SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a CENTERPOINT ENERGY INDIANA SOUTH
(CEI SOUTH)

IURC CAUSE NO. 37366-GCA151

DIRECT TESTIMONY
OF
PAULA J. GRIZZLE
DIRECTOR OF GAS SUPPLY AND PORTFOLIO OPTIMIZATION

DIRECT TESTIMONY OF PAULA J. GRIZZLE

I. INTRODUCTION

Q. Please state your name and business address.

A. Paula J. Grizzle
1111 Louisiana, 21st Floor
Houston, Texas 77002

Q. Please state your present title.

A. I am the Director of Gas Supply and Portfolio Optimization.

Q. What company are you representing?

A. I am submitting testimony on behalf of Petitioner, Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South ("CEI South" or the "Company").

Q. Please describe your educational background.

A. I earned a Bachelor of Science degree from University of Houston – Clear Lake in 1999.

Q. Please describe your professional experience.

A. My entire professional career has been focused in the energy industry with a total of 21 years of experience. I started my career doing gas accounting functions and through a combination of mergers and acquisitions, my initial job at Engage Energy led me to work at EnCana Energy Services, Kinder Morgan and Cinergy Marketing. During each transition, my responsibilities increased from gas accounting to gas scheduling and currently managing gas supply and transportation covering all CenterPoint Energy utilities. My career at CenterPoint Energy started in 2005.

Q. What are your present duties and responsibilities as Director of Gas Supply and Portfolio Optimization?

A. I am responsible for the acquisition and administration of gas supply for the Company's natural gas distribution operations.

Q. Have you previously testified before this Commission, any other state commission or Federal Energy Regulatory Commission (FERC)?

A. Yes. I have testified before the Indiana Utility Regulatory Commission ("IURC" or "Commission") on behalf of CEI South in its Gas Cost Adjustment ("GCA"), Cause No. 37366, beginning in GCA 149. I have also testified on behalf of CEI North in its GCA proceeding Cause No. 37394, beginning in GCA 149. In addition, I have presented testimony to FERC in Northern Natural Gas Company's rate proceeding.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to provide information related to the following: 1) CEI South's portfolio approach to gas supply acquisition, 2) CEI South's existing long-term purchases, 3) CEI South's sources of interstate pipeline capacity, 4) CEI South's Asset Management Arrangement, 5) the demand forecast and gas supply costs underlying CEI South's GCA schedules, and 6) the market circumstances that contributed to increased gas costs during February 2021.

II. CEI SOUTH'S PORTFOLIO APPROACH TO GAS SUPPLY ACQUISITION

Q. What is CEI South's approach to gas supply acquisition?

A. CEI South employs a portfolio approach that results in acquiring gas supply for a GCA quarter using different pricing mechanisms. Generally, CEI South blends 1) fixed-priced physical gas purchased in advance of the month of delivery, 2) financial hedges that cap, collar, or fix gas prices on a portion of future purchases, and 3) summer-purchased storage gas to be withdrawn in winter months, with 4) gas purchased at the time of delivery at current market prices (the "Portfolio Approach").

Q. Why does CEI South employ a portfolio approach?

A. CEI South's Portfolio Approach achieves two important objectives – to purchase reliable gas supply at market prices, while at the same time mitigating to a large degree the price volatility of the gas sold to CEI South's customers.

Q. Please describe the component purchases of CEI South's Portfolio Approach.

A. CEI South's Portfolio Approach currently consists of the following components:

1. Fixed-price gas that is acquired in advance of the month of delivery based on a structured process.
2. Financial hedges that effectively cap, collar, or fix gas prices on a portion of future purchases based on a structured process.
3. Storage gas purchased at typically lower prices in the summer months for redelivery to customers during the heating season.
4. First-of-month ("FOM") gas purchased and priced based on monthly indices just before the month of delivery.
5. Daily "swing" purchases acquired during the month at daily indices as needed to meet daily swings in demand.
6. Long-term purchases for a portion of projected annual volumes which allows the Company to fix the price of gas for a period greater than two years and up to ten years in duration.

Q. Please describe the modifications to the Gas Supply Hedge Plan (the "Hedge Plan") approved in Cause No. 44021.

A. In light of changes in the gas marketplace, mainly the development of shale gas, CEI South proposed certain changes to its Hedge Plan in Cause No. 44021. These changes were found to be reasonable in that proceeding. The CEI South Hedge Plan has been modified to change the level of hedged gas and to include proposed long-term purchases as another component of the plan. The modified targets approved in Cause No. 44021 allow CEI South to hedge up to 50% of its annual purchases and up to 70% of its projected winter deliveries.

Q. Has CEI South proposed, and had approved by the Commission, any modifications to the current Advance Purchase Plan?

A. Yes, CEI South previously proposed to modify the Advance Purchase Plan from a quarterly approach to a seasonal approach. The rationale for this modification was that a seasonal approach is in line with both the supply planning and storage management seasons along with the acquisition pattern of commodity purchases. This seasonal approach would not alter the level of hedged purchases on either a monthly or annual basis but would align the combined short-term and long-term hedged volumes in a concise manner.

Q. Please identify the adjustments to CEI South's Advance Purchase Plan which were proposed and approved by the Commission.

A. CEI South proposed, and the Commission approved for the Company, to modify the Advance Purchase Plan from eight calendar quarters to four seasons and will continue to incorporate both physical fixed-priced purchases and financial hedges, including caps, to fulfill the seasonal volumes. The targeted quantities and timing for the proposed Advance Purchase Plan are listed in the following table:

CEI South's Proposed Advance Purchase Plan
Season and Target Hedge Levels

	Time Period	Current % of Seasonal Volume to be Hedged
Current Season	April 2021 through October 2021	50-100%
1st Succeeding Season	November 2021 through March 2022	25-75%
2nd Succeeding Season	April 2022 through October 2022	0-75%
3rd Succeeding Season	November 2022 through March 2023	0-75%

Q. Based on CEI South's Portfolio Approach, as developed in the Gas Supply Hedging Program, what percentage of total deliveries to customers would be hedged for a normal winter season?

A. The following table illustrates the amount and percentage of gas supply that would be delivered at hedged prices during a normal winter season.

CEI South Portfolio Approach

Percentage of Hedged Deliveries During a Normal Winter Season

Quantities in MDth

Season	Total Normal Season Deliveries	Hedged Storage Activity	Physical and Financial Hedged Volumes	Market Priced Purchases	Hedged Gas % of Total
Nov-Mar	**8,240**	**3,434**	**2,333**	**2,473**	**70%**

Q. Does the Portfolio Approach eliminate the possibility of a spike in gas costs to customers?

A. No, but the Portfolio Approach provides stabilization by providing diverse supply products. The sum effect of physical hedged volumes, financial hedged volumes, and storage withdrawals means that roughly 70% of the gas delivered to customers during a normal winter season has been purchased at various times in advance, at then current market prices, achieving an averaging effect that can mitigate price spike in the period.

That does, however, leave roughly 30% of the deliveries to be purchased at monthly or daily market prices during a normal winter season, that could be higher or lower than the hedged price deliveries. By leaving some portion of the gas deliveries for purchase at current market prices, CEI South's Portfolio Approach ensures that a current price signal is still being conveyed.

Q. Does CEI South's Portfolio Approach for gas supply acquisition "optimize" the resulting gas costs?

A. It is important to understand that there is no "exact" answer to solve for when acquiring gas supply. Natural gas is a competitively priced commodity impacted by many forces including fluctuating temperatures, the economy, storage inventory levels, etc. CEI South's Portfolio Approach achieves a "reasonable" answer or result, by acquiring reliable gas supply at market prices while over time mitigating the impact of price volatility. The Portfolio Approach does provide a structured approach to acquiring gas supply such that the negative impacts of gas price spikes can be mitigated.

III. CEI SOUTH'S EXISTING LONG-TERM TRANSACTIONS

Q. Please describe the long-term transaction proposed and executed by CEI South in Cause No. 37336-GCA135.

A. In its GCA 135 filing, CEI South proposed to enter into a transaction for the term November 2018 – October 2023. The transaction was proposed as a financial transaction for 90,000 Dth per month at a fixed-price for the entire sixty-month term to not exceed $3.25 per Dth. A transaction at this level is the equivalent of nine New York Mercantile Exchange ("NYMEX") contracts for the term, and the volume represents roughly 10% of the projected **normal** weather annual GCA supply to be purchased for CEI South.

On July 26, 2017 the Commission's Order for GCA135 granted approval for CEI South to proceed with the proposed long-term transaction. Shortly thereafter, CEI South executed a financial transaction for the term November 2018 – October 2023 for 90,000 Dth per month.

Q. Please describe the long-term transaction proposed and executed by CEI South in Cause No. 37336-GCA136.

A. In GCA136, CEI South proposed to enter into a transaction for the term April 2019 – March 2024. The transaction would be a financial transaction for 50,000 Dth per month at a fixed-price for the entire sixty-month term to not exceed $3.25 per Dth. A transaction at this level is the equivalent of five (5) NYMEX contracts for the term, and the volume represents roughly 5% of the projected normal weather annual GCA supply to be purchased for CEI South.

On October 28, 2017, the Commission's Order for GCA 136 granted the approval for CEI South to proceed with the proposed long-term transaction. Shortly thereafter, CEI South executed a financial transaction for the term April 2019 – March 2024 for 50,000 Dth per month.

Q. Why has CEI South entered into financial transactions?

A. Fixed-priced financial purchases, as opposed to fixed-priced physical purchases, will enable CEI South to maintain the maximum amount of daily system flexibility required for system balancing. Long-term financial purchases based on the NYMEX are more liquid for the term proposed in comparison to a physical transaction at a physical pricing point in the current environment. CEI South customers will continue to receive the benefits from first-of-the-month indexed-priced physical supply from the diverse physical pricing points for the financial volumes executed in these long-term transactions.

Q. How will these financial transactions be accounted for in the GCA process?

A. These transactions will be accounted for in the GCA in a similar manner as the existing long-term fixed-priced transactions have been shown in the GCA schedules. For the projected quarter, these financial transactions will be shown as a separate line item in Schedule 3 for each month for the term of the transaction. This will ensure transparency for the long-term purchases in each quarterly GCA filing. Similarly, to the previously executed long-term purchases, the Company will provide the same level of transparency for any future long-term supply purchases. For the reconciliation quarter, these transactions will be shown as a separate line item in the Schedule 8 Supplement for each month for the term of these financial transactions. As a result, the monthly gain or loss associated with these financial transactions will flow through the GCA and will be accounted for in the GCA filings as all purchases have been accounted for.

IV. <u>INTERSTATE CAPACITY</u>

Q. Please detail the components of the CEI South pipeline capacity portfolio for the period April 2021 – March 2022.

A. Below is a table of the CEI South pipeline capacity portfolio for the period April 2021 – March 2022. After further analysis from winter 2020-2021, CEI South will determine if the Company needs to purchase additional pipeline capacity to serve the required markets.

CenterPoint Energy Indiana South - CEI South
Interstate Capacity Portfolio
April 2021 - March 2022
(Volumes in Dth)

Pipeline Supplier	Pipeline Contract #	Service Type	SCQ		Term Date	April 30 MDQ	May 31 MDQ	June 30 MDQ	July 31 MDQ	August 31 MDQ	September 30 MDQ	October 31 MDQ	November 30 MDQ	December 31 MDQ	January 31 MDQ	February 28 MDQ	March 31 MDQ
Texas Gas	33274	FT			10/31/2024	10,247	10,247	10,247	10,247	10,247	10,247	10,247	8,188	8,188	8,188	8,188	8,188
Texas Gas	33274	NNS	438,564		10/31/2024	10,906	-	-	-	-	-	14,268	16,812	16,812	16,812	16,812	16,812
Texas Gas	35496	FT			10/31/2036	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Texas Gas	26787	FT			3/31/2029	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
TETCO	911048	SCT			10/31/2021	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
						56,353	**45,447**	**45,447**	**45,447**	**45,447**	**45,447**	**59,715**	**60,200**	**60,200**	**60,200**	**60,200**	**60,200**

Q. Please describe the interstate capacity utilized by CEI South.

A. CEI South receives firm transportation and/or storage capacity from the following interstate pipelines: Texas Gas Transmission ("TGT"), and Texas Eastern Transmission Corporation ("Texas Eastern"). CEI South relies upon capacity from these pipelines for the delivery of gas supply to its citygate.

V. ASSET MANAGEMENT ARRANGEMENT

Q. Please describe how an Asset Management Arrangement ("AMA") works.

A. FERC Order 712 developed the framework for an AMA in 2008. At that time FERC recognized the benefits of allowing LDCs, gas producers, and end-users to outsource capacity optimization and supply management services using AMAs. Capacity releases within an AMA are exempt from the prohibition on tying a capacity release to any condition and from competitive bidding requirements. To receive this exemption under the AMA, the asset manager must bear a purchase or delivery obligation to the releasing shipper for at least 5 months out of each 12-month period for up to 100% of the daily contract demand of the released capacity.

The asset manager commits to provide a reliable gas supply and manage upstream capacity contracts. The asset manager often pays a fixed fee for the right to optimize the LDC's capacity contracts.

Q. How did CEI South address the AMA which expired March 31, 2021?

A. On June 1, 2020, Indiana Gas Company, Inc. d/b/a CenterPoint Energy Indiana North ("CEI North") and CEI South (collectively, "CenterPoint Energy Indiana") issued a competitive request for proposals ("RFP") to solicit bids for the provision of AMA services for the term April 1, 2021 – March 31, 2024. The RFP was distributed to a list of qualified and experienced AMA suppliers. Each supplier has experience with operating and managing firm transportation and storage services with multiple interstate pipeline contracts.

Q. What criteria did CEI utilize to select the entity to be the AMA provider commencing April 1, 2021?

A. In response to the RFP, CEI received five (5) proposals from bidders. The relevant factors and criteria included in the review were monthly AMA payment, commodity price, supplier creditworthiness, supplier experience, supplier's prior operational activity in the region, and any proposed changes to the AMA Agreement. CEI accepted Tenaska Marketing Ventures bid to be the AMA provider for this three-year term. Pursuant to that bid, the CEI South GCA customers will receive a credit of $50,417 per month for the three-year term April 2021 through March 2024. This credit is an increase of 50% from current AMA payment. This AMA payment amount is included on GCA projection Schedule 1, line 1 column A and Schedule 1A as a credit to the projected monthly demand costs starting April 2021. The AMA payment amount will also be included on reconciliation Schedule 8 for the entire three-year term April 2021 through March 2024.

VI. DEMAND FORECASTS AND GAS SUPPLY COSTS

Q. Please describe the information contained in GCA Schedule 2.

A. This schedule contains the sales quantity forecasts for the twelve months ending July 2022 as prepared by CEI South.

Q. Please describe the sales quantity forecasts.

A. The sales quantity forecasts for Rate Schedules 110 and 120 are derived from historical consumption, adjusted for normal weather, conservation and customer growth.

Q. Please describe the gas supply plan, which serves as the basis for the data contained in GCA Schedules 3 and 5.

A. Prior to each season, a gas supply plan is assembled which includes projections of the quantities and prices of gas supply and any storage activity required to meet expected customer demand during the GCA period. These projections are then reflected in GCA Schedules 3 and 5.

Q. How are the projected pipeline service prices determined?

A. The rates and charges reflected in the estimation of transportation costs are based upon contracts or filings which have been made with the FERC. The rates and charges reflected in the estimation of contract storage and storage transportation charges are based upon contracts or FERC filings.

Q. How are the projected gas supply prices determined?

A. The projected gas supply prices are based upon NYMEX gas futures market prices and the prices of any fixed-priced gas purchased in advance of the GCA quarter. NYMEX gas futures market pricing data is adjusted to reflect price volatility and basis pricing differentials. In addition, the premiums for financial hedges and the estimated hedging impact are included in computing the average commodity costs.

Q. Please describe the actual gas cost information contained in GCA Schedules 8 and 10.

A. Schedule 8 contains the actual demand and commodity costs for pipeline services and gas supply purchased during the reconciliation period. Schedule 10 contains the quantities, prices, and costs of gas injected into and withdrawn from Company-owned storage during the reconciliation period.

Q. Do the gas costs included in GCA Schedules 3, 5, 8, and 10 reflect CEI South's policy of making every reasonable effort to acquire long-term gas supplies so as to provide reliable gas service to its retail customers at the lowest gas cost reasonably possible?

A. Yes.

VII. FEBRUARY 2021 WINTER WEATHER EVENT

Q. Please describe the February weather event.

A. Beginning Friday, February 12, 2021, a combination of significant disruptions in natural gas supply combined with a sharp rise in natural gas demand led to an extraordinary increase in natural gas spot market prices. Prices at delivery points to Indiana increased dramatically to as much as $65.60 per dekatherm at Rockies Express Pipeline, Zone 3, on February 13-16, in comparison to the February weighted average cost of gas of $3.17 per dekatherm included in the GCA 149 flex filing. The impact of this price spike was amplified by the fact that the Company had to make all necessary gas purchases on Friday, February 12 to cover demand over the four-day President's Day holiday weekend since gas markets were closed until Tuesday, February 16. Although the four-day President's Day holiday weekend had price spikes, the elevated prices continued through February 22nd. Despite the volatile weather and market conditions, the Company maintained reliable natural gas service for its customers in southern Indiana.

Q. When did the Company start preparing for the February weather event?

A. The true starting point of preparation was spring 2020, during the development of the gas supply plans. However, it is not until weather providers start publishing temperature forecasts during the winter season that the Company starts to forecast specific demand scenarios for additional short-term planning and preparation for a 7-day look ahead. As each day unfolds, our gas supply and gas control teams must plan for the projected demand and allow room for unexpected variations that requires storage to be utilized on a day-by-day basis. The Company executed its plan during the weather event and its hedged gas supplies and storage protected customers from the extreme market conditions.

Q. How did the spot market for gas function during the weather event?

A. Due to the arctic cold temperatures across much of the country, which caused a significant disruption in natural gas supply and sharp rise in natural gas demand, the spot market saw an extraordinary increase in natural gas market prices. Although the Company was exposed to the spot market pricing, CEI South's portfolio provided price protection to 39% of total purchases of gas supply during the weather event.

Q. What were the Company's total gas procurement costs during the event?

A. During the winter event period of February 12, 2021 through February 22, 2021, CEI South procured 654,363 Dth of daily supply. The planned or baseline amount for these volumes are $1,858,197. The extraordinary amount for these volumes were $17,888,929 and, when added to the baseline amount, equals a total purchased cost for these days of $19,747,126.

Q. Can you provide additional information about the supply disruptions?

A. Yes. The winter storm named "Uri" brought cold weather to a significant portion of the U.S. which caused gas well freeze-offs and pipeline restrictions. These freeze-offs and restrictions, in turn, caused an overall tightening of supplies and historically high prices in many regions, particularly as it related to the 4-day period of February 13 – 16, and prices continued to remain high through February 22. The freeze-offs impacted a major supply region known as the mid-continent and gulf region, reducing overall U.S. natural gas supply by almost 20% during this period. Due to its proximity to their service territories, this region has become an integral supply source for Midwest local distribution companies ("LDCs") including CEI South. The fact that the mid-continent region normally has abundant gas output and associated low prices also has contributed to it becoming an essential supply source for Midwest LDCs.

Q. Due to tightening of supplies in the Midwest, did the Company experience any loss of supply to residential customers?

A. Yes. On gas days 16 and 17, CEI South had supply loss of 6,086 Dth, less than 1% of total purchases in the daily market. Reliability is the Company's highest priority in system planning and operations and the Company's actions leading up to and during the event were successful in maintaining-continued service to CEI South's customers.

Q. What supply products were used to cover the weather event?

A. In order to meet firm customer needs, the Company uses a diversified gas supply portfolio consisting of a combination of baseload supplies, delivered supply, daily spot market purchases and storage which are designed to maintain reliability, while balancing price protection, stability of gas supply costs billed to customers, and reasonable prices. For higher usage days, the Company meets customer needs by first utilizing its baseload supplies and storage withdrawals, including its on-system underground storage supplies. The Company then begins calling on its portfolio of available flexible supply sources, which includes a combination of daily spot market gas purchases and delivered supply, depending on the weather and market conditions. While the Company uses storage to meet daily demand, the Company also reserves a portion of its withdrawal capabilities to manage unforeseen supply issues or other emergency conditions. The Company believes these processes and the built-in flexibility contained within the plan have functioned well to ensure continuous and reliable natural gas service to our customers and balancing stability of gas supply costs. Below is a summary of all flowing supply by product.

	12	13	14	15	16	17	18	19	20	21	22	Totals	
Daily	30,491	56,417	56,417	71,417	70,806	66,215	72,520	72,520	52,520	52,520	52,520	654,363	62%
Storage	25,065	34,905	8,684	25,381	17,703	23,577	8,886	13,582	14,049	22,679	23,856	218,367	21%
Baseload	16,853	16,853	16,853	16,853	16,853	16,853	16,853	16,853	16,853	16,853	16,853	185,383	18%
Totals	72,409	108,175	81,954	113,651	105,362	106,645	98,259	102,955	83,422	92,052	93,229	1,058,113	100%

During the weather event, the Company withdrew 218,367 Dth from storage, which equals 21% of flowing supply to customers. Due to contractual and operational limitations and the need for storage for the remaining winter months, CEI South did not withdraw all storage inventory during the weather event. After February withdrawals, the Company continued to execute the gas supply plans and started March 1, 2021 with 1,908,835 Dth of storage inventory to cover the remaining winter season.

Q. Can you provide some context for the demand experienced by the Company during the event?

A. During the February weather event, the Company experienced a peak day on the 16th where customer demand equaled 133,770 Dth as compared to the design day of 134,847 Dth. See chart below for additional data analysis on historical weather and demand.

February Design Day Comparison			
	2/16/21	Design Day	% of Design Day
Peak Day (Dth) - February	133,770	134,847	99%
Heating Degree Days	56	61	92%

February Total HDD Comparison			
	2021	30yr Normal	% Colder than Normal
Total Heating Degree Days - February	966	825	117%

Q. Did the Company have adequate transportation capacity during the weather event?

A. Yes, the Company had adequate transportation capacity during the event. However, given the threat of supply disruptions and potential pipeline penalties, additional supplies were delivered by the Asset Manager to both Indiana LDCs to ensure system reliability. As stated in the gas supply plans, each year an analysis is performed to assure that the Company has sufficient pipeline capacity to serve the required markets if it were to experience weather conditions in the future that replicate the coldest conditions experienced in the recent past.

Q. Please provide additional information about the postings, restrictions, and flow orders issued by pipeline operators.

A. No Operational Flow Orders were declared by any interstate pipeline serving CEI South.

Q. Was the Company able to maintain firm service to its sales customers throughout the weather event?

A. Yes. Although prices were extraordinarily high during the February winter event, the Company contracted for firm pipeline capacity and was able to obtain all the necessary gas supply required in order to fully supply its obligations to its sales customers and to transport it into its distribution system for delivery to the end-use customers.

Q. During the weather event, did large industrial transportation customers deliver sufficient gas to meet their requirements?

A. Overall, the Company's large industrial transportation customers provided adequate supply to meet their demands.

VIII. CONCLUSION

Q. Does this conclude your prepared direct testimony?

A. Yes, at the present time.

STATE OF INDIANA)

) SS:

COUNTY OF VANDERBURGH)

The undersigned, Paula J. Grizzle, being duly sworn, under penalty of perjury affirms that the foregoing Direct Testimony in Cause No. 37366-GCA151 is true to the best of her knowledge, information, and belief.

Paula J. Grizzle

Paula J. Grizzle