit information from the Credit Department for all suppliers.

Credit Department

17. Provides credit information on a quarterly basis (or as requested by the Gas Supply Department) including any changes to S&P and Moody's ratings or to the Maximum Credit Limit of natural gas suppliers.

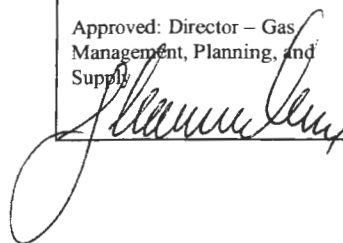
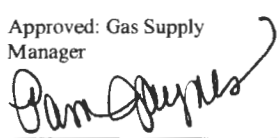
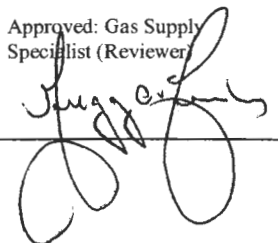
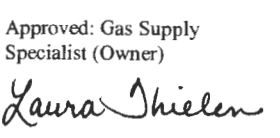
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**RESPONSIBILITY**

Gas Supply Department

**ACTION**

18. Updates Credit Evaluation List and Approved Transaction List (See Appendix 2-P) based on information provided by the Credit Department.
  
19. If the Maximum Credit Limit established by the Credit Department indicates that the natural gas supplier, or its guarantor, is no longer creditworthy (e.g., downgrade of financial ratings), the Gas Supply Department does not enter into natural gas sales and purchases unless adequate assurance is provided by the supplier (See Actions 4, 5, and 6).

Approved: Director – Gas Management, Planning, and Supply 	Approved: Gas Supply Manager 	Approved: Gas Supply Specialist (Reviewer) 	Approved: Gas Supply Specialist (Owner) 
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The entire attachment is  
Confidential and  
provided separately  
under seal.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 9**

**Witness: J. Clay Murphy / Pamela L. Jaynes**

Q-9. Provide a copy of LG&E's most recent gas supply plan and a written description of its gas supply planning process.

A-9. LG&E's gas supply planning process is governed by several guiding principles set forth and described in the Preface to the Procedures Manual for the Gas Supply Department. The Preface acts as a risk management policy for LG&E's Gas Supply Department. The Preface also describes the major functions of the Gas Supply Department, the potential risks and risk mitigation strategies related to natural gas purchases, the general activities of the Gas Supply Department, and the roles played by Gas Supply Department personnel.

Using the guiding principles from the Preface referenced above, LG&E develops its annual gas supply plan. LG&E's 2017 Annual Gas Supply Strategies ("Gas Supply Plan") was prepared by the Gas Management, Planning, and Supply Department. Exhibit 1 to the 2017 Annual Gas Supply Plan includes the "Summary of Bid Evaluations for 2017/2018" including the Bid Evaluation (Appendix A), Bid Invitation (Appendix B), list of suppliers invited to bid (Appendix C), bids provided by suppliers (Appendix D) and Bid Evaluation Methodology (Appendix E).

Subsidiary to LG&E's 2017 Annual Gas Supply Plan is its 2017 Summer Season Gas Supply Plan. While the Annual Gas Supply Plan develops details for the upcoming year, it is primarily focused on deliveries for the upcoming winter season. The Summer Plan is more closely focused on summer season purchases which are primarily used for storage re-fill.

LG&E's gas supply strategies are in accordance with the Order of the Kentucky Public Service Commission ("KYPSC") in Administrative Case No. 297, which set forth the twin goals to purchase the most economical gas supplies consistent with reliability of supply. These goals were enhanced by the KYPSC's Order in Administrative Case No. 384 which stated that "LDCs should procure wholesale natural gas supplies at market clearing prices, within the context of maintaining a balanced natural gas supply portfolio that balances the

objectives of obtaining low cost gas supplies, minimizing price volatility and maintaining reliability of supply.”

While LG&E is focused on achieving low cost gas supplies for its customers, all supplies purchased must be reliable. LG&E’s focus on reliability as a criteria within its gas supply planning regime is best illustrated by LG&E’s ability to meet all-time record demand on its gas system as a result of the Polar Vortex that moved through LG&E’s service area on January 6, 2014. On that gas day, with an average temperature of minus 0.3 degrees Fahrenheit, LG&E set an all-time record peak day load of approximately 559,000 Mcf. About half of that peak load was served by LG&E’s on-system gas storage with the remaining half served by deliveries from the two interstate pipeline systems that deliver gas purchased from suppliers to LG&E. This new peak sendout exceeded LG&E’s previous record sendout of about 538,000 Mcf which was set on January 20, 1985, when the average temperature was minus 10.1 degrees Fahrenheit. Without the appropriate planning, LG&E would not have been able to serve customer gas loads on that day.

While the Gas Supply Department is responsible for developing and implementing LG&E’s Bid Evaluation and Gas Supply Plan, the exchange of information among several areas within the Company is incorporated into the process to ensure that LG&E’s Bid Evaluation and Gas Supply Plan generally comports with LG&E’s corporate strategy. In particular, forecasted customer demands, operational parameters, regulatory guidance, credit assessments, legal requirements, and other related issues are considered in the development of the Gas Supply Plan. The gas supply plan, bid evaluation process, and contracts resulting therefrom, are presented to management for review and approval.

LG&E’s major gas supply strategies to achieve the goals described above are as follows:

- (1) evaluate all practicable gas supply and pipeline transportation alternatives;
- (2) evaluate the ability of on-system storage to deliver firm sales obligations;
- (3) match firm purchases of natural gas and transportation services with firm sales obligations;
- (4) establish a portfolio of reliable natural gas supplies and creditworthy suppliers;
- (5) achieve the required supply and pipeline service flexibility to provide reliable service;
- (6) establish the maximum supply area access and diversity practicable;
- (7) price natural gas purchases in a manner consistent with KYPSC regulatory guidelines;
- (8) advocate the positions of LG&E and its customers at the Federal Energy Regulatory Commission (“FERC”);
- (9) assist end-use customers in the delivery of customer-owned gas; and

- (10) maximize savings under LG&E's gas supply cost Performance-Based Ratemaking ("PBR") mechanism.

LG&E's Gas Supply Plan includes a description of its planning process and covers the following topics that impact gas supply planning:

- Gas Procurement Goals
- Gas Procurement Strategies
- Bid Process Overview
- Evaluation of Bid Responses
- Gas Supply Planning Horizon
- Maximum and Minimum Supply Requirements and Flexibility
- Pricing Parameters
- Supplier Creditworthiness
- Contractual Terms and Conditions
- LG&E's On-System Storage
- LG&E's System Constraints
- State Regulatory Constraints and Guidance
- LG&E's Market Requirements
- Near-Term Natural Gas Supply Availability
- Short-Term Natural Gas Price Forecast
- Supply Area Access
- Pipeline Services and Transportation Contracts
- Interstate Pipeline Regulatory Matters
- Recent FERC Proceedings and Historical Guidance (Gas Industry)
- Recent and Relevant Historical FERC Proceedings (Texas Gas)
- Recent FERC Proceedings (Tennessee)
- Federal Law

The 2017 Annual Gas Supply Plan provided in response to this question, provides a detailed discussion of each of these topics.

**The following information has been included as an attachment to this response:**

- Preface to Gas Supply Department Procedures Manual

**The following information has been included as attachments to this response subject to a Petition for Confidential Treatment:**

- 2017 Annual Gas Supply Plan (including 2017 bid documentation)
- 2017 Summer Purchase Plan Analysis

## **PREFACE – PROCEDURES MANUAL**

### **Introduction**

This Procedures Manual deals with the policies and procedures regarding the purchase, sale, and control activities related to the management of and control activities related to natural gas supplies for LG&E's system supply and its end-use customers.

The Kentucky Public Service Commission ("KYPSC") has directed local distribution companies ("LDCs") in Kentucky to purchase gas supplies at market-clearing levels in keeping with directives stated by the KYPSC in Administrative Case No. 297. The KYPSC provided further gas commodity purchasing direction in its July 17, 2001, Order in Administrative Case No. 384. In that Order, the KYPSC encouraged LDCs to consider methods for reducing price volatility, such as the use of storage or financial hedging. All of the gas supply costs (including commodity purchases, pipeline transportation services, and the cost of gas injected into and withdrawn from storage) are recovered through LG&E's Gas Supply Clause as set forth in its tariff and approved by the KYPSC each quarter. Additionally, all of the purchased gas supply costs of LG&E's LDC are benchmarked subject to the Performance-Based Ratemaking ("PBR") Mechanism as set forth in LG&E's tariff and approved by the KYPSC each year.

### **Major Functions**

The major functions of the Gas Supply Department include the following:

- Purchase required supplies of natural gas for system supply, which involves managing the bidding process, evaluating, contracting for, and transporting natural gas supplies;
- Advocate the position of LG&E and its customers by providing guidance and participation in regulatory activity affecting the services of LG&E's interstate pipeline suppliers, which are regulated by the Federal Energy Regulatory Commission ("FERC"); and
- Provide information to end-use transportation customers and facilitate the transportation of customer-owned gas supplies to and through the gas distribution system of LG&E.

In order to carry out these functions, the Gas Supply Department regularly interacts with the Legal, Gas Control, Rates and Regulatory Affairs, Billing Integrity, Sales Analysis and Forecasting, Economic Development, Major Accounts, and Revenue Accounting and Analysis Departments.

### **Risks and Risk Mitigation Strategies**

Key risks related to purchasing and delivering natural gas on behalf of LG&E's LDC include the following:

- The supply of natural gas to LG&E's LDC customers may not be reliable;
- Transactions are not performed subject to Authority Limit Matrix ("ALM");
- Bidding and bid evaluation processes are not appropriately documented and managed;
- Sole source processes and transactions are not appropriately documented and managed;

- Transactions are fraudulent, improperly recorded, or made outside of approved processes and limits;
- Gas supply costs are imprudent;
- Credit contingencies, embedded and other derivatives, and other accounting features are not properly reported; and
- Legal or regulatory guidelines are violated.

In order to mitigate key risks and ensure adequate controls exist over key processes, the Gas Supply Department has developed purchasing strategies and processes which are further defined in its supply plans and supported by policies and procedures strictly followed by all departmental personnel.

The purchasing strategies of the Gas Supply Department include the following:

- Evaluate all practicable gas supply and pipeline transportation alternatives;
- Evaluate the ability of on-system storage to deliver firm sales obligations;
- Match firm purchases of natural gas and transportation services with firm sales obligations;
- Establish a portfolio of reliable natural gas supplies and creditworthy suppliers;
- Achieve the required gas purchase and pipeline service flexibility to provide reliable service;
- Establish the maximum supply area access and diversity practicable;
- Price natural gas purchases in a manner consistent with KYPSC regulatory guidelines;
- Advocate the positions of LG&E and its customers at FERC;
- Assist end-use customers in the delivery of customer-owned gas; and
- Maximize savings under LG&E's gas supply cost PBR mechanism.

Additionally, the Gas Supply Department:

- Advises, and acts upon as required, regulatory initiatives at the KYPSC regarding tariff and other regulatory changes for both sales and end-use transportation activities regarding LG&E's natural gas customers; and
- Ensures that all transactions are in compliance with FERC regulations, including, but not limited to, capacity release rules, shipper-must-have-title, market manipulation, Form 549-D, and Form 552 reporting.

This Procedures Manual also sets forth standard policies related to the purchase and sale of natural gas in the wholesale market. The specific authority limits applicable to contracts and transactions entered into by the Gas Supply Department are based on job title as set forth in the LG&E and KU ALM.



### Scope

This policy applies to all personnel within the Gas Supply Department.

### Gas Management, Planning, and Supply

The Gas Supply Department reports directly to the Vice President – Gas Operations and is responsible for procurement of natural gas and interstate pipeline transportation services. The primary responsibilities of the Gas Supply Department are to:

- Ensure that the natural gas portfolio conforms with the regulatory guidelines established by the KYPSC;
- Ensure that natural gas and interstate pipeline transactions conform with the regulatory guidelines established by FERC;
- Coordinate activities with Gas Control and Storage to maintain on-going system reliability, including maintenance of adequate storage inventory levels (injections and withdrawals) as established by Gas Control and Storage;
- Establish contracting and portfolio criteria using underlying gas sendout forecast provided by Sales Analysis and Forecasting;
- Negotiate and manage short- and long-term contracts for natural gas and interstate pipeline transportation to serve the needs of the sales customers of LG&E's LDC;
- Perform overall management of the natural gas portfolio, including transaction execution;
- Ensure that all transactions are performed according to departmental procedures;
- Ensure that all transactions are Sarbanes-Oxley compliant;
- Ensure that all transactions are within authority limits established in ALM;
- Identify potential market opportunities and optimize LG&E's performance under the gas supply cost PBR mechanism;
- Inform senior management of market issues and significant market developments as soon as reasonably possible;
- Ensure all transactions, including purchases, sales, and transportation are correctly entered into the financial records of Company each month;
- Ensure all transactions, including purchases, sales, and transportation are reported correctly and on a timely basis to Revenue Accounting and Analysis for entry into the company financial system monthly;
- Retain written evidence of all transactions, accurately record all transactions, and accurately report all transactions to Revenue Accounting for booking;
- Facilitate and manage the re-delivery of customer-owned natural gas to the facilities of end-use transportation customers; and
- Participate in business recovery readiness and contingency plans in conjunction with Gas Control and Storage and other affected departments.

### **Organizational Structure**

The Gas Supply Department is responsible for ensuring that:

- gas supply activities and associated risk of LG&E with respect to its LDC operations are controlled and maintained within the specified parameters;
- gas supply activities of LG&E with respect to its LDC are in compliance with all appropriate external laws and regulations and internal policies and procedures; and
- departmental practices conform to approved risk mitigation measures.

### **Oversight**

The Director – Gas Supply and the Vice President – Gas Distribution shall meet monthly, or more often as necessary, along with others, including, but not limited to, the Chief Operating Officer. These oversight functions may also be carried out through the Enterprise Risk Management Committee or as otherwise required.

The responsibilities of Senior Management are to:

- Review and approve risk mitigation measures, models and assumptions;
- Measure and monitor credit, market, and other risks;
- Ensure that risks are duly reported to Internal Audit via the “Enterprise Risk Management Risk Report Inventory”;
- Oversee business recovery readiness and contingency plans in conjunction with the following departments: Gas Control, Gas Storage, Economic Development and Major Accounts, Gas Engineering, Legal, Rates, Corporate Communications, Information Technology, Telecommunications, Facilities, Human Resources; and
- Ensure that the Company is in compliance with all appropriate external laws and regulations and internal policies and procedures pertaining to natural gas procurement and related activity.

### **Director -- Gas Supply**

The Director -- Gas Supply reports directly to the Vice President – Gas Distribution, is responsible for oversight of all strategic plans and transactional activity for the Gas Supply Department, and is responsible for oversight of all natural gas supply activities for LG&E’s LDC, including, but not limited to, the purchase and sale of natural gas in the wholesale market, and the procurement and management of interstate pipeline transportation services.

The primary responsibilities of the Director -- Gas Supply include:

- Ensure compliance with risk mitigation strategies by controlling and maintaining activities within the Gas Supply Department within the parameters specified by Senior Management;

- Work with legal and other counterparts in the Company to determine and support the interests of LG&E and its customers with respect to state and federal regulatory matters and initiatives;
- Monitor risks and mitigate same;
- Manage gas supply activities to maximize results under LG&E's gas supply cost PBR mechanism;
- Adhere to and monitor transaction authority limits within the ALM;
- Approve and manage reputable counterparties;
- Approve shorter-term and longer-term gas supply plans;
- Oversee the day-to-day activities of the Gas Supply Department;
- Perform overall management of gas supply activities, including transaction execution;
- Review and approve recording of all gas supply transactional activities and related reporting;
- Establish and approve policies and procedures related to competitive and non-competitively bid transactions;
- Establish and approve policies and procedures as necessary to carry out the functioning of the Gas Supply Department within the guidelines described herein;
- Establish and approve Gas Supply Department Business Recovery Plan;
- Review all natural gas supply transactions, including pricing, prior to the issuance of an award;
- Review and approve all transactions entered into within Gas Supply Department;
- Advise and consult with the Gas Supply Manager and Gas Supply Specialists on appropriate gas supply strategies;
- Ensure that departmental personnel adhere to all limits and that procedures are properly followed;
- Ensure compliance with Sarbanes-Oxley requirements;
- Ensure that all contracts undergo required financial analysis for embedded derivatives and that results are duly reported to Financial Analysis for their further review and confirmation;
- Ensure that all reporting and booking activity associated with LG&E's cost supply cost PBR mechanism is performed and provided to the Rates and Regulatory Affairs or Revenue Accounting and Analysis Departments as required;
- Ensure that all reporting and booking activity associated with LG&E's off-system gas sales is provided to the Rates and Regulatory Affairs or Revenue Accounting and Analysis Departments as required;
- Ensure that credit risks and activities affecting those credit risks and limits are duly reported to the Credit Department; and
- Review, initiate, and approve processes and procedures to ensure that the gas procurement risks of LG&E's LDC are controlled and maintained within parameters specified by the ALM.

Additionally, the Director – Gas Supply provides the Vice President – Gas Distribution with a monthly written report of key performance indicators and other updates.

### **Gas Supply Manager**

The Gas Supply Manager reports directly to the Director – Gas Supply. The primary responsibilities of the Gas Supply Manager include:

- Determine longer-term forecasting of natural gas and pipeline transportation requirements;
- Develop and document longer-term supply plan;
- Implement longer-term bid process, perform and document bid evaluations;
- Negotiate terms and conditions of base form of agreement with suppliers subject to legal review and establish that adequate credit assurance is in place with all counterparties prior to transacting;
- Secure approvals through execution of award form or corresponding “sole source” award form;
- Engage in transactional activity within the limits of the ALM;
- Review contracts for embedded derivatives and ensure all contracts are reported to Financial Analysis;
- Approve quarterly commitments report with respect to commodity purchases;
- Identify potential market opportunities;
- Ensure that all data for reporting and invoicing activity associated with LG&E’s off-system gas sales performed and provided to Billing Integrity on a timely basis;
- Ensure that personnel adhere to all authority limits and that procedures are properly followed by overseeing the day-to-day activities of departmental personnel; and
- Prepare gas emergency and business recovery plan.

The Gas Supply Manager has an obligation to inform Director – Gas Supply of market issues and significant market developments as soon as reasonably possible.

**Gas Supply Specialist (System Supply Scheduling)** reports directly to the Director – Gas Supply. Responsibilities of this Gas Supply Specialist are to:

- Determine short-term purchase requirements and prepare shorter-term supply plan;
- Economically dispatch gas supplies and pipeline transportation services;
- Prepare short-term bid evaluations and award form or corresponding “sole source” award form;
- Prepare short-term off-system sales evaluation and award form or corresponding “sole source” award form;
- Prepare capacity release evaluation and award form or corresponding “sole source” award form;
- Engage in short-term transactional activity subject to approval and guidance of the Director-Gas Supply or Gas Supply Manager;
- Act as primary point of contact between the Gas Supply Department and the Gas Control Department, counterparties or pipelines regarding short-term supply requirements and transactions;

- Ensure that all transactions are complete and accurately entered into the financial records of Company;
- Schedule and verify all transactions on the Internet Web-Site of the transporting natural gas pipeline; and
- Comply with operational aspects of gas supply contracts and pipeline tariffs.

The Gas Supply Specialist (Scheduling) has an obligation to inform Director – Gas Supply of market issues and significant market developments as soon as reasonably possible.

**Gas Supply Specialist (System Supply Accounting)** reports directly to the Director – Gas Supply. Responsibilities of this Gas Supply Specialist are to:

- Calculate all purchased gas costs in accordance with terms of the transaction;
- Prepare financial contract reports for review and approval by Gas Supply Manager;
- Prepare credit contingent features analysis and report;
- Prepare reports related to recording of gas supply expense estimates;
- Prepare reports related to recording of off-system sales activities;
- Prepare reports related to purchase commitments;
- Prepare “Approved Transaction List” by counterparty based upon credit assessment and transactional limits report based on information provided quarterly by Credit Department;
- Ensure contract compliance;
- Ensure compliance with credit and transactional limits;
- Issue transaction confirmations and resolve all confirmation discrepancies;
- Ensure executed transaction confirmation is returned by counterparty prior to payment;
- Prepare various FERC reporting data (e.g., Form 552); and
- Identify and update all relevant counterparty repository information in the Company records.

The Gas Supply Specialist (Accounting) has an obligation to inform Director – Gas Supply of market issues and significant market developments as soon as reasonably possible.

**Gas Supply Specialist (End-Use Scheduling)** reports directly to the Director – Gas Supply. Responsibilities of this Gas Supply Specialist are to:

- Act as primary point of contact between end-use customers and their agents or pool managers regarding end-use transportation activities;
- Ensure that LG&E’s gas transportation tariffs are applied and enforced uniformly;
- Ensure that all agreements and documentation is in place prior to commencing transportation for a customer;
- Ensure that all agreements and documents are maintained and current, including any applicable credit requirements as provided for in LG&E’s tariffs;
- Ensure daily that volumes nominated by end-use customers match the volumes scheduled by customers on the pipeline’s Internet Web-Site;
- Prepare reports related to end-use transportation activities;

- Prepare reconciliation of customer-owned gas;
- Prepare curtailment data; and
- Prepare Gas Commodity Purchase Disbursement Requests.

The Gas Supply Specialist (End-Use Scheduling) has an obligation to inform Director-Gas Supply of market issues and significant market developments as soon as reasonably possible.

Functions may be reassigned or rotated among employees from time to time as workload and training requirements are permitted or required.

### **Credit Department**

The Credit Department is responsible for the daily functions necessary to support the Company's trading activities. With respect to the Gas Supply Department, the Credit Department's primary responsibilities are to:

- Monitor and enforce compliance with the Credit Policy. The policy applies to all applicable transactions;
- Ensure that establishment of credit limits and terms are in accordance with the Company's Credit Policy;
- Establish counterparty limits prior to Gas Supply Department entering into transactions;
- Ensure that changes in counterparty credit limits are reported to the Gas Supply Department on a timely basis;
- Negotiate guaranties, letters of credit, and other security with counterparties where appropriate;
- Research and analyze a variety of financial information, market conditions, and economic trends to determine creditworthiness of counterparties at least quarterly; and
- Identify and systematically manage counterparty risks.

### **Supply Risk Management and Mitigation**

All employees involved in the Gas Supply Department have the obligation to manage risks, while senior management has the obligation to understand all risks as part of its oversight responsibilities. Unmitigated market, credit risks, and other risks will be quantified to the extent possible and brought to the attention of senior management.

In an effort to mitigate the risks associated with serving its sales customers, LG&E purchases and transports gas from suppliers on Texas Gas's system using Rate Schedules NNS, FT, STF, or IT and on Tennessee's system using Rate Schedules FT-A or IT. LG&E may also contract with the supplier to have such gas supplies delivered directly to LG&E's city-gate. No-Notice Service ("NNS") is a pipeline service which combines pipeline capacity and storage. NNS incorporates features allowing LG&E to receive a portion of its natural gas supplies on demand without prior nomination notice to the pipeline providing flexibility to meet variable supply requirements. Interruptible Transportation ("IT") service is interruptible in character and is available provided the transporting pipeline has sufficient capacity. Firm Transportation ("FT")

service is considered firm at both the Receipt and Delivery Point(s), but requires the nomination of both the receipts and deliveries. Short-Term Firm (“STF”) service has the same characteristics as service under FT, except that the daily pipeline contract demand may be different by month or season. LG&E utilizes FT, STF, FT-A and NNS services regularly and IT service and other forms of released capacity when deemed necessary and appropriate. Contracts with pipelines are negotiated and executed as required and with the assistance of appropriate counsel. LG&E’s supply risks are further mitigated by and through its access to its on-system gas storage capabilities.

In an effort to mitigate market and supply risks, the Gas Supply Department shall establish a portfolio of natural gas supplies and suppliers, and will not enter into contracts to purchase all gas supplies from a single source. Therefore, absent a significant economic benefit, or regulatory issues that dictate otherwise, the Gas Supply Department will generally purchase its gas supply from multiple suppliers.

The Gas Supply Department shall maintain an appropriate mix of shorter-term and longer-term purchases as governed by market conditions, forecasts, and regulatory guidance. The term “shorter-term” gas supply refers to natural gas purchased with a term of less than one year. The term “longer-term” gas supply refers to natural gas purchased with a term of one year or more. The Gas Supply Department only enters into physical gas supply arrangements as provided in the “Firm Warranted Sales and Purchase Agreement for Natural Gas Supplies” and the “Natural Gas Sales and Purchase Agreement”. The Gas Supply Department shall secure gas supply at competitive prices through the use of competitive bidding, negotiation, and other appropriate supply contracting practices. The bid evaluation methodology for longer-term supplies shall be formulated and revised each year based on current industry standards, marketplace activity, and regulatory developments. This bid evaluation methodology shall include an analysis of price, flexibility, and reliability factors associated with supply. LG&E has generally ensured that its gas supplies are at market response prices by indexing the commodity portion of its gas purchases to published and industry-recognized indices reflecting monthly or daily market prices. Fixed-price transactions for a period longer than one (1) month, or transactions relying upon a price index that extends for a period longer than one (1) month (and that price index does not reset monthly), are not currently permitted. The security and reliability of the supply is also evaluated through a close examination of the potential supplier’s creditworthiness and performance. The flexibility of the supply is another evaluated factor and includes minimum take requirements, mid-month nomination changes, and seasonal contract levels. Trade references from other LDCs are also taken into consideration. An appropriate contract will be in place prior to the purchase of any natural gas supplies. All contract terms with suppliers will be reviewed by counsel and diligently enforced to ensure compliance with departmental and LG&E policies.

LG&E plans to continue to use its on-system storage as a physical hedge against price volatility. LG&E has filed various hedge plans for KYPSC approval in Case Nos. 2001-00253, 2002-00136, 2003-00149 and 2004-00198. LG&E’s analyses have shown that storage remains a viable and economic means of mitigating the price volatility to which customers would otherwise be exposed. In its Order dated August 6, 2004, in Case No. 2004-00198, the KYPSC indicated that LG&E could continue to rely on storage as a hedge and is not required to make

further annual hedge-plan filings unless LG&E chooses to request KYPSC approval to use financial hedging instruments to supplement its storage as a hedge.

### **Financial Instruments and Commodities**

The Gas Supply Department is only authorized to enter into transactions for the physical delivery of natural gas. The Gas Supply Department shall not enter into natural gas futures transactions, exchange options, Over-the-Counter (“OTC”) forward contracts, OTC swaps, OTC options, or Exchange For Physicals (“EFPs”) or the like.

The ALM explicitly authorizes transactions for physical delivery at either fixed or indexed (market) prices within terms specified in the ALM.

The Gas Supply Department does not use electronic trading platforms for natural gas transactions.

### **Single Transactions Authority Limits**

The Single Transaction Authority Limits are those set forth in the ALM.

### **Personal Account Trading**

Employees shall not trade in financial or other instruments for their own account. Personal account trading is subject to disciplinary action in accordance with Company policies

### **Concealment of Trades**

All personnel must accurately reflect all gas supply transactions in the financial records of Company. The willful misrepresentation of or concealment of any transaction or any information regarding any transaction is subject to disciplinary action in accordance with Company policies.

### **Ethics and Conduct**

All personnel must adhere to the business and integrity guidelines of the Company and conduct themselves with the utmost integrity and discretion when dealing with potential and current counterparties. All personnel must adhere to company guidelines with respect to market manipulation. Failure to do so is subject to disciplinary action in accordance with Company policies.

LG&E recognizes the importance of the following “Standards of Integrity” (formerly the “Code of Business Conduct”) to guide the conduct of the Gas Supply Department in the performance of their duties and responsibilities:

- The Gas Supply Department shall endeavor to serve the best interests of LG&E’s customers, LG&E, and its stockholders in the performance of their duties and responsibilities;



- The Gas Supply Department shall adhere to the ethical standards and policies of LG&E;
- The Gas Supply Department shall strive to maintain and/or improve their skills, knowledge, abilities and competence in all areas required for effective discharge of their duties;
- Each employee involved with the procurement of natural gas will be required to comply with such internal code of conduct and other requirements specified by LG&E; and
- It is LG&E's policy to adhere to and comply with all applicable federal, state, and local laws and regulations.

### Execution of Transactions

No transaction may be entered into prior to the execution of a contract with the counterparty. All transactions must be reduced to writing by Gas Supply and countersigned by the counterparty in accordance with Gas Supply Department procedures.

### Transactions Conducted Outside of the Gas Supply Department

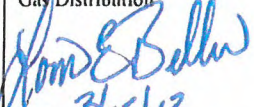
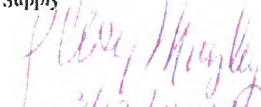
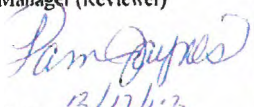
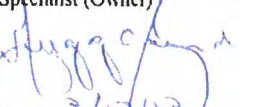
Transactions conducted outside of the Gas Supply Department must be solely for the purpose of maintaining system reliability and integrity, for example, in response to unexpected changes in weather patterns, storage availability, natural disasters, or terrorist incidents.

Transactions conducted outside the Gas Supply Department must be reduced to writing and executed by both LG&E and the counterparty.

### Transactional Confidentiality

LG&E maintains confidential treatment of its gas supply contract information regarding suppliers, terms of agreements and prices. Any document that leaves the Gas Supply Department that is determined to contain confidential information is so labeled.

Pursuant to KYPSC Order dated January 20, 1986, and in Case No. 8924-I, LG&E was required to submit copies of all natural gas supply agreements to the KYPSC. The KYPSC allowed information from certain agreements that was deemed to be of a confidential nature to be submitted subject to a filing for confidentiality. In an Order dated August 4, 2003, in Case No. 2002-00221, LG&E was relieved of the requirement to file natural gas purchase contracts and related documents with the KYPSC. The KYPSC reasoned that no other Kentucky LDC is required to make such filings and that the requirement creates an administrative burden on both the KYPSC and LG&E. Pursuant to the Order, LG&E is required to retain its natural gas purchase contracts and related documents and make them available, upon request, to the KYPSC.

Approved: Vice President - Gas Distribution  Date: 3/15/13	Approved: Director - Gas Supply  Date: 3/13/2013	Approved: Gas Supply Manager (Reviewer)  Date: 3/12/13	Approved: Gas Supply Specialist (Owner)  Date: 3/17/13
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The entire attachment is  
Confidential and  
provided separately  
under seal.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 10**

**Witness: Pamela L. Jaynes**

- Q-10. Provide a narrative description of any supply-planning computer models currently being used by LG&E, or being considered for future use.
- A-10. LG&E uses the ABB SENDOUT model as a part of its supply and transportation planning process. The basic question that SENDOUT answers is as follows:

*Given:*

- the system demand forecast by customer and/or customer class,
- potential supplies, costs and delivery capabilities by receipt point,
- transportation routes, cost and delivery capabilities,
- storage capacities, costs and operating characteristics,
- the user's reliability criterion, and
- study horizon of interest,

*what* is the best use of supply, transportation, and storage to meet system demand and reliability requirements in a least cost fashion? The answer provided by SENDOUT is called a *best cost* solution, since SENDOUT determines the *least cost* solution within given constraints.

SENDOUT employs an algorithm that uses a full linear program along with a network optimization to solve the gas supply planning scenario. By using linear programming, SENDOUT automatically takes physical limitations and contract constraints into account, and finds the minimum cost dispatch for the system during the study period. SENDOUT looks at the complete problem at once, taking into account thousands of variables and evaluating thousands of possible solutions, in order to generate the best cost solution.

SENDOUT has the flexibility to describe the complexities of both the supply and demand aspects of the distribution system in detail. There are no limits on the number of facilities (i.e., supply contracts, storage facilities, transportation contracts, temperature patterns, demand classes, markets, and areas) that can be modeled.

SENDOUT allows the definition of multiple demand areas, each served by as many or as few sources as is appropriate. Classes of demand in each area must be defined. SENDOUT computes the demand forecast for each demand class given their usage factors and daily temperatures.

SENDOUT allows multiple flowing gas contracts to serve the system, with each supplying as many interconnects as is necessary (multiple receipt points). Physical and contractual constraints are specified, such as maximum flow levels and minimum flow percentages, on a daily, monthly, seasonal, or annual basis. Contractual constraints with respect to flexibility can also be reflected or determined.

SENDOUT allows multiple storage sources (either pipeline or company-owned) to serve the system. Storage input data includes starting inventory levels, minimum or maximum inventory levels, and minimum or maximum injection and withdrawal rates. Storage withdrawal and injection curves can be defined by using line function and step function percentage tables (ratchets) for each storage asset.

SENDOUT provides the means to model the system's delivery network using segments and interconnects. Transportation segments are used to define flows and costs for transportation contracts.

SENDOUT can view the designated study period as one optimization interval, or as a series of intervals, regardless of length (e.g., one or more years). An optimization problem is set up to balance supplies against demand for the interval. To solve the problem, SENDOUT determines the required supply contracts, transportation contracts, storage withdrawals, and storage injections that minimize cost given physical and operating constraints.

LG&E's applications for SENDOUT tend to be operational in nature. While the model finds the best cost solution, given the actual and relative costs assumed, LG&E's primary goal is to optimize the use of its supply options, within the constraints associated with those options, in order to ensure reliable service to its firm sales customers. LG&E's applications for SENDOUT include:

- Analyze supply contract requirements (e.g., volumes or re-nomination flexibility, etc.) before sending out RFPs
- Analyze transportation contract requirements (e.g., volumes, the mix of services, flexibility, etc.)
- Analyze the effect of load growth (or decline) on future transportation requirements
- Assist in the optimization of storage inventory management to meet service reliability targets and maintain field integrity

LG&E has found SENDOUT to be a very effective application in its long-term planning process – particularly as related to interstate pipeline capacity planning and term gas supply procurement.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

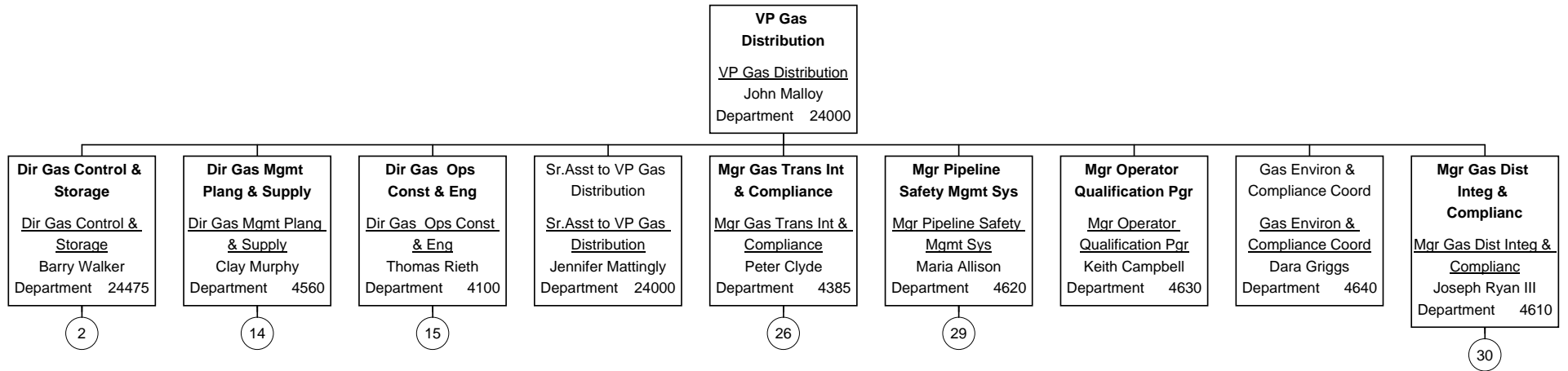
**Question No. 11**

**Witness: J. Clay Murphy**

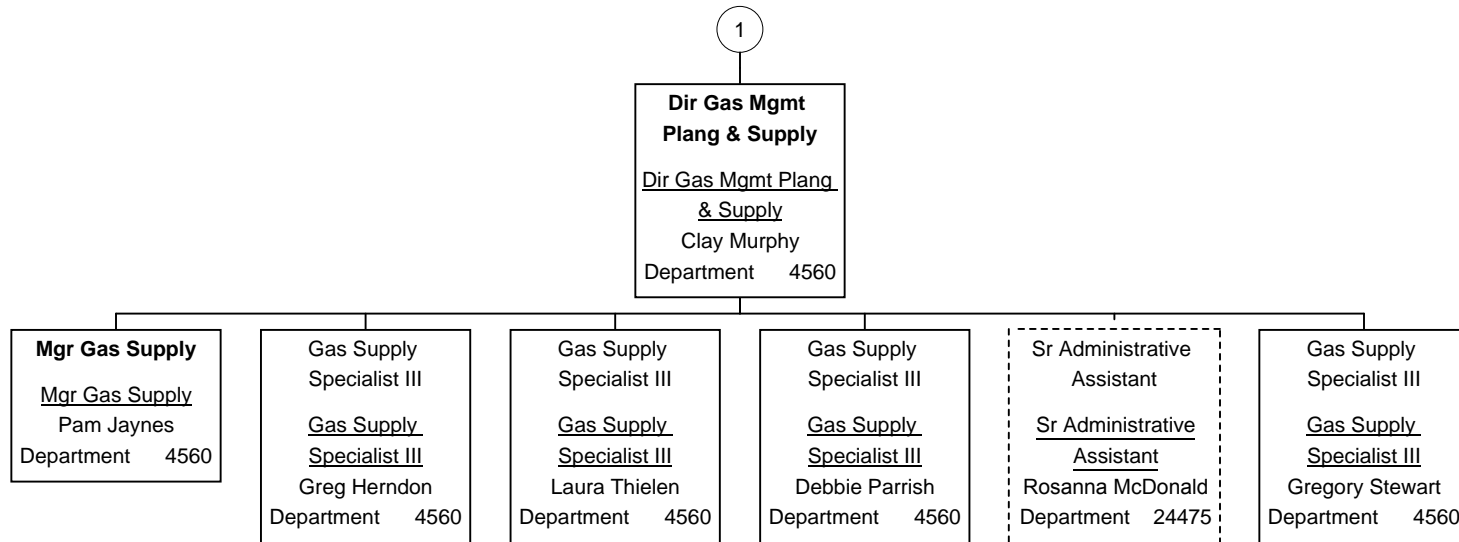
- Q-11. Provide organization charts of the overall corporate organization and of the gas planning, gas purchasing, and gas operations functions. Describe any changes that have occurred in the corporate, gas planning and purchasing, and gas operations organizations in the last five years, and any changes that are underway or contemplated within the next five years.
- A-11. Beginning in 2016, a number of new Gas Distribution positions were created to meet regulatory, compliance, and safety requirements. In early 2017, I was promoted from Vice President of Customer Services to Vice President of Gas Distribution and now report directly to Mr. Lonnie E. Bellar, who is the Company's Chief Operations Officer. Please see the attached organizational chart.

Other changes to the organizational structure occur on a periodic basis as people retire, or otherwise leave their position, to provide developmental opportunities for employees or to simply make improvements to existing structure. Currently no major reorganizations of Gas Operations are under consideration.

# VP Gas Distribution



# Dir Gas Mgmt Plang & Supply



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 12**

**Witness: J. Clay Murphy**

- Q-12. Provide job descriptions of the personnel working in the gas planning, gas purchasing, and gas operations functions.
- A-12. See attached job descriptions of the personnel working in the gas planning, gas purchasing, and gas operations functions.



Job Title – Manager of Operator Qualification Program  
Department – Gas Regulatory Compliance Organization  
Reports to Title – VP, Gas Distribution  
Direct Report Title(s) – Gas Business Analyst, Coordinator

Job Code	E1510
FLSA Classification	
EEO Category	
Approved By	Susan Reeve
Effective Date	10/30/2017
Revision Date	
Mkt Pricing Date	

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**Purpose**

This position leads the Pipeline and Hazardous Materials Safety Administration (PHMSA) Operator Qualification program, inclusive of: corporate-wide Operator Qualification compliance obligations. This position will be responsible for the coordination of all intracompany compliance obligations, evaluation and approval of all business partner operator qualification programs, and interactions with state and federal regulators.

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**Core Responsibilities**

Leads Project Management team in the development of the Operator Qualification implementation plan  
Ensures all Operator Qualification Administrator duties are performed  
Updates Operation Contacts concerning Operator Qualification processes and requirements  
Identifies all non-gas underground operations and ensures awareness of Operator Qualification rules  
Acts as a member of sales/bid team identifying Operator Qualification requirements, issues, bid/no bid decisions  
Addresses qualification issues or changes during construction  
Produces or facilitates production of customer Operator Qualification action plan  
Facilitates lines of communications between company departments  
Monitors and evaluates Operator Qualification process and procedures  
Leads Operator Qualification incident investigations at the Region Level  
Keeps region management informed of progress, changes and issues  
Interfaces with Compliance division and senior executives on compliance updates  
Manages the field audit process for both internal and external Operator Qualification programs

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**Education/Experience/Qualifications**

Bachelor degree in Business, Applied Science, or Engineering, or an equivalent combination of knowledge and work experience.

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**Preferred Qualifications**

Applicant should possess excellent interpersonal skills, high organizational skills, and ability to manage complex compliance obligations.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Office and field environment Normal work hours apply

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**Physical Effort**

Position requires both office and field operations. Applicant must be physically able to engage employees and business partners on gas construction sites, power plants, and customer field services.

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**Job Hazards**

Low degree of physical hazards associated with this position.

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Job Title Manager - Pipeline Safety Management System  
 Department 004600 - Gas Services  
 Reports to Title – VP, Gas Distribution  
 Direct Report Title(s) – Engineer, Analyst

Job Code	E1511
FLSA Classification	
EEO Category	
Approved By	Susan Reeve
Effective Date	10/30/2017
Revision Date	
Mkt Pricing Date	

**Purpose**

This position provides strategic direction for services supporting Pipeline Safety Management Systems (PSMS), risk management, operational performance, and compliance. Responsibilities include directing PSMS activities including, but not limited to quality assurance, management of change, standard/procedure development/tracking, audit/incident tracking and emergency drill preparation. This position will also be responsible for associated data analysis and reporting. This position will present findings and recommendations to various groups within the company including to Senior Management and the PHMSA Steering Committee. Additionally, this position will represent the company to external industry groups and organizations.

**Core Responsibilities**

- Provides strategic direction for Company in regards to Pipeline Safety Management System actions and activities
- Leads standards/procedures development, review and communication of changes to appropriate departments
- Provides data analysis and assessments to GDO and other Company departments in regards to areas of responsibility and other data sets as required
- Provides direction on establishing criteria for a Management of Change process and may have responsibility for administering all or part of this process
- Provides direction on tracking incidents and associated action items
- Provides guidance to centralize quality assurance activities for procedures, construction standards and other items occurring within GDO
- Responsible for communicating risk analysis to various levels within the organization
- Participates in industry organizations and on committees to remain current with industry PSMS implementations and actions
- Provide strategic direction for quality control activities
- Provide direction on budgetary needs to support objectives of responsibilities
- Assists with the development of goals, objectives, budgets and programs, as required to support company goals and objectives including remaining in compliance with federal and state regulations.
- Plans and controls activities so as to provide an accident-free work place
- Conducts work activities with regard to environmental rules and regulations
- Performs other duties as assigned

**Education/Experience/Qualifications**

Bachelor of Science degree in Engineering. Technical knowledge and proficiency acquired through several years of work-related assignments in Gas Operations.

**Preferred Qualifications**

- Ability to utilize statistical methods in providing data analysis used for program reporting and communication with other GDO and Company groups
- Ability to develop Business Case Analysis that aid in decision making and for presentation to Senior Management

Demonstrated proficiency and/or working knowledge of Microsoft Office applications, GIS systems and other applications as needed

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Primarily office environment with some field work. The field work requires the ability to inspect work in trenches, frequent walking and climbing

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**Physical Effort**

Primarily desk work with some standing and walking and field work including work in excavations

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**Job Hazards**

Low degree of physical hazards associated with this position.

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Job Title – Gas Environmental & Compliance Coordinator  
Department – Gas Distribution  
Reports to Title – VP, Gas Distribution  
Direct Report Title(s) – None

Job Code	E5351
FLSA Classification	
EEO Category	
Approved By	Susan Reeve
Effective Date	10/30/2017
Revision Date	
Mkt Pricing Date	

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**Purpose**

Supports the VP, Gas Distribution, in the coordination of environmental and gas compliance auditing, documentation, internal and external regulatory reporting, permitting and retention of records for Gas Distribution Operations.

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**Core Responsibilities**

Facilitates and assists in the analysis of industry regulations/requirements and partners with department leaders in the development of necessary processes and procedures to ensure compliance  
Manages the coordination and retention of all formal reporting to regulatory agencies and internal compliance efforts  
Acts as a central information source for the organization on regulatory issues.  
Monitors and reviews proposed initiatives by regulatory agencies to determine the potential impact(s) on departmental operations  
Manages the coordination of activities and reporting of PHMSA compliance to the Gas Compliance Steering Committee  
Interfaces with Corporate Environmental Affairs on permitting matters  
All other duties and projects as assigned

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**Education/Experience/Qualifications**

Bachelor degree in Engineering, Business or related field  
Five or more years of experience in audit, compliance, governance, regulatory, legal, or similar role.  
Strong analytical and problem solving background; good project management skills and ability to manage multiple assignments.  
Excellent written and verbal communication skills, strong organizational and computer skills  
Must possess the ability to maintain the confidentiality of sensitive information and interface with employees at all levels.

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**Preferred Qualifications**

Law degree or Master of Business Administration degree  
Previous experience or working knowledge of Gas Distribution Operations

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment

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**Physical Effort**

Normal sitting, standing and walking

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**Job Hazards**

Low degree of physical hazards associated with this position



Job Title: Director Gas Operations, Construction  
& Engineering  
Department:  
Reports to Title: Vice President Gas Distribution  
Direct Report Title(s): N/A

Job Code: **E7055**  
FLSA Classification  
EEO Category  
Approved By Susan Reeve  
Effective Date  
Revision Date 10/02/17  
Mkt Pricing Date

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**Purpose**

This position is responsible for managing the construction, operation, maintenance and engineering of the gas distribution pipeline systems providing service to customers and for the high pressure pipelines linking the compressor stations with the distribution systems. This position is also responsible for managing the installation, operation, and maintenance of facilities associated with the operating functions within the gas distribution system. These functions include Construction and Maintenance; Gas Construction Pipeline Inspection; Gas Trouble; Corrosion Control and Valve Maintenance.

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**Core Responsibilities**

Directs the supervision of the Gas operation, construction and engineering activities

Coordinates the safe and efficient company and contractor installation, maintenance, repair, and operation of gas mains, services, and other facilities in the gas pipeline system.

Coordinates the safe and efficient installation, operations, maintenance, and repair of gas distribution system facilities.

Participates in long- and short-range planning for gas operation, construction and engineering.

Participates in the development of construction, operating, and maintenance budgets for gas operations.

Evaluates, determines, and coordinates response to emergency situations.

Ensures the proper inspection of contractor constructed gas facilities.

Assists in developing and revising department practices, policies and procedures.

Coordinates the work of gas operations, construction and engineering with other divisions and departments in the company.

Ensures the proper inspection of customer gas facilities.

Ensures gas operational work performed meets all local, state, and federal regulations.

Oversees the administration of the labor contract and grievance procedures within gas operations.

Administers the investigation and response to customer inquiries, complaints, and service requests.

Reviews and approves new construction and maintenance equipment, material, and contractors.

Promotes a good working atmosphere for employees.

Promotes positive employee interaction with customers and the general public.

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Participates in external organizations to further the goals of the gas business.

Performs other duties as assigned.

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**Education/Experience/Qualifications**

Bachelor's degree in civil or mechanical engineering and ten years' experience in the gas industry is desirable.

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**Preferred Qualifications**

Exceptional communication, organization and leadership skills.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment with occasional field work.

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**Physical Effort**

Primarily sitting with some standing and walking

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**Job Hazards**

Moderate degree of danger or hazard associated with job.

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Job Title: Gas Supply Specialist III  
Department: Gas Supply  
Reports to Title: Director, Gas Management, Planning,  
And Supply  
Direct Report Title(s): N/A

Job Code: **E7545**  
FLSA Classification  
EEO Category  
Approved By Susan Reeve  
Effective Date  
Revision Date 10/02/17  
Mkt Pricing Date

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**Purpose**

This position is responsible for activities associated with developing LG&E's strategic gas supply and transportation position and policies; managing gas supply and transportation contracts; and managing the transportation of natural gas to qualifying industrial/commercial customers.

Incumbent will be multi-knowledgeable and multi-skilled in gas supply business issues. Will work with a high degree of autonomy.

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**Core Responsibilities**

*Strategy*

Conducts and analyzes various industry and competitive studies and provides strategic recommendations as to natural gas purchase, transportation, contract trends, inventory levels, alternate gas supply strategies, regulatory issues, and other matters.

Develops strategic position; understands and explains relative competitive positions; recommends actions based on positions, strategies, and initiatives.

Prepares guidelines for evaluation of short- and long-term supply and transportation service options, strategies and negotiations; develops contractual negotiation parameters; analyzes pricing methods and pricing tools; determines natural gas and transportation availability; develops and negotiates contractual language; oversees analysis and evaluation of contract proposals and bids; anticipates potential impact of future market conditions, trends, and regulations; makes associated recommendations and implements them when required so to do.

Analyzes regulations, filings and testimony related to gas supply matters at the Federal Energy Regulatory Commission and the Kentucky Public Service Commission; oversees routine regulatory issues; makes associated recommendations and acts upon them when required so to do.

Coordinates strategies with internal groups to ensure support of long-term strategic plans and initiatives; interacts with Gas Control, Corporate Law, Rates, and Marketing.

*Procurement*

Manages gas supply and transportation contracts to ensure full compliance, performance, and maximum cost efficiencies resulting in lower costs and reliable quantities of natural gas supplies; contracts are monitored for performance and deviations; makes recommendations as appropriate; interacts with Gas Control as necessary.

Performs accounting functions and analyses associated with the purchase of natural gas; reviews gas supply and transportation invoices for accuracy and recommends approval; interacts with Internal and External Auditing and Corporate Accounting as necessary.

Performs various complex statistical, cost and rate analyses within established guidelines related to short- and long-term supply/transportation solicitations.

Negotiates contracts and contractual amendments for short-term natural gas supplies; interacts with Corporate Law as necessary.

### *End-User Transportation*

Manages all gas activities, including the coordination of end-use volumes, associated with the functioning and operation of natural gas transportation by qualifying commercial and industrial end-users in order to ensure the highest levels of customer service; interacts with Gas Control and other operating areas as necessary.

Ensures full contract compliance by LG&E and end-user; all contract negotiations, communications and transactions are fully documented; interacts with Marketing and Corporate Law as necessary.

Closely works with other groups within LG&E to ensure adequate and timely gas quantities are delivered, measured, and billed; interacts with Marketing, Gas Control, Customer Accounting, and Corporate Law as necessary.

### *General Duties*

Maintains frequent contact with natural gas customers, suppliers, and transporters, via telephone, in writing, and through personal contact in order to ensure smooth functioning of gas supply activities.

Monitors, analyzes, and interprets cost data and other statistics in order to evaluate problems and recommend appropriate solutions and actions; prepares accurate and timely reports and analyses.

Monitors critical contractual dates and other factors to ensure contract options are maximized and risks minimized.

Prepares required reports and documentation, and works to ensure compliance with applicable tariffs, regulations, and other requirements.

Learns from and supports and teaches others within Gas Supply in order to provide appropriate backup.

Maintains adequate working knowledge of industry and regulatory developments affecting natural gas in order to explain same in response to enquiries from others both inside and outside of LG&E.

Performs other duties as assigned.

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### **Education/Experience/Qualifications**

Bachelor's degree in engineering, science, mathematics, or business, or an alternate combinations of education and experience. Three to five years industry experience in gas supply/ transportation and/or gas procurement.

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### **Preferred Qualifications**

Excellent analytical skills. Possess sound knowledge of PC word processing, spreadsheet applications, and optimization models. Excellent oral and written communication skills as well as interpersonal relations skills. Ability to coordinate complex projects and issues. Must have valid driver's license.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment. May occasionally visit off-site locations such as storage fields, processing plants, or production platforms.

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**Physical Effort**

Primarily sitting. Some standing, walking, stooping.

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**Job Hazards**

Low degree of danger or hazard in office setting. Higher degree when in field.

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Job Title: Manager Gas Supply  
Department: Gas Supply  
Reports to Title: Director – Gas Management, Planning,  
and Supply  
Direct Report Title(s): N/A

Job Code: **E7565**  
FLSA Classification  
EEO Category  
Approved By Susan Reeve  
Effective Date  
Revision Date 10/02/17  
Mkt Pricing Date

**Purpose**

This position is responsible for managing the procurement and transportation of adequate gas supplies for system supply at the most economic cost and the coordination of the transportation of customer-owned gas. This position is professional level within the Gas Supply Specialist job family. Will work with a high degree of autonomy.

**Core Responsibilities**

Develops and implements gas supply strategies as well as negotiates and procures gas supply and pipeline transportation services.

Analyzes forecasts, conducts hedging and pricing analyses and optimization studies as a part of the gas supply planning function.

Develops and solicits proposals, analyzes, evaluates, negotiates, and recommends approval of contracts for short- and long-term firm and interruptible gas supplies in accordance with established Company policies, so as to mitigate Company exposure to risk of loss.

Interacts with major natural gas producers, marketers, and interstate pipeline natural gas transporters in the role of negotiating and administering the terms and conditions of gas supply and transportation contracts.

Participates in the preparation and presentation of filings and testimony and assures Company’s interest in gas supply matters at FERC and Kentucky PSC. May be required to testify.

Coordinates gas supply planning with gas system supply requirements forecasts and storage field performance forecasts and recommends pipeline transportation contract demand levels and annual gas supply quantities to assure adequate system gas supplies at the most economic cost.

Uses industry experience to develop innovative ways in which to purchase gas and minimize costs while maintaining supply reliability

Develops and performs ad hoc analyses with little or no guidance by integrating knowledge and experience.

Uses expertise to develop procedures and ensure compliance with regulations, including auditing of same.

Establishes policies and procedures and oversees processes related to the coordination, arrangement, and proper accounting of the transportation of customer-owned gas.

Provides Rate Department with estimates of expected costs and quantities of system supply of customer-transported gas for use in Gas Supply Adjustment filings.

Performs duties integrating planning, regulatory, and forecasting analyses which must produce unified and viable strategic gas supply strategies.

Must maintain a highly proficient working knowledge of natural gas industry matters, and be able to act on same, as well as explain the import of these to others in an understandable fashion.

Supports and teaches others within Gas Supply in order to develop employees..

Performs other duties as assigned.

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**Education/Experience/Qualifications**

Minimum: Bachelor's degree in engineering, science, mathematics, or business and preferably five or more years' experience in gas supply related functions.

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**Preferred Qualifications**

Ability to communicate effectively, both orally and in writing. Demonstrated leadership ability. Results oriented. Should possess both a broad and in-depth knowledge of the gas supply purchase and transportation functions, including end-use transport, natural gas commodity purchasing, hedging, forecasting, etc. Must be able to lead action required to create framework necessary for others to implement various tactical aspects of the gas supply plan. Must possess excellent decision-making, negotiation, analytical, and computer skills. Must be thoroughly acquainted with governmental regulations which affect Gas Supply activities. Must be able to discern trends in the market place that will impact current gas supply plans and arrangements and must be able to integrate these trends in the development of new gas supply strategies.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment. May occasionally visit off-site locations such as storage fields, processing plants, or production platforms.

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**Physical Effort**

Primarily sitting. Some standing, walking, stooping.

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**Job Hazards**

Low degree of danger or hazard in office setting. Higher degree when in field.

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Job Title: Director- Gas Management, Planning, & Supply  
Department: 025/Gas Management, Planning, & Supply  
Reports to Title: VP Gas Distribution  
Direct Report Title(s): N/A

Job Code: **E9624**  
FLSA Classification  
EEO Category  
Approved By Susan Reeve  
Effective Date  
Revision Date 10/02/17  
Mkt Pricing Date

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**Purpose**

Directs all activities associated with developing and implementing the planning and management of natural gas supplies including the purchase and transport of natural gas as well as the transportation of natural gas for and by others. Possesses an in-depth knowledge of the many issues affecting gas supply, transportation, and storage, including supply availability, regulatory and pricing issues, general gas supply trends, and apply such knowledge to LG&E and its natural gas business.

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**Core Responsibilities**

Directs the analysis of various industry and competitive studies and provide strategic recommendations as to natural gas sales and purchases, transportation, storage field performance and inventory levels, alternate supply methods, regulatory issues, contracting trends, and other matters.

Develops and implements LG&E's strategic position; understands and explains relative competitive positions; recommends actions based on positions, strategies, and initiatives. Directs the formulation of strategic and tactical plans which support LG&E's overall strategic plans.

Assists in and ensures the coordination of all gas supply and system management strategies with internal groups to ensure support of long-term strategic plans and initiatives.

Directs the analysis of regulations, filings, and testimony in matters related to gas supply and system management at the Federal Energy Regulatory Commission and the Kentucky Public Service Commission; oversees all affected regulatory issues; testifies as required; makes associated recommendations and acts upon them when required; provides required data and information for Gas Supply Clause and other filings as required.

Coordinates the preparation of natural gas purchase and sales strategies and contracting guidelines for the evaluation and selection of successful vendors of short- and long-term supply and transportation strategies, service options, and negotiations; analyzes pricing methods and pricing tools; determines natural gas supply and transportation availability; oversees analysis and evaluation of purchase proposals, solicitations, and bids and contract negotiations; oversees the preparation of bid specifications and solicits of bids; determines natural gas supply and transportation availability; anticipates potential impact of future market conditions, trends, and regulations; makes associated recommendations and implements when required so to do.

Anticipates potential impact of future market conditions, trends, and regulations; makes associated recommendations; adopts and implements changes when required; recommends modifications to existing pipeline service levels and storage field optimization to ensure gas supplies are delivered at the lowest cost consistent with reliability.

Ensures that gas supply, gas storage, and gas transportation activities are properly managed in order to create the maximum savings for both customers and LG&E under LG&E's Performance-Based Ratemaking ("PBR") Mechanism; formulate risk management strategies and methods and undertake risk management activities as required; makes recommendations and acts upon them as appropriate; ensures full compliance, performance, and maximum cost efficiencies resulting in the lowest costs and reliable quantities of natural gas supplies; assists in the coordination of supply planning within system and contractual requirements and limitations based on forecasted loads, operating requirements, and storage field performance.

Oversees the management of natural gas sales, transportation, and storage services to ensure full compliance, performance, and maximum cost efficiencies; contracts are monitored for performance and deviations; makes recommendations and acts upon them as appropriate.

Directs the management of and coordination of end-use volumes, associated with the functioning and operation of natural gas transportation by customers or aggregators in order to ensure the highest levels of customer service; directs the preparation of guidelines for delivery of natural gas to LG&E by customers or their aggregators; directs the development and negotiation of contracts and contractual amendments.

Assists in the determination of the availability of storage services to third-parties; directs the development and negotiation of end-use transportation, storage, and aggregation services and contracts; directs the management of transportation and storage services to ensure full compliance, performance, and maximum cost efficiencies; contracts are monitored for performance and deviations.

Reviews the natural gas forecasting process to ensure accuracy and meaningfulness.

Ensures that frequent contact is maintained with gas customers, suppliers, transporters, and aggregators via telephone, in writing, and through personal contact in order to ensure smooth functioning of gas supply and system management activities.

Maintains an advanced working knowledge of industry and regulatory developments affecting natural gas in order to explain same in response to enquiries from others both inside and outside of LG&E. Ensures adequate training and personnel development planning and coordination. Undertakes departmental goal setting and performance measurement. Ensures that department members understand and support natural gas business and direction of LG&E.

Communicates the impact of various gas supply strategies with others throughout LG&E in order to ensure that management and others are informed regarding gas management, planning, and supply issues.

Performs other duties as assigned.

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### **Education/Experience/Qualifications**

Master's degree in engineering, science, mathematics, or business, or an alternate combination of education and experience. Ten plus years of in-depth gas industry experience.

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### **Preferred Qualifications**

Excellent analytical and research skills. Possess excellent working knowledge of PC word processing and spreadsheet applications. Excellent oral and written communication skills as well as interpersonal relation skills. Ability to coordinate complex projects and issues. Possesses leadership skills. Must have valid driver's license.

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### **Attendance**

Regular attendance is essential for satisfactory performance.

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### **Work Conditions**

Normally office environment. May occasionally visit off-site locations such as storage fields, processing plants, or production platforms.

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### **Physical Effort**

Primarily sitting. Some standing, standing, stooping, and occasional off site visits.

**Job Hazards**

Low degree of danger or hazard in office setting. Higher degree when in field.

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**Completed by Compensation Department**

Job Title: Manager Gas Distribution Integrity & Compliance  
Department: Distribution Integrity  
Reports to Title: VP Gas Distribution  
Direct Report Title(s):  
Group Leader Gas Distribution Integrity Engineering  
Group Leader Gas Regulatory Compliance

Job Code E9713  
FLSA Classification  
EEO Category  
Approved By Susan Reeve  
Effective Date 10/30/2017  
Revision Date  
Mkt Pricing Date

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**Purpose**

This position is responsible for directing department employees and overseeing contractor activities to ensure that LG&E Gas Distribution Operations meet the stringent regulatory requirements of the Pipeline and Hazardous Materials Safety Administration, Kentucky Public Service Commission, and Indiana Underground Regulatory Commission related to key gas regulatory compliance programs. This position provides technical oversight and leadership for the various programs and ensures that proper records are maintained for the associated regulatory activities.

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**Core Responsibilities**

Ensure complete documentation is generated for all functions under this department's responsibility and that the records are archived in a manner in which they can be produced in the future as appropriate based on the retention requirements of the documents.

Oversee root cause failure analysis, associated follow up investigations, and associated corrective action plans related to material failures and other issues which impact the gas distribution system.

Manage the distribution integrity management program, leakage survey program, curb valve inspection program, residential regulator performance control program, critical and priority valve inspection program, line locating and damage prevention program, public awareness program, public liaison program, atmospheric corrosion inspection program, and distribution system maximum allowable operating pressure validation program.

Ensure all programs satisfy related federal and state pipeline safety regulations and company policies. Support the drug and alcohol testing program as needed.

Support the company's Pipeline and Hazardous Materials Safety Administration Compliance Program. Serve on the steering committee with company executives and provide technical guidance.

Develop and manage operations and maintenance and capital budgets.

Compile and submit key regulatory reports associated with the gas distribution system. Archive correspondence with regulatory agencies associated with both gas distribution and transmission facilities in the agency communication library.

Evaluate federal and state regulatory initiatives to determine their impact on the company's gas distribution systems and associated operations.

Oversee records review, records quality assurance, and data quality assurance initiatives as necessary associated with the company's gas distribution systems.

Represents the company in various regulatory and legal proceedings as required.

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Represent the company on industry boards, committees and councils as appropriate.

All other duties and projects as assigned.

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**Education/Experience/Qualifications**

Bachelor's degree in Business, Applied Science, or Engineering. Three or more years' experience in gas operations.

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**Preferred Qualifications**

Bachelor's degree in engineering. Master's degree in Business Administration. Seven or more years' experience in gas operations. Five or more years' supervisory experience. Three or more years' experience in regulatory compliance.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment. Periodic field visits. There is occasional exposure to noise, elements, etc.

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**Physical Effort**

Primarily sitting with some standing and walking. Individual must be able to climb in and out of excavations.

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**Job Hazards**

Low degree of physical hazards associated with this position.

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Job Title: Manager Gas Transmission Integrity & Compliance

Department: Transmission Integrity

Reports to Title: VP Gas Distribution

Direct Report Title(s):

Group Leader Transmission Integrity

Group Leader Corrosion Control

Job Code	E9717
FLSA Classification	
EEO Category	
Approved By	Susan Reeve
Effective Date	12/18/2017
Revision Date	
Mkt Pricing Date	

**Purpose**

This position is responsible for directing department employees and overseeing contractor activities to ensure that LG&E Gas Distribution Operations meet the stringent regulatory requirements of the Pipeline and Hazardous Materials Safety Administration, Kentucky Public Service Commission, and Indiana Underground Regulatory Commission related to key gas regulatory compliance programs. This position provides technical oversight and leadership for the various programs and ensures that proper records are maintained for the associated regulatory activities.

**Core Responsibilities**

Ensure complete documentation is generated for all functions under this department’s responsibility and that the records are archived in a manner in which they can be produced in the future as appropriate based on the retention requirements of the documents.

Oversee root cause failure analysis, associated follow up investigations, and associated corrective action plans related to material failures and other issues which impact the gas transmission system.

Manage the transmission integrity management program, external corrosion control program, and transmission system maximum allowable operating pressure validation program.

Ensure all programs satisfy related federal and state pipeline safety regulations and company policies.

Support the company’s Pipeline and Hazardous Materials Safety Administration Compliance Program.

Serve on the steering committee with company executives and provide technical guidance.

Identify areas of business risk, rank the risk and propose mitigation activities.

Develop action plans, including resource needs, funding requirements, and implementation timelines.

Develop business review presentations, workforce planning documents, labor forecasts, capital investment proposals, operating and maintenance funding requests, variance reports and spend projections to inform company leadership of the risks and ensure approved action plans are implemented appropriately.

Develop business cases to justify proposed capital investments and evaluate merit of project business cases for allocation of capital budget dollars.

Perform and/or oversee studies that optimize major capital and O&M investments.

Develop and manage operations and maintenance and capital budgets.

Compile and submit key regulatory reports associated with the gas transmission system.

Evaluate federal and state regulatory initiatives to determine their impact on the company's gas transmission system and associated operations.

Oversee records review, records quality assurance, and data quality assurance initiatives as necessary associated with the company's gas transmission system.

Represents the company in various regulatory and legal proceedings as required.

Represent the company on industry boards, committees and councils as appropriate.

All other duties and projects as assigned.

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**Education/Experience/Qualifications**

Bachelor's degree in engineering.

Seven or more years' experience in gas operations.

Experience and/or training in the design, inspection and repair of gas transmission systems including:

Design and specification of pipe for procurement and installation utilizing ASME and ANSI standards.

Calculation of safe operating pressure for pipe anomalies using B31.G, RSTRENG or similar methodology.

In line inspections, direct assessments, and pressure tests.

Preventative maintenance programs for pipelines.

Familiarity with one-call notification and public education programs.

Working knowledge of or specific training on DOT regulations 49 CFR § 191 and 192.

Specific knowledge or training on DOT Integrity Management regulations 49 CFR § 192 Subpart O.

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**Preferred Qualifications**

Master's degree in Business Administration.

The following National Association of Corrosion Engineers (NACE) and Gas Technology Institute (GTI) certifications.

NACE Cathodic Protection Technologist

NACE Protective Coatings Technologist or NACE Coating Inspector Level 1

NACE Pipeline Corrosion Integrity Management Technologist or GTI Pipeline Integrity Management

Five or more years' supervisory experience. Three or more years' experience in regulatory compliance.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment. Periodic field visits. There is occasional exposure to noise, elements, etc.

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**Physical Effort**

Primarily sitting with some standing and walking. Individual must be able to climb in and out of excavations.

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**Job Hazards**

Low degree of physical hazards associated with this position.

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Job Title: Director Gas Control & Storage  
Department: Energy Delivery  
Reports to Title: Vice President Retail & Gas Storage  
Operations  
Direct Report Title(s): N/A

Job Code: E9995  
FLSA Classification  
EEO Category  
Approved By Susan Reeve  
Effective Date  
Revision Date 10/02/17  
Mkt Pricing Date

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**Purpose**

Provides leadership for the organization responsible for operating the gas supply systems for LG&E's gas distribution system and for the execution of Gas Operation's regulatory compliance activities. Responsible for the planning, leadership, performance of activities, and collaboration with other process owners necessary to support the Energy Delivery organization.

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**Core Responsibilities**

Exercises leadership in senior management relationships and in the accomplishment of business plans.

Participates in establishing and carrying out Energy Delivery's strategic and business plan objectives.

Participates in the long and short-range investment planning process for Energy Delivery.

Provides leadership and oversees the operation of LG&E's gas control center, gas transmission system, gas compressor stations, and underground gas storage reservoirs.

Directs construction, operation, and maintenance of the gas supply systems that provide gas supply to LG&E's gas distribution system.

Provide leadership and direction to ensure the safe and reliable delivery of natural gas to LG&E's customers.

Ensures that LG&E regulatory compliance programs for gas operations are efficiently executed and in compliance with governmental regulations.

Provides technology leadership support through identification and implementation of strategic uses of technology that increases efficiencies and reliability of service to Energy Delivery customers.

Responsible for ensuring that the functions provided through the Economic and Operational Performance and IT support groups are effective in supporting gas operations and management's objectives.

Directs emergency response plans and public safety programs.

Provides other support services and special project assignments as directed by the Vice President of Retail and Gas Storage Operations.

Directs the continuous review of present systems and processes; determine appropriate changes to effect improvements; reduces costs and ensures efficiency.

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**Education/Experience/Qualifications**

Minimum of ten years management and supervisory experience in operations and administrative organizations, preferably within the energy industry. Engineering degree and advanced degree preferred (advanced degree - MBA or business emphasis).

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**Preferred Qualifications**

Outstanding leadership ability. Excellent oral and written communication skills and interpersonal skills.  
Strong analytical thinking ability.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office conditions. Field and site work location visitations required.

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**Physical Effort**

Office environment.

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**Job Hazards**

No significant special hazards.

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Job Title: Sr. Assistant to VP Gas Distribution  
Department:  
Reports to Title:  
Direct Report Title(s): N/A

Job Code: **N0316**  
FLSA Classification  
EEO Category  
Approved By M Denham  
Effective Date  
Revision Date May 2017  
Mkt Pricing Date

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**Purpose**

This position is responsible for organizing and coordinating administrative matters, activities, and projects for the executive.

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**Core Responsibilities**

Handles extremely confidential Company information.

Coordinates and assists in special projects, i.e., corporate campaigns, external Boards of Directors.

Coordinates preparations for domestic and international travel, including airline, hotel, transportation, preparation of meeting materials, and follow-through on expense reporting upon return.

Manages the office while the executive is traveling by maintaining and coordinating communication.

Creates professional presentations, reports, and other project correspondence as required.

Composes and distributes department-wide communications.

Manages executive's schedule, including extensive and complex domestic and international meeting arrangements.

Maintains all files, including confidential files and special Company files.

Reviews all electronic and regular mail for appropriate handling. If appropriate, responds on behalf of the executive.

When executive is not available, redirects calls, mail, and requests from staff as appropriate. Makes decisions on items to be delegated to subordinate managers; follows up and informs principal manager of actions.

May code invoices for payment, track department expenses and assist Budget Coordinator.

May support the CEO's office as requested and perform other duties as assigned by the officer.

May supervise the work of others.

May provide administrative support for the executive's direct reports.

All other projects and duties as assigned.

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**Education/Experience/Qualifications**

Minimum 5 years of experience providing executive-level assistance. Two years of education beyond high school or equivalent experience desirable. Certified Professional Secretary (CPS) certificate helpful. Expert knowledge of Word and PowerPoint; working knowledge of Excel.

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**Preferred Qualifications**

Requires excellent written and verbal communication skills, ability to multi-task, knowledge of departmental/Company operations, and specialized knowledge/experience supporting an executive. Professional presence and knowledge to communicate with internal, external and international executives. Demonstrated ability to handle confidential information, work in a fast-paced environment and adapt to a variety of situations.

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**Attendance**

Regular attendance is essential for satisfactory performance.

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**Work Conditions**

Normal office environment.

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**Physical Effort**

Primarily sitting with optional standing and walking.

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**Job Hazards**

Low degree of physical hazards associated with this position.

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**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 13**

**Witness: Shannon L. Charnas**

Q-13. Provide copies of reports or internal audits or reviews of any aspect of the supply function conducted within the last five years. Include reports prepared by LG&E and outside auditors.

A-13. The Gas Supply Department is audited annually. LG&E's annual audits of the Gas Management, Planning, and Supply Department ("Gas Supply") ensure compliance with the Sarbanes-Oxley Act which requires assessment of management's responsibility for and compliance with an adequate internal control structure as well as an assessment of the effectiveness of the control structure.

Gas Supply is covered by LG&E's Sarbanes-Oxley controls in LG&E's Cycle 22 (documentation attached). Annually, Audit Services performs Sarbanes-Oxley Compliance testing on all Key Controls across the Company. The Key Controls of Gas Supply focus on three main areas to ensure that (a) all contracts and transactions are approved in accordance with Company guidelines, (b) all transactions are properly recorded on the books of the Company, and (c) invoices are reviewed and approved in accordance with Company policy. These audits are designed to prevent or detect potential financial statement or disclosure errors.

In the past five years, no deficiencies have been identified in the Key Controls for Gas Supply. No report was developed specifically related to Gas Supply. However, a consolidated SOX report is issued at the end of the year encompassing all SOX testing across the Company.

No other internal audits have been performed related to the Gas Supply function in the last five years.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated July 30, 2018**

**Case No. 2018-00302**

**Question No. 14**

**Witness: John P. Malloy**

Q-14. Provide a copy of LG&E's strategic plan with primary emphasis on gas procurement, transmission, delivery, expansion and inclusive of any significant related capital expenditures.

A-14. In keeping with the directives of the Commission, LG&E's gas supply strategies are focused on achieving low cost and reliable natural gas supplies for customers.

LG&E's gas supply plan and the supporting strategies are discussed in LG&E's response to Commission Question No. 9.

Also attached is LG&E's Operating Plan for 2019 which outlines the major assumptions of the 2019 business plan and includes operating and maintenance expenses and capital expenditures by major activity.

# Gas Distribution LG&E and KU Utilities 2019 Operating Plan



**September 2018**



Attachment to Response to Question No. 14 PPL companies

Page 1 of 24

Malloy

# Table of Contents

- Plan Highlights
- Major Assumptions
- Financial Performance
  - 2017-2023 Annual O&M Expenses
  - 2017-2023 Capital Expenditures
  - Labor Expense
  - Headcount
  - Supplemental Contractors
- Plan Risks
- Key Performance Indicators

# Plan Highlights

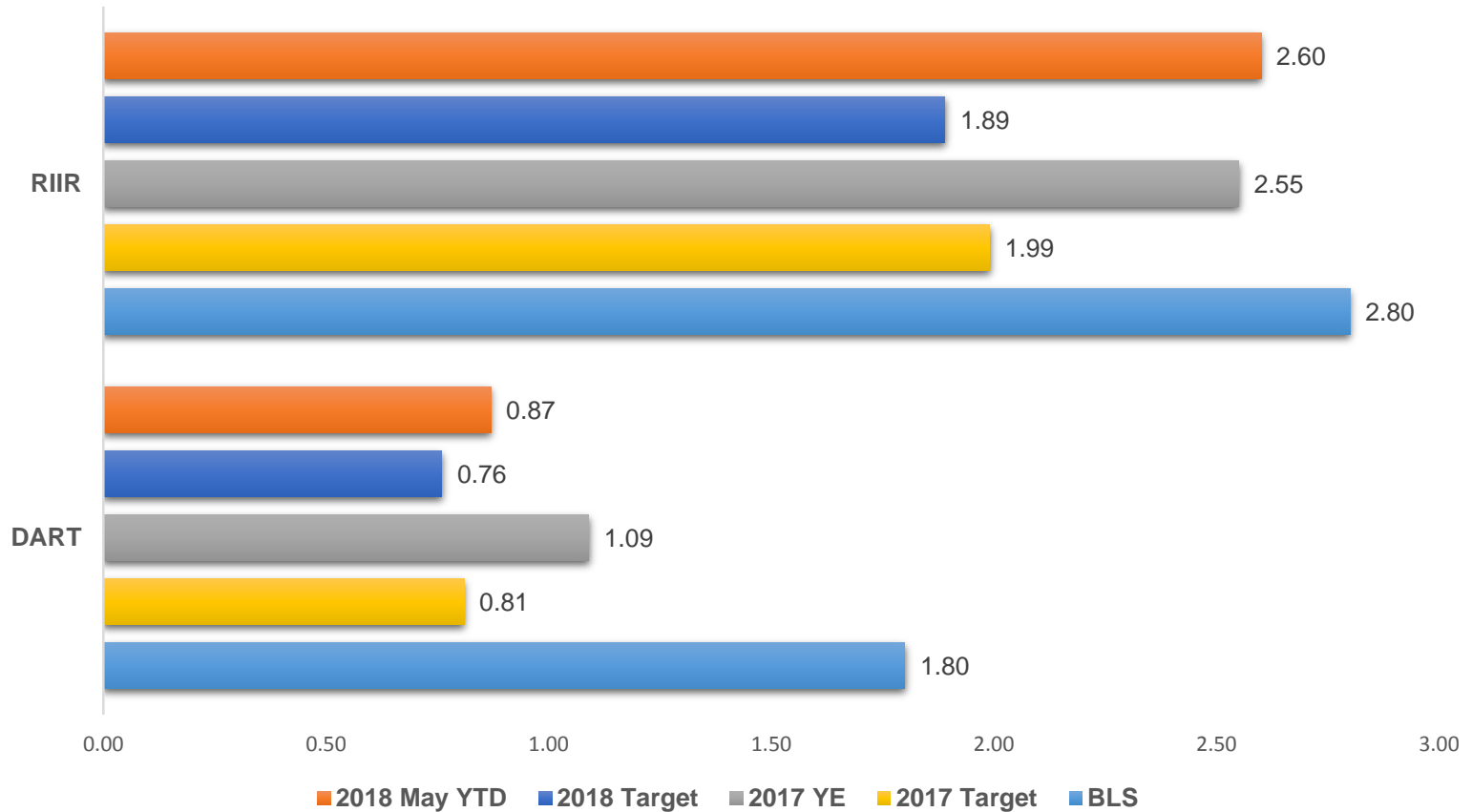
Safety and customer satisfaction are core values at LG&E and KU. Gas Distribution Operations mission is to provide safe, reliable, and low cost service that enhances our customer's quality of life.

Funding levels within the proposed plan were established with the following priorities in mind:

- Employee, contractor and public safety
- Regulatory compliance
- Supporting customer service
- Gas system reliability
- Asset replacement to ensure reliable and safe service
- System enhancements to meet customer needs
- Technology to increase efficiencies and enhance customer experience
- Capital investments for transmission modernization, customer service line replacement and service line ownership

# Plan Highlights

## Safety Performance - Gas



2016 BLS - most recent data

# Plan Highlights

- Safety and Wellness
  - Continuously strive to improve employee safety performance
  - Improve gas system safety thru effective Distribution Integrity, Transmission Integrity, Public Awareness, Damage Prevention, Storage Integrity and Gas Control Room Management programs
  - Maintain strong safety partnerships with business partners
  - Enhanced public safety through customer communications and asset replacement
  - Continuation of motor vehicle safety initiatives
  - Identify, share, and capitalize on industry best practices
  - Mock drills, leak detection training, and emergency response improvements
  - Effective liaison with emergency response agencies
  - Promote wellness initiatives as an aspect of safety

# Plan Highlights

- Customer Experience
  - Meet customer expectations for new service requests
  - Promptly address customer service issues
  - Identify customer service improvement opportunities
  - Invest in aging infrastructure to ensure reliable and safe service
  - Promote professional and positive corporate image to customers
  - Restore customer service outages quickly and efficiently
  - Meet customer capacity needs
  - Implement technology to support customer service
  - Proactively communicate with customers



# Plan Highlights

- Reliability, Infrastructure and Regulatory Compliance
  - Investments in infrastructure to meet customer needs
  - Investment in aging infrastructure to improve safety, reliability and performance
  - Effectively manage gas distribution integrity, transmission integrity, storage integrity and control room management regulatory programs
  - Provide reliable gas supplies through investments in:
    - Gas regulation/measurement facilities
    - Gas transmission system
    - Gas compressor stations
    - Gas storage fields
    - Distribution infrastructure upgrades

# Plan Highlights

- Workforce Development
  - Headcount plan that addresses high number of expected retirements
  - Identification of pre-hires for critical job positions
  - Knowledge transfer to new employees
  - Support of employee continuing education initiatives
  - Support onboarding and enhanced training/operator qualification to promote consistent work practices across operational groups
  - Internal and external training opportunities
  - Mobile computing technologies supporting training
  - Skilled craft-worker intern program in participation with local technical colleges

# Major Assumptions

- Customer expectations regarding levels of service and information availability will continue to increase.
- Incremental headcount is needed to meet increased regulatory, work scope and compliance demands, and transfer critical knowledge in preparation for retirements.
- New Business assumes low to moderate customer growth and inflationary increases through the planning period with new commercial and industrial loads requiring gas main extensions and system reinforcements.
- Continuation of the Gas Line Tracker (GLT) mechanism through the planning period.
- Gas Supply Clause remains fundamentally unchanged.
- Incremental resources for the Gas Trouble department to improve Emergency Response Time remain through the planning period.
- Available technology and operating conditions will support successful enhanced in-line inspections.

# Major Assumptions

- Continued focus on reliability initiatives and system reinforcement.
- New gas safety regulatory requirements will:
  - Require operators to validate MAOPs of gas transmission pipelines.
  - Expand pipeline integrity requirements beyond high consequence areas.
  - Expand operator qualification requirements to construction activities.
  - Require continuous improvement for distribution system integrity.
  - Require continued implementation of storage integrity compliance program.
- Based upon the 2019 BP:
  - Forecasted Design Day for 2018 is expected to increase to 682,000 Mcf/day from 680,000 Mcf/day estimated in the prior BP. During the current 5-year planning period, the forecasted Design Day is expected to gradually decrease to 670,000 Mcf/day.
  - The Transmission Modernization and Steel Customer Service line programs will continue infrastructure upgrades supporting compliance and reliability.
  - Replacement of amine gas processing systems with H<sub>2</sub>S scavenging systems will increase storage reliability, reduce environmental risks and reduce headcount to operate compressor stations.

# 2017-2023 Annual O&M Expenses (\$000)

Item	2017 Actual	2018 Forecast	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
O&M Expenses Only:							
Labor	18,092	20,754	21,267	22,039	22,930	23,141	23,875
Inline Inspections	658	3,878	10,341	1,741	2,712	7,390	3,376
Outside Services - Supplemental	6,793	10,068	12,913	13,118	13,503	13,974	14,402
Outside Services - Other	1,389	1,784	3,227	3,253	3,233	3,400	3,255
Materials	3,894	3,289	3,532	3,706	3,778	3,801	3,851
Transportation and Equipment	2,163	2,266	2,770	2,778	2,879	2,934	2,971
All Other Non-labor	1,940	2,217	2,133	1,857	1,866	1,816	1,912
<b>Total O&amp;M Expense - Mgmt. View</b>	<b>34,929</b>	<b>44,256</b>	<b>56,183</b>	<b>48,492</b>	<b>50,902</b>	<b>56,457</b>	<b>53,642</b>
<b>Plus:</b>							
Base Gross Margin Items	-	-	-	-	-	-	-
Mechanism Gross Margin Items	3,443	2,537	2,588	2,841	2,902	2,925	2,943
<b>Total O&amp;M Expense-GAAP View</b>	<b>38,372</b>	<b>46,793</b>	<b>58,771</b>	<b>51,333</b>	<b>53,804</b>	<b>59,382</b>	<b>56,585</b>

# 2017-2023 Annual O&M Expenses

## Non Labor Category

### (\$000)

Item	2017 Actual	2018 Forecast	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
<b>Inline Inspections:</b>							
Ballardsville ILI	440	2	0	0	0	0	0
Calvary ILI	156	134	0	0	0	0	0
Center 20" ILI	0	1,362	0	0	0	0	0
Lees to Cane Run ILI	0	494	0	0	0	0	0
Magnolia 16" Line ILI	0	4	2,806	0	0	0	0
Mill Creek 12" ILI	0	194	0	0	0	0	0
Muldraugh-Piccadilly ILI	0	1,567	0	0	0	0	0
Western Kentucky A Line ILI	0	0	2,465	0	0	4,560	0
Penile to Paddy's 16" & 20" Line ILI	0	0	5,070	0	0	0	0
Western Kentucky B Line ILI	0	0	0	1,741	0	2,280	0
Magnolia 20" line - Radcliff to Magnolia ILI	0	0	0	0	2,712	0	0
Riverport 12" ILI	0	0	0	0	0	550	0
Riverport 8" ILI	0	0	0	0	0	0	567
Doe Valley 8" ILI	0	0	0	0	0	0	2,809
Pipeline Repairs / Validation Digs	62	121	0	0	0	0	0
<b>Total Inline Insepctions</b>	<b>658</b>	<b>3,878</b>	<b>10,341</b>	<b>1,741</b>	<b>2,712</b>	<b>7,390</b>	<b>3,376</b>
<b>Outside Services - Supplemental:</b>							
LGE Electric and Gas Line Locating	3,433	4,749	8,301	8,301	8,594	8,910	9,277
Stop Box Inspections	1,224	1,741	1,662	1,665	1,659	1,715	1,738
Corrosion Control	554	976	783	799	815	831	848
Leak Survey	579	592	847	850	863	906	912
Gas Distribution	627	1,388	685	872	939	963	973
Estimated impact for additional sales tax	0	160	320	320	320	320	320
Other	376	462	315	311	313	329	334
<b>Total Outside Services - Supplemental</b>	<b>6,793</b>	<b>10,068</b>	<b>12,913</b>	<b>13,118</b>	<b>13,503</b>	<b>13,974</b>	<b>14,402</b>

# 2017-2023 Annual O&M Expenses

## Non Labor Category

### (\$000)

Item	2017 Actual	2018 Forecast	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
<b>Outside Services - Other:</b>							
Compressor Stations	629	631	1,061	1,380	1,322	1,465	1,435
Storage Integrity and Internal Corrosion	318	349	863	774	725	759	777
Gas Control	213	184	371	337	355	373	428
Transmission Integrity and Compliance	129	428	616	415	462	419	223
Distribution Integrity and Compliance	-	4	220	227	244	259	268
Other	100	188	96	120	125	125	124
<b>Total Outside Services - Other</b>	<b>1,389</b>	<b>1,784</b>	<b>3,227</b>	<b>3,253</b>	<b>3,233</b>	<b>3,400</b>	<b>3,255</b>
<b>Materials:</b>							
Compressor Stations	1,748	1,324	1,528	1,522	1,581	1,576	1,599
Gas Control	414	331	374	373	373	373	373
Transmission Integrity and Compliance	539	498	554	554	554	554	554
Distribution Integrity and Compliance	85	105	189	189	197	218	237
Gas Distribution	1,098	995	837	1,016	1,021	1,025	1,028
Other	10	36	50	52	52	55	60
<b>Total Materials</b>	<b>3,894</b>	<b>3,289</b>	<b>3,532</b>	<b>3,706</b>	<b>3,778</b>	<b>3,801</b>	<b>3,851</b>
<b>Transportation and Equipment:</b>							
Compressor Stations	822	763	950	942	962	962	977
Gas Control	347	321	410	431	442	450	457
Transmission Integrity and Compliance	137	181	240	244	248	277	281
Distribution Integrity and Compliance	57	101	114	117	119	121	123
Gas Distribution	791	884	1,011	1,000	1,064	1,079	1,088
Other	9	16	45	44	44	45	45
<b>Total Transportation and Equipment</b>	<b>2,163</b>	<b>2,266</b>	<b>2,770</b>	<b>2,778</b>	<b>2,879</b>	<b>2,934</b>	<b>2,971</b>

# 2017-2023 Annual O&M Expenses

## Non Labor Category

### (\$000)

Item	2017 Actual	2018 Forecast	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
<b>Other Non Labor:</b>							
AGA Dues	195	202	195	195	195	195	195
Dues and Subscriptions - Other	172	151	158	158	158	158	160
Phone and Telecom	189	171	169	174	174	155	155
Fees, Permits, and Licenses	218	254	197	197	197	197	197
Utilities	257	137	183	183	183	183	183
Travel and Mileage Reimbursement	134	128	150	136	138	139	133
Liability Claims	10	115	131	131	131	131	131
Education and Training	87	164	180	164	168	180	181
Meals	110	82	86	86	84	87	89
Lease/Rentals	20	19	18	18	18	12	12
Computer Hardware/Software	104	31	28	28	28	28	28
Other Operating Expenses	444	763	638	387	392	351	448
<b>Total Other Non Labor</b>	<b>1,940</b>	<b>2,217</b>	<b>2,133</b>	<b>1,857</b>	<b>1,866</b>	<b>1,816</b>	<b>1,912</b>



# 2017-2023 Annual Expenses Mechanism Gross Margin Items (\$000)

Item	2017 Actual	2018 Forecast	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
<b>GLT:</b>							
CSO Meter Conditions	385	419	559	581	600	614	626
Repair Leaks	245	360	280	281	284	289	291
Other GLT	(76)	(5)	(33)	214	219	223	227
<b>Total GLT</b>	<b>554</b>	<b>774</b>	<b>806</b>	<b>1,076</b>	<b>1,103</b>	<b>1,126</b>	<b>1,144</b>
<b>Gas Losses:</b>							
Muldraugh <sup>1</sup>	2,679	1,534	1,571	1,553	1,588	1,588	1,588
Magnolia <sup>2</sup>	210	229	211	212	211	211	211
<b>Total Gas Losses</b>	<b>2,889</b>	<b>1,763</b>	<b>1,782</b>	<b>1,765</b>	<b>1,799</b>	<b>1,799</b>	<b>1,799</b>
<b>Total Mechanism Gross Margin</b>	<b>3,443</b>	<b>2,537</b>	<b>2,588</b>	<b>2,841</b>	<b>2,902</b>	<b>2,925</b>	<b>2,943</b>

<sup>1</sup> Muldraugh: 2019 gas losses based on 433 MMcf at \$3.63/MMcf for a total \$1.6M, 2020 is 433 MMcf at \$3.59/MMcf for a total \$1.6M, and 2021-2023 is 433 MMcf at \$3.67/MMcf for a total \$1.6M.

<sup>2</sup> Magnolia: 2019 gas losses based on 58.6 MMcf at \$3.61/MMcf for a total \$.2M, 2020 is 58.6 MMcf at \$3.62/MMcf for a total \$.2M, and 2021-2023 is 58.6 MMcf at \$3.61/MMcf for a total \$.2M.

# O&M Annual Expense Reconciliation (\$000)

	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
2018 Plan/Expectation	41,458	41,010	41,999	42,921	44,762
Drivers:					
In Line Inspections	8,031	792	2,164	6,828	2,369
Line Locating	5,066	5,066	5,277	5,508	5,844
Distribution Integrity Management Plan	413	376	384	399	410
Leak Survey	393	395	396	427	429
Stop Box Inspections	376	366	327	359	371
Emergency Response Improvements	800	820	841	862	883
Estimated Sales Tax on Services	320	320	320	320	320
Close Interval Survey	290	84	116	20	60
WFP Impacts - All Other	371	235	169	240	247
WFP Impacts - Savings from Amine Plant Rep	(381)	(480)	(964)	(1,145)	(1,180)
Overtime Reductions	(1,237)	(873)	0	0	0
Other	283	381	(127)	(282)	(873)
Current Plan - Mgt. View	<u>56,183</u>	<u>48,492</u>	<u>50,902</u>	<u>56,457</u>	<u>53,642</u>

# 2017-2023 Capital Expenditures (\$000)

Item	2017 Actual	2018 Forecast	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
New Business	9,296	9,956	8,634	8,893	9,156	9,336	9,617
Enhance the Network	26,614	58,404	98,180	65,515	82,623	46,012	45,002
Maintain the Network	40,224	33,066	38,916	28,585	31,221	21,772	20,650
Repair the Network	381	768	378	389	400	413	425
Miscellaneous	1,283	1,082	892	624	1,196	382	391
<b>Total Capital</b>	<b>77,798</b>	<b>103,276</b>	<b>146,999</b>	<b>104,005</b>	<b>124,596</b>	<b>77,915</b>	<b>76,085</b>
<b>2018 Plan</b>		<b>114,751</b>	<b>129,361</b>	<b>100,568</b>	<b>85,697</b>	<b>62,923</b>	<b>71,440</b>
<b>Change</b>		<b>(11,475)</b>	<b>17,638</b>	<b>3,437</b>	<b>38,899</b>	<b>14,992</b>	<b>4,645</b>

# Labor Expense

Salary Plan	2019					2019 Labor Expense	2020 Labor Expense	2021 Labor Expense	2022 Labor Expense	2023 Labor Expense
	Average Headcount	Base Salary	Overtime and all Other Labor*	TIA Labor Expense	Total Salary & TIA Labor					
Exempt	104	\$ 10,776	\$ -	\$ 840	\$ 11,616					
Non-Exempt	24	\$ 1,322	\$ 75	\$ 127	\$ 1,524					
Union / Non-Union Hourly	174	\$ 13,169	\$ 2,742	\$ 1,258	\$ 17,169					
Subtotal	303	\$ 25,267	\$ 2,817	\$ 2,225	\$ 30,309					
Co-ops / Interns	7	\$ 161	\$ -	\$ -	\$ 161					
<b>Total</b>	<b>310</b>	<b>\$ 25,428</b>	<b>\$ 2,817</b>	<b>\$ 2,225</b>	<b>\$ 30,470</b>	<b>\$ 21,267</b>	<b>\$ 22,039</b>	<b>\$ 22,930</b>	<b>\$ 23,141</b>	<b>\$ 23,875</b>

Note: Annual expense amounts are on an income statement basis and exclude balance sheet accounts.

# Employee Headcount by Work Group

<b>Work Group or Major Dept.</b>	<b>June 30, 2018 Actual</b>	<b>Dec. 31, 2018</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2020</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2022</b>	<b>Dec. 31, 2023</b>
VP Gas Distribution Operations	2	2	2	2	2	2	2
Transmission Integrity & Compliance	22	24	24	23	23	23	23
Distribution Integrity & Compliance	15	21	22	21	21	21	21
Pipeline Safety Management Systems	2	3	4	4	4	4	4
Operator Qualifications Program	1	2	4	4	4	4	4
Compliance/Environmental Coordinator	1	1	1	1	1	1	1
Gas Management & Supply	6	6	6	6	6	6	6
Gas Operations, Constructions, & Engineering	120	128	128	128	128	128	128
Gas Control & Storage	97	110	111	110	103	102	102
Interns	10	10	7	7	7	7	7
<b>Total</b>	<b>276</b>	<b>307</b>	<b>309</b>	<b>306</b>	<b>299</b>	<b>298</b>	<b>298</b>

# Supplemental Contractors by Work Group

Work Group or Type of Work	Jun 30, 2018 Actual	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2023
Director, Gas Control & Storage	10	10	10	10	10	10	10
Director, Gas Operations Construction & Engineering	170	169	176	176	166	163	163
Manager, Gas Transmission Integrity & Compliance	9	11	11	11	11	11	11
Manager, Gas Distribution Integrity & Compliance	112	112	112	112	112	112	112
<b>Total</b>	<b>301</b>	<b>302</b>	<b>309</b>	<b>309</b>	<b>299</b>	<b>296</b>	<b>296</b>

# 2017-2023 Headcount Totals & Changes

Employees	Year-End						
	<u>2017 Actual</u>	<u>2018 Forecast</u>	<u>2019 Plan</u>	<u>2020 Plan</u>	<u>2021 Plan</u>	<u>2022 Plan</u>	<u>2023 Plan</u>
TOTAL From Page 19	264	307	309	306	299	298	298
Prior Plan		<u>300</u>	<u>301</u>	<u>301</u>	<u>299</u>	<u>298</u>	
Change From Prior Plan		<u>7</u>	<u>8</u>	<u>5</u>	<u>0</u>	<u>0</u>	
<hr/>							
		<u>2018 FC</u>	<u>2019 Plan</u>	<u>2020 Plan</u>	<u>2021 Plan</u>	<u>2022 Plan</u>	<u>2023 Plan</u>
Supplemental Contractors (Page 20)		<u>302</u>	<u>309</u>	<u>309</u>	<u>299</u>	<u>296</u>	<u>296</u>
Prior Plan		<u>261</u>	<u>260</u>	<u>260</u>	<u>260</u>	<u>260</u>	
Change from Prior Plan		<u>41</u>	<u>49</u>	<u>49</u>	<u>39</u>	<u>36</u>	
<hr/>							
<b>Total Workforce (Employees Plus Supplemental Contractors)</b>							
Current Plan		<u>609</u>	<u>618</u>	<u>615</u>	<u>598</u>	<u>594</u>	<u>594</u>
Prior Plan		<u>561</u>	<u>561</u>	<u>561</u>	<u>559</u>	<u>558</u>	
Change from Prior Plan		<u>48</u>	<u>57</u>	<u>54</u>	<u>39</u>	<u>36</u>	

# Plan Risks

- Finalization of new transmission pipeline regulations
- Regulatory changes impacting capital and O&M costs
- Mitigation costs associated with gas transmission pipeline inspections
- Mitigation costs associated with new storage integrity compliance requirements
- Economic development-pace
- Impact of workforce turnover from retirements
- Overtime needs exceeding overtime assumed in the plan
- Material, equipment, and resource cost escalation and availability
- Permitting and Right of Way acquisition for Pipeline projects



# Plan Risks

- Findings from failure analysis on longitudinal defect on Ballardsville gas transmission pipeline could drive capital or O&M incremental to the plan.
- Aggressive KPSC enforcement of gas safety regulations and KY “Before you Dig” laws
  - Increased citations/fines
  - Increased underground locating costs
- Telecommunications fiber projects and other general construction increases driving increase in line locating costs

# Operational Performance

## Key Performance Indicators

<u>KPI</u>	<u>2017 Year End</u>	<u>2018 Forecast</u>	<u>2019 Plan</u>	<u>2020 Plan</u>	<u>2021 Plan</u>	<u>2022 Plan</u>	<u>2023 Plan</u>
Safety - Employee Incident Rate <sup>1</sup>	2.55	2.60	1.80	1.73	1.66	1.55	1.47
Safety - Contractors Incident Rate <sup>1</sup>	1.58	0.00	1.80	1.73	1.66	1.55	1.47
DART - Employees <sup>1</sup>	1.09	0.87	0.72	0.67	0.63	0.63	0.59
Gas Response Priority 1 Calls (minutes)	37.1	35.6	35.0	34.5	34.0	33.5	33.0
New Business Cycle Time (Calendar Days) <sup>2</sup>	6.00	9.00	9.00	9.00	9.00	9.00	9.00

1) 2018 Forecast numbers are YTD May 2018 actuals and not forecasted.

2) Measures from the time a service request is approved by a locator from the Design department to the time the service is installed.