LG&E's strategies to purchase gas at market prices reflective of the supply area from which LG&E receives the gas.

- Two-Part Pricing Mechanisms: Some of LG&E's transactions for gas commodity supplies contain a two-part pricing mechanism that includes a demand charge and a commodity charge. Among other factors, the demand charge is reflective of the cost to reserve the supply, the number of volumetric changes that LG&E can make mid-month, and the index posting used to calculate the commodity price. The commodity charge is paid for each MMBtu purchased and is tied to an industry price posting that reflects the market price of natural gas. LG&E has found these kinds of pricing arrangements to be viable and supportive of LG&E's strategies to purchase gas at the lowest price consistent with reliability of supply and also essential in providing the kind of volumetric flexibility required by LG&E to address weather-driven load changes on its system.

- Term-Limited Contracting: LG&E continues to purchase gas for a period not to exceed a term of [redacted]. LG&E has found that this time horizon has provided LG&E and its customers with adequate security of supply, but at the same time allows LG&E to respond to market, regulatory, or other changes that may develop.

- Gas Supply Reliability and Adequacy: LG&E continues to ensure that it has adequate supplies under contract at the start of each winter in order to reliably serve customers under extreme weather conditions. Planning for summer season purchases starts prior to the beginning of the storage injection season. This practice allows LG&E to more carefully tailor its supply purchases by season and to ensure that changes in the marketplace and in LG&E's requirements can be incorporated into purchase plans.

- Creditworthy Suppliers: LG&E continues to deal only with creditworthy suppliers. LG&E reviews and assesses the credit standings of potential suppliers in order to help ensure that suppliers will be able to reliably perform their obligations under either potential or existing transactions. LG&E has sought to achieve supplier diversity through a robust portfolio of potential creditworthy suppliers with whom LG&E can do business. Over the past six years, about six different credit-worthy suppliers account for between [redacted] and [redacted] of LG&E's total annual gas purchase volumes. Some of these suppliers have changed as LG&E has changed its sources of supply through new pipeline transportation arrangements.

- Spot-Market Purchases: In addition to dispatching gas under term arrangements with market-responsive pricing, LG&E continues to make daily purchases in the spot market. These purchases can be opportunistic in nature, for example, in order to assist LG&E in optimizing its portfolio where a daily purchase may be more economic than taking gas under a term agreement, or they may be necessary in order to satisfy a short-term need for gas supplies. The use of spot-market purchases has been a consistent feature used by LG&E in managing its gas supply portfolio. Typically, these spot-market purchases are about [redacted] of LG&E's annual purchases volumes. However, during the 12 months ended October 31, 2017, LG&E purchased about [redacted] of its annual requirements on the spot market which allowed LG&E to take advantage of pricing opportunities in the spot market not otherwise available under LG&E's term supply arrangements. As further discussed herein, incenting LG&E to maximize these kinds of opportunistic purchases is a key feature of LG&E's gas supply cost Performance-Based Ratemaking ("PBR") mechanism.

- <u>Off-System Sales</u>: 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. While the opportunity to make off-system sales may be intermittent, the results can be significant. For example, during March 2017, LG&E made off-system sales of about $1,557,000 which yielded a profit of about $197,000. Most recently in January 2018, LG&E made off-system sales of about $1,908,000 which yielded a profit of about $382,000. LG&E's PBR mechanism encourages it to make these off-system sales which help reduce gas costs that would otherwise be paid by LG&E's customers.

LG&E has also developed new strategies in recent years to respond to changing market conditions. LG&E has sought and taken advantage of opportunities to revise its supply arrangements in order to continue to achieve low cost supply consistent with the required reliability of supply. For example:

- <u>Supply Zone Diversity</u>: One of LG&E's strategies has been to maximize supply area diversity. Recent changes in supply access have allowed LG&E to take advantage of gas production in the Marcellus and Utica supply areas. LG&E first began accessing this supply area in 2009 on a secondary basis under its Texas Gas's transportation agreements. As interstate gas pipeline flows and supply options continued to develop, LG&E secured firm access to Marcellus and Utica supplies through Texas Gas's 2016 Ohio-Louisiana ("OHLA") Open Season discussed in LG&E's response to Commission Question No. 1. As a result, LG&E can purchase supply from this area when it is more competitively priced than other supply areas. Over time, LG&E has increased its purchases from the Marcellus and Utica supply areas. For example for the 12 months ended October 31, 2013, about [redacted] of LG&E's supply volumes were purchased from the Marcellus and Utica areas. For the 12 months ended October 31, 2017, this percentage rose to about [redacted]. For the 12 months ended October 31, 2018, LG&E anticipates that about [redacted] of its supply will have originated from the Marcellus and Utica areas. These supplies displaced traditional forward haul supplies on the Texas Gas system from Louisiana, East Texas, and Arkansas. The use of these supplies illustrates how LG&E has responded to the changing dynamics of available supply in an effort to achieve lower costs. During the past year, Utica and Marcellus gas supplies delivered at Lebanon and from there into Texas Gas's Zone 4 have tended to be about $0.04 to $0.05 per MMBtu less than the traditional forward haul supply sources from and reliability of these delivered supplies and adjust the volumes it purchases as the natural gas market continues to develop. For example for the 12 months ended October 31, 2013, LG&E did not rely upon city-gate deliveries from Tennessee. The purchase of delivered supplies increased to about [redacted] of LG&E's total supply for the 12 months ended October 31, 2015, and about [redacted] for the 12 months ended October 31, 2016. By contrast, for the 12 months ended October 31, 2018, LG&E anticipates that about [redacted] of its supply will be city-gate deliveries from Tennessee given the cost of this supply option relative to other supply options. The dynamic use of these supplies illustrates how LG&E has responded to changing market conditions.

- <u>Pre-Determined Allocation Methodology</u>: In order to more fully integrate the use of north-to-south gas transportation capacity on Texas Gas under Rate FT with the use of its south-to-north gas transportation and storage service capacities under Rate NNS, LG&E has changed the pre-determined allocation methodology that it uses on the Texas Gas system. The allocation options that Texas Gas makes available include: percentage, pro-rata, ranking, and swing methodologies. LG&E recently changed from the ranking allocation methodology to the swing allocation methodology to take advantage of more economical gas supplies which may be available from Lebanon in the spring when LG&E is refilling its Rate NNS storage. In short, the swing option methodology allows LG&E to transport gas using its Rate FT transportation capacity and inject that gas into the storage component of its Rate NNS service rather than purchase potentially more expensive gas delivered from the Gulf using LG&E's Rate NNS capacity. This change in the allocating methodology and the associated gas management processes allows LG&E to take advantage of the most economical gas supplies that may be available from time to time in order to refill LG&E's storage component of its Texas Gas Rate NNS transportation service.

Like the multi-step process that LG&E uses in order to ensure that it secures adequate firm pipeline capacity to reliably serve its firm gas sales customers at the lowest cost, LG&E uses a similar process to ensure that its gas supply costs are as low as possible consistent with the reliability of supply. This process can be summarized as follows:

- Perform Annual Load Forecast
- Determine Storage Operating Parameters
- Model Gas System Operating Constraints
- Model Potential Load Scenarios (Weather)
- Reflect Current Pipeline Contract Terms and Conditions
- Determine Supply Packages Required