

Exhibit No.:

Issue(s):

Gas Supply Incentive Plan

Witness/Type of Exhibit:

Busch/Direct

Sponsoring Party:

Public Counsel GR-2000-512

Case No.:

DIRECT TESTIMONY

OF

JAMES A. BUSCH

Submitted on Behalf of the Office of the Public Counsel

UNION ELECTRIC COMPANY D/B/A AMERENUE

Exhibit No. Date 101 00 Case No. (2.3000 512

Case No.: GR-2000-512

Reporter___



BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

d/b/a Amere tariffs incre	er of Union Electric Company enUE for authority to file easing rates for gas service customers in the company's ervice area.	Case No. GR-2000-512
	AFFIDAVIT OF	JAMES A. BUSCH
STATE OF	F MISSOURI) OF COLE)	ss
James A. B	susch, of lawful age and being first d	uly sworn, deposes and states:
1.	My name is James A. Busch. I as Public Counsel.	n the Public Utility Economist for the Office of the
2.	Attached hereto and made a par consisting of pages 1 through 20, S	rt hereof for all purposes is my direct testimony Schedules JAB-1 through JAB-6.
3. Subscribed	I hereby swear and affirm that my true and correct to the best of my keep and sworn to me this 8th day of Ar	James A. Busch

My Commission expires May 3, 2001.

marie de la

DIRECT TESTIMONY

Of

JAMES A. BUSCH

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1		DIRECT TESTIMONY
2		OF
3		JAMES A. BUSCH
4		CASE NO. GR-2000-512
5		UNION ELECTRIC COMPANY
6		d/b/a AmerenUE
7		
8	Q.	Please state your name and business address.
9	A.	My name is James A. Busch and my business address is P. O. Box 7800,
10		Jefferson City, MO 65102.
11	Q.	By whom are you employed and in what capacity?
12	A.	I am a Public Utility Economist with the Missouri Office of Public Counsel
13		(Public Counsel).
14	Q.	Please describe your educational and professional background.
15	A.	In June 1993, I received a Bachelor of Science degree in Economics from
16		Southern Illinois University at Edwardsville (SIUE), Edwardsville, Illinois. In
17		May 1995, I received a Master of Science degree in Economics, also from SIUE.
18		I am currently a member of the American Economic Association and Omicron
19		Delta Epsilon, an honorary economics society. Prior to joining Public Counsel, I
20		worked just over two years with the Missouri Public Service Commission as a
21		Regulatory Economist in the Procurement Analysis Department and worked one
22		year with the Missouri Department of Economic Development as a Research
23		Analyst. I accepted my current position with Public Counsel in September 1999.

. . ----

- Case No. GR-2000-512 1 Have you previously testified before this Commission? 2 A. Yes. Attached is Schedule JAB-1 which is a list of the cases in which I have filed 3 testimony before this Commission. 4 What is the purpose of your testimony? 5 The purpose of my testimony is to provide Public Counsel's proposed Gas Supply 6 Incentive Plan (GSIP) for AmerenUE. 7 INTRODUCTION 8 When was AmerenUE's GSIP approved? 9 AmerenUE initially proposed a GSIP in its last rate case, Case No. GR-97-393. 10 The Commission approved a unanimous Stipulation and Agreement that included 11 the current GSIP, effective February 1998. 12 Please describe AmerenUE's current GSIP. O. 13 Currently AmerenUE's GSIP consists of three components. These components 14 are capacity release, off-system sales, and transportation and storage discounts 15 (P.S.C. Mo. No. 2 Original Sheet Nos. 29.5 - 29.9 effective 2/18/98). Within
 - Q. What is the mechanism for capacity release?

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A. The capacity release mechanism works as follows:

these components, there are different types of mechanisms.

	<u>Pipeline</u>	Amount	%Sharing (Ratepayers/Company)
	Panhandle Eastern	<\$250,000	90/10
	Panhandle Eastern	>\$250,001	70/30
	Texas Eastern	<\$12,000	90/10
	Texas Eastern	>\$12,001	70/30
-			

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Natural Gas	<\$1,000	90/10	
Natural Gas	>\$1,001	70/30	

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(P.S.C. Mo. No. 2 Original Sheet Nos. 29.6 and 29.7).

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Q. Why are there three separate interstate natural gas pipelines shown, each with its own grid, for the capacity release mechanism?

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Pipeline Company (PEPL) serves a majority (approximately 77,000) of the

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Company's residential consumers, and runs through the middle section of the

Three distinct pipelines serve AmerenUE's service territories. Panhandle Eastern

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State and areas near St. Louis. Texas Eastern Pipeline Company (TETCO) serves

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approximately 17,000 residential customers in Southeast Missouri. Natural Gas

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Pipeline Company (NGPL) serves nearly 2,000 additional customers in the

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Southeast Missouri area. Since each one of these interstate pipelines has varying

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levels of capacity needed to serve the Company's ratepayers, three separate

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What is the mechanism for off-system sales?

capacity release grids were created.

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A. The off-system sales mechanism allows the Company to retain 30% of any off-

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system sales revenues while the ratepayers recapture 70% (P.S.C Mo. No 2

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Original Sheet 29.7 – 29.9).

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Q. What is the current mechanism for transportation and storage discounts?

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A. The transportation and storage discount grid is 80% ratepayers, 20% Company

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(P.S.C. Mo. No. 2 Original Sheet No. 29.6).

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Q. Does the current mechanism contain a gas procurement incentive?

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- No. AmerenUE's current incentive plan does not have a gas procurement mechanism. AmerenUE proposed a gas procurement mechanism in GR-97-393. However, during negotiations that ultimately led to the unanimous Stipulation and Agreement filed in that case, the gas procurement mechanism was omitted from the final GSIP.
- Q. Is AmerenUE proposing any modifications to its existing GSIP?
 - Yes, AmerenUE is proposing certain modifications to its GSIP. First, AmerenUE is proposing to add language to the plan's off-system sales component. This language would allow the Company to make off-system sales to its affiliates. Second, the Company is proposing to add a gas procurement component to the incentive plan. Third, AmerenUE is proposing to include language that will grant it the right to file to end or modify the GSIP if certain factors such as market conditions, regulations, laws, or operating conditions change. Finally, the last modification is to extend the term to March 31, 2004.

GAS PROCURMENT COMPONENT

INTRODUCTION

- Q. What is Public Counsel's view concerning the gas procurement component for incentive plans?
- A. Public Counsel believes it may be appropriate to allow a gas procurement component to be included in an incentive plan. However, Public Counsel does not recommend that Local Distribution Companies (LDCs) should be allowed to profit from contracts for natural gas supplies that are based on the volatile and unknown first-of-month or spot market indices as a part of any gas supply incentive plan. The ultimate prices to be paid by the ratepayers resulting from

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these types of contracts are determined in the market and are completely outside of the control of a LDC. Incentive plans should be structured in such a way as to give the company opportunities to profit from only those aspects of gas procurement practices that the LDC can control.

- Q. What conditions need to be met before Public Counsel will recommend adding a gas procurement incentive mechanism within a GSIP for AmerenUE?
- It is Public Counsel's belief that two factors have to occur before the Company should be allowed to profit from the procurement of natural gas. First, the price of gas paid for by the ratepayers should not exceed a reasonably anticipated level that reflects both historical and anticipated trends and the actual months indexed price of natural gas. Second, the ability to profit should be conditioned on the Company entering into contracts that fix or cap the total actual per unit price of natural gas. Locking in only a component of the total per unit price does not allow sufficient protection to justify rewarding the Company with excess profit. Under this type of incentive mechanism, the ratepayers will be benefiting from the Company's actions and the shareholders will be given the opportunity to profit by actively lowering natural gas costs to the ratepayers.
- What types of contracts would be associated with this type of incentive plan?
- A. The types of contracts that would allow AmerenUE to share in any savings would include fixed-price contracts and/or options contract. These contracts could be obtained either through financial intermediaries or directly with suppliers.
- What are fixed-price contracts?

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- Fixed-price contracts can generally take two forms. The first type of fixed-price 2 contract is one directly between a buyer and supplier. This contract stipulates that 3 the buyer will purchase a fixed amount of natural gas for a fixed price at some 4 future date. A second type of fixed-price contract is a futures contract. A futures 5 contract is generally traded in a financial market, such as the New York Mercantile Exchange (NYMEX). A futures contract works in basically the same 6 7 way as a fixed-price contract between a buyer and a seller, except that the buyer 8 does not usually take physical delivery of the natural gas. A futures contract is a 9 financial arrangement with the financial gain or loss used to offset the physical 10 purchase.
 - Can you provide an example of how a futures contract works? 0.
 - Yes. A purchaser of natural gas wishes to fix the price of natural gas it wants to pay for this upcoming winter. The purchaser goes to a financial market in the summer and purchases a futures contract. Let's assume that the price of the contract is \$3.00 per MMBtu, and the contract is for 10,000 MMBtus. contract's expiration date approaches, the purchaser liquidates its position by selling the contract. A gain or loss is recorded depending upon the current price of that futures contract. For this example, let's assume the current price is now \$3.50 per MMBtu. Upon completion of this second transaction, the purchaser has made a financial profit of \$5,000 (\$0.50 * 10,000 MMBtus). The purchaser still needs to purchase the gas. It goes to its supplier and pays \$35,000 for its 10,000 MMBtus it needs (\$3.50 per MMBtu * 10,000 MMBtus). However, the purchaser has already made \$5,000 in its financial transaction. Therefore, the actual price of

natural gas it pays is \$30,000 (\$35,000 - \$5,000). Even though the current price of natural gas is \$3.50 per MMBtu, by purchasing a futures contract, the purchaser was able to lock its price in at a lower rate.

This scenario can also work in reverse. If the current price of natural gas in the above example had fallen to \$2.50 per MMBtu, the purchaser would have paid \$5,000 more than if it had not purchased a futures contract. This is the risk involved in purchasing futures, or fixed-price contracts.

- Q. What is an options contract?
- A. An option contract gives the purchaser the right but not the obligation to purchase natural gas at a given price on a future date. The purchaser is granted this right by paying a premium to the seller.
- Q. Can you describe how an options contract works?
- A. Yes. A purchaser wants to cap the price for which it is willing to pay for natural gas. The purchaser does not want to utilize a futures contract because if prices fall, it will have to pay the higher price associated with the futures contract. Therefore, the purchaser decides to purchase a call option. A call option is obtained by paying a premium for the option contract. With this call option, the purchaser in effect establishes a cap it will ultimately pay for natural gas. Let's assume that a call option is purchased for \$.10 per MMBtu to cap the future price at \$4.00. This means that if the price of natural gas is above \$4.00 as the call option reaches its expiration date, the purchaser will exercise its option and only pay \$4.00 per MMBtu. However, if the price does not rise above \$4.00, the

option will be allowed to expire without the purchaser exercising its option. In effect, the purchaser is buying insurance against a potential increase in prices.

PUBLIC COUNSEL'S RECOMMENDATION

A benchmark price should be established by calculating a four-year average that

Q. What is Public Counsel's recommendation concerning the gas procurement incentive component of the GSIP for AmerenUE?

price for that month.

Q. Why does Public Counsel propose using a four-year average?

NYMEX near term 12-month strip futures prices as adjusted for any basis differential. Next, the Company will determine whether or not it wishes to pursue the acquisition of fixed-price or option contracts. If the Company utilizes these types of contracts, it will have the opportunity to profit from the procurement of natural gas supplies for its ratepayers. The Company would receive profits if it acquires natural gas at a price that is below both: (1) the established monthly benchmarks; and, (2) the current month's actual first-of-month index price. The establishment of the benchmark will be described below. If these conditions are

Q. Would this procurement incentive component be established Company-wide or would the price of natural gas be calculated on each pipeline?

met, the shareholders will receive 50% of the amount between the contract price

and either the lower of the actual first-of-month index price or the benchmark

A. Since AmerenUE's natural gas supplies come from different supply basins through three different pipelines, there should be three separate benchmark prices established, one for each pipeline.

- A. Public Counsel is recommending a four-year average because we believe it balances considerations of what the ratepayers have previously paid for natural gas and potential future price levels. These benefits are also enhanced by averaging actual first-of-month index prices utilized by the Company with the then current future expectations of natural gas prices.
- Q. Under Public Counsel's proposal, how would the benchmark prices be established for each month on each pipeline?
- A. Public Counsel recommends the benchmark prices for each month on each pipeline would be established as the average of the most recent three-year historical index prices with the NYMEX 12-month futures strip price for that month, adjusted for any basis differential between the NYMEX and each pipelines supply basins. The benchmark prices would be established based on the month preceding the effective date of this plan. For example, if the effective date of this plan is April 1, 2001, the most recent three years of index prices would be April 1998 March 2001. The NYMEX futures 12-month strip would be April 2001 March 2002. These prices would then establish the monthly benchmarks to be utilized in determining the Company's profit opportunities.
- Q. Please give an example of how the benchmark prices would be determined.
 - A. Attached to my direct testimony is schedule JAB 2 that illustrates how the historical prices and NYMEX futures prices are combined to establish each months benchmark price. The most recent three years, September 1997 August 2000, plus the current 12 month NYMEX futures strip prices, basis adjusted, were

combined to determine what the monthly benchmark prices would be if the plan was to be put into effect in September 2000.

Q. What historical prices are used for each pipeline?

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A. In order to develop a single recommended benchmark for each pipeline for each month, I reviewed the actual first-of-month index prices from Inside FERC Gas
Market Report and the benchmark weightings proposed in the Company tariffs.

Based on this review, Public Counsel recommends using the Company's proposed weighting system, excluding the Gas Daily based contract for each of the pipeline.

Attached to my direct testimony are the proposed tariff sheets that include these weights.

Q. What is basis differential?

- A. Basis differential is the difference between the price of gas at two separate locations. In this case, the basis differential is the difference between the price at the Henry Hub (where the NYMEX is priced), and the price on AmerenUE's pipelines. To compensate for any basis differential between the NYMEX price and the indices developed for AmerenUE, the NYMEX strip will be adjusted. The basis differential will be determined by looking at NYMEX settlement data for the past three years and the weighted pipeline indices.
- Q. Would the benchmark price levels be established for the entire length of the program, or would the benchmark prices be re-established every year?
- A. Due to the constantly changing natural gas market, the benchmark price levels for each month would be re-established each year consistent with the method

described above. Annually updating the benchmark prices accommodates market change on an ongoing basis.

- Q. Please provide examples of how this mechanism would work?
- A. Attached to my direct testimony is schedule JAB-4 that illustrates different scenarios that show how the Company's procurement activity would be treated under the gas procurement incentive phase of the GSIP.

PUBLIC COUNSEL'S ALTERNATIVE RECOMMENDATION

- Q. What is Public Counsel's recommendation if the Commission decides that AmerenUE's framework for a gas procurement component to its gas supply incentive plan should be used?
- A. If the Commission decides in favor of the Company's framework, Public Counsel recommends that it be modified as follows. As proposed, the Company would receive half of any amount of cost reductions, down to 94% of its established benchmark. This limits the Company's incentive to acquire natural gas below 94% of what the consumers would pay if based on the benchmark. To combat this lack of incentive to get lower prices, Public Counsel recommends that the Company's ability to profit be established in a modified grid form.
- Q. Please explain Public Counsel's grid proposal.
 - Schedule JAB-5 depicts the grid. Essentially, it works as follows: if actual costs fall below, but within 90% of the benchmark the difference will be split 90/10 customers/Company; if actual costs fall between 80 90%, the difference will be split 80/20. The 10% incremental shift will continue until the split reaches 50/50 between the ratepayers and the Company. This grid gives the Company the incentive to try and get the lowest possible prices in order to maximize its profit

opportunities. If the Company procures its natural gas at levels greater than the benchmark, the proposed grid would simply be reversed.

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Q. Why is Public Counsel modifying the grid for the procurement component?

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A. The reason that Public Counsel is modifying the grid is twofold. First, Public Counsel is trying to give the Company greater incentives to acquire as low a

natural gas price as possible. Second, if prices in the near future, for instance the

next three years, are to remain at current levels, the Company could potentially

earn millions of dollars in excess profits by acquiring natural gas at or near all-

time high levels just because the incentive is structured to reward the Company in

a manner that is based upon an index price that floats with the market.

Unmodified, such a system would reward shareholders for procuring natural gas

at all-time high levels. Such a result would be the antithesis of the incentive

program. Public Counsel's modified approach would reduce the chances of the

Company receiving excess profits while ratepayers pay for natural gas at or near

all-time highs. Public Counsel's proposed modifications gives AmerenUE a

greater incentive to procure natural gas at levels that may actually provide real

savings to the ratepayers.

OFF-SYSTEM SALES AND CAPACITY RELEASE

INTRODUCTION

Q. What is capacity release?

A. Capacity release allows owners of capacity on an interstate pipeline the opportunity to release any extra or unutilized capacity into the open market and

receive revenues to help offset the pipeline reservation charges. This feature was

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What is Public Counsel's opinion regarding off-system sales and capacity release?

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company releases all of its capacity, it will not be able to make any bundled offsystem sales. If a company makes off-system sales, it will potentially have less
capacity available to release, if any at all. Therefore, these two components need
to be treated in a similar fashion. If not, a company will have the incentive to do
one or the other to create greater profits for itself, potentially at the expense of
ratepayer relief. Due to this interrelationship between these two features and the
potential for unbalanced incentives Public Counsel recommends that the capacity
release and off-system sales components be combined.

PUBLIC COUNSEL'S RECOMMENDATION

- Q. What is Public Counsel's recommendation for AmerenUE's incentive plan regarding off-system sales and capacity release?
- A. Public Counsel recommends that capacity release and off-system sales should be combined into one component. With this combination, the Company should then be required to reach a baseline amount of capacity release and off-system sales before it is allowed to profit from these additional revenues. This baseline amount should be **_____** of combined capacity release revenues and off-system sales profits.
- Q. Why should the Company be required to reach a certain baseline level of these two components before it is allowed to profit from this mechanism?
- A. For any given month, the Company has contracts with pipelines that allow it to transport a certain amount of natural gas through its pipes. In order to be prepared to meet any peak demand levels, there inherently will be extra capacity available to be either released or bundled with natural gas to be sold as an off-system sale.

1]		Therefore, a certain amount of revenues from both of these mechanisms can and
2		should be expected.
3	Q.	How did Public Counsel determine the base level of capacity release and off-
4		system sales revenues?
5	A.	Historically, AmerenUE has averaged roughly **** in capacity release
6		revenues. Off-system sales have been virtually non-existent for this Company,
7		but it is proposing to allow off-system sales to its affiliates in the future. With the
8		anticipation that off-system sales will be added to AmerenUE's incentive
9		structure, **** should be reached before the Company is allowed to
10		profit from capacity release and off-system sales. Once that level is reached, the
11		Company will be allowed to profit by retaining 30% of the revenue derived from
12		capacity release and off-system sales.
13	Q.	How many years were used to determine the yearly average of capacity release
14		revenues?
15	A.	The capacity release revenues for the past six-years commencing in April of 1994
16		were used to calculate the yearly average. These yearly amounts are shown on
17		schedule JAB-6 attached to my direct testimony.
18	Q.	Does this recommendation differ from Public Counsel's recommendation in
19		Laclede Gas Company's GSIP proceeding Case No. GT-99-303?
20	A.	Yes, Public Counsel has modified its recommendation from the Laclede GSIP
21		proceeding.
22	Q.	Why?

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In Laclede's case Public Counsel recommended that both off-system sales and capacity release revenues be dealt with in a base rate proceeding by imputing a normalized level of revenues into the cost of service. The Commission approved moving off-system sales revenues to a base rate case, but chose to allow capacity release revenues to remain in the GSIP (Report and Order, GT-99-303, pg. 16, September 21, 1999). By not placing both components in the same mechanism, the Company is given an incentive to focus on the component that would lead to its greatest profit opportunities.

Also, there is no historical evidence to determine the amount of off-system sales AmerenUE could potentially make. Therefore, keeping these components in the incentive plan is the better alternative in this proceeding.

TRANSPORTATION AND STORAGE DISCOUNTS

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INTRODUCTION

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Q. What are transportation and storage discounts?

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Discounts are generally any reductions from the approved rates to the actual price

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paid for transportation or storage services.

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Q. Has AmerenUE obtained transportation or storage discounts during the initial

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A. Yes it has.

GSIP?

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Q. Did AmerenUE have transportation or storage discounts prior to the inception of

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the original GSIP?

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A. Yes it did.

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PUBLIC COUNSEL'S RECOMMENDATION

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MISCELLANEOUS ISSUES

has been awarded over ** in transportation and storage discounts.

Public Counsel recommends a baseline of ** ** in discounts. Once that

level is reached, then the Company should be allowed to profit by retaining 20%

Q. Does Public Counsel have any other recommendations?

of any discounts and the ratepayers receiving 80%.

A. Yes, AmerenUE should be required to submit quarterly monitoring reports to the Commission detailing any and all activity that the Company has been involved

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with in regard to any natural gas procurement activities relating to the incentive plan, capacity release and off-system sales, and transportation and storage discounts. These reports are common for the utilities that have incentive plans and are necessary for the parties to properly review the plan to determine the appropriate course of action upon the expiration of the experiment.

- How long should this program last?
- Α. This incentive plan should be approved for no more than a three-year period.
- Should there be a market out provision? Q.
- A. Yes, there should be a market out provision. Each party to this incentive plan should have the opportunity to review the program on a yearly basis and have the opportunity to move for its end prior to the existing expiration date if conditions change.

SUMMARY

- Please summarize your direct testimony.
- My direct testimony discusses Public Counsel's position regarding a gas supply incentive plan for AmerenUE and offers recommendations for certain modifications if the Commission decides to use the Company's proposed framework. A gas procurement incentive should be established only if it gives the Company the incentive to lock in prices within a reasonably expected level that reflects both historical and anticipated trends. Off-system sales and capacity release revenues need to be combined in order to keep the Company from having a distorted incentive to do one over the other. Further, before the Company should be allowed to profit from revenues in these two components, a combined

baseline amount of **____** should be achieved. Once this baseline amount is reached, the Company would be given the opportunity to keep 30% of recovered relief as extra profits. Transportation and storage discounts should be an activity that the Company is constantly pursuing to try and obtain the lowest possible price for its consumers. Therefore, AmerenUE should not be allowed profits from this activity.

- Q. What is Public Counsel's recommendations regarding the incentive plan if its approach is not used?
- A. Public Counsel's recommends these modifications in case the Commission decides to utilize the Company's framework. Regarding gas procurement, the sharing mechanism should be altered to give the Company a greater incentive to procure lower prices of gas for the consumers. This new grid is shown as schedule JAB-5 to my direct testimony. If transportation and storage discounts are to be included in the incentive plan, a baseline amount of **_____** should be reached by the Company before it can earn profits from this activity. Once the baseline level is reached, the Company's profit potential should be 20% of the discount obtained.
- Q. What are Public Counsel's recommendations regarding other issues relating to the gas supply incentive plan?
- A. Public Counsel recommends that AmerenUE be required to submit quarterly monitoring reports to the Commission to allow interested parties the opportunity to follow the plan as it progresses. Also, Public Counsel recommends that all parties have the opportunity to review the plan yearly and move to eliminate it if

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- conditions have changed sufficiently to warrant such action. Finally, Public Counsel recommends that this extension should not be continued for longer than three-years.
 - Q. Does this conclude your testimony?
 - A. Yes it does.

Cases of Filed Testimony James A. Busch

Company Union Electric Company	Case No. GR-97-393
Missouri Gas Energy	GR-98-140
Laclede Gas Company	GO-98-484
Laclede Gas Company	GR-98-374
St. Joseph Light & Power	GR-99-246
Laclede Gas Company	GT-99-303
Laclede Gas Company	GR-99-315
Fiber Four Corporation	TA-2000-23; et al.
Missouri American Water Company	WR-2000-281/SR-2000-282

DEVELOPMENT OF BENCHMARK PRICE

Union Electric Company d/b/a AmerenUE
Case No. GR-2000-512

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		PE	PL							
				N'	YMEX -	N	∄onthly	N	YMEX	
	97 - 98	98 - 99	99 - 00		Basis	Be	nchmark	3	3/4/00	Basis
Sept	2.42	1.56	2.77	\$	4.135	\$	2.721	\$	4.250	PEPL
Oct	3.01	1.90	2.43	\$	4.137	\$	2.869	\$	4.252	\$ (0.115)
Nov	3.16	1.95	2.94	\$	4.227	\$	3.069	\$	4.342	,
Dec	2.35	2.06	2.06	\$	4.327	\$	2.699	\$	4.442	TETCO
Jan	2.15	1.78	2.26	\$	4.317	\$	2.627	\$	4.432	\$ (0.091)
Feb	1.93	1.76	2.50	\$	4.112	\$	2.576	\$	4.227	,
Mar	2.15	1.58	2.48	\$	3.907	\$	2.529	\$	4.022	NGPL
Apr	2.19	1.76	2.79	\$	3.727	\$	2.617	\$	3.842	\$ (0.120)
May	2.18	2.22	2.94	\$	3.664	\$	2.751	\$	3.779	
Jun	1.94	2.12	4.21	\$	3.649	\$	2.980	\$	3.764	
Jul	2.27	2.17	4.20	\$	3.629	\$	3.067	\$	3.744	
Aug	1.84	2.51	3.70	\$	3.630	\$	2.920	\$	3.745	

TETCO

				NYMEX -		Monthly	
	97 - 98	98 - 99	99 - 00	- 1	3asis	Ber	nchmark
Sept	2.46	1.54	2.80	\$	4.159	\$	2.739
Oct	2.99	1.96	2.44	\$	4.161	\$	2.887
Nov	3.19	1.93	2.96	\$	4.251	\$	3.083
Dec	2.41	2.04	2.05	\$	4.351	\$	2.713
Jan	2.18	1.70	2.28	\$	4.341	\$	2.627
Feb	1.94	1.75	2.55	\$	4.136	\$	2.594
Mar	2.17	1.57	2.54	\$	3.931	\$	2.553
Apr	2.23	1.83	2.81	\$	3.751	\$	2.656
May	2.21	2.30	3.01	\$	3.688	\$	2.802
Jun	1.96	2.16	4.29	\$	3.673	\$	3.020
Jul	2.29	2.21	4.26	\$	3.653	\$	3.103
Aug	1.87	2.54	3.72	\$	3.654	\$	2.945

NGPL

				N	MEX -	N	onthly!
	97 - 98	98 - 99	99 - 00	- 1	Basis	Bei	nchmark
Sept	2.42	1.56	2.78	\$	4.130	\$	2.723
Oct	3.02	1.91	2.43	\$	4.132	\$	2.873
Nov	3.13	1.95	2.94	\$	4.222	\$	3.061
Dec	2.33	2.05	2.05	\$	4.322	\$	2.687
Jan	2.14	1.74	2.23	\$	4.312	\$	2.606
Feb	1.93	1.73	2.48	\$	4.107	\$	2.562
Mar	2.16	1.55	2.48	\$	3.902	\$	2.522
Apr	2.20	1.75	2.78	\$	3.722	\$	2.613
May	2.18	2.23	2.95	\$	3.659	\$	2.755
Jun	1.95	2.13	4.21	\$	3.644	\$	2.983
Jul	2.28	2.18	4.20	\$	3.624	\$	3.071
Aug	1.85	2.51	3.69	\$	3.625	\$	2.919

Source: Price levels - Inside FERC

Cancelling P.S.C. Mo. No.

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UNION ELECTRIC COMPANY GAS SERVICE

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MISSOURI SERVICE AREA

RIDER A

PURCHASED GAS ADJUSTMENT CLAUSE

The average demand cost per MMBtu for each supply region, which shall be determined annually through the issuance of a Request For Proposal ("RFP") prior to the start of each ACA year, shall be the weighted average demand cost per MMBtu of all the proposals received by the Company, pursuant to the RFP, for each type of supply contract within each supply region, exclusive of the volumes associated with the highest-priced 10% of all volumes for such type of contract and supply region.

4. The commodity cost benchmark component for all Other Supplies shall be computed by multiplying total natural gas volumes purchased for on-system requirements, exclusive of any volumes purchased by the Company on a "long-term" firm fixed price ("Long-term Firm Fixed Price") basis, by the Weighted Average Spot Cost of Gas ("WACOG"). The WACOG shall be developed by using "Inside FERC Gas Market Report" or "Gas Daily" (where specified) first-of-the-month indices and weighting the respective indices by service area as follows:

For the Panhandle Eastern service area:

- 96% Panhandle Eastern Pipe Line Co.-Texas,Oklahoma (mainline)
- 4% Average of Monthly Contract Index as reported in "Gas Daily" for ANR ML7 (entire zone) and Mich.-MichCon

For the Texas Eastern service area:

- 23% Texas Eastern Trans. Corp. South Texas zone
- 26% Texas Eastern Trans. Corp. East Texas zone
- 20% Texas Eastern Trans. Corp. West Louisiana zone
- 26% Texas Eastern Trans. Corp. East Louisiana zone
- 5% Texas Eastern Trans. Corp. M-1 (Kosi) Monthly Contract Index as reported in "Gas Daily"

DATE OF ISSUE February 18, 2000 DATE EFFECTIVE April 2, 2000

ISSUED BY C. W. Mueller President & CEO St. Louis, Missouri

Original	SHEET No.	29.12
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Cancelling P.S.C. Mo. No.

UNION ELECTRIC COMPANY GAS SERVICE

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<u>MISSOURI SERVICE AREA</u>

RIDER A

PURCHASED GAS ADJUSTMENT CLAUSE

For the Natural Gas Pipeline service area:

- 21% Natural Gas Pipeline Co. of America TexOk zone
- 75% Natural Gas Pipeline Co. of America Mid-continent zone
- 4% Natural Gas Pipeline Co. of America Iowa-Ill.

 Receipt Monthly Contract Index as reported in "Gas Daily"
- 5. A cumulative benchmark cost of gas shall be computed by summing the benchmark cost of gas for all months of the year or portion thereof.
- 6. At the end of each ACA year, the Company shall compare the cumulative benchmark cost of gas defined above to actual cumulative costs for the Company's on-system requirements, excluding the commodity cost of "Long-term Firm Fixed Price" supplies.
 - a. If the Company's cumulative actual cost is greater than the cumulative benchmark cost of gas but less than or equal to 104% of such cumulative benchmark cost of gas, the IA Account is not affected and such actual costs are deemed to be prudent.
 - b. If the Company's cumulative actual cost of gas is greater than 104% of the cumulative benchmark cost of gas but less than or equal to 110% of such cumulative benchmark cost of gas, the IA Account is credited and the IR Account is debited with 50% of the difference between such cumulative actual cost of gas and 104% of the benchmark cost of gas and such actual costs are deemed to be prudent.
 - c. If the Company's cumulative actual cost is greater than 110% of the cumulative benchmark cost of gas; the IA Account is credited and the IR Account is debited with 50% of the maximum difference compated in b. above and those costs in excess of 110% of the benchmark cost of gas shall be subject to a prudence review.

DATE OF ISSUE	February 18, 2000	DATE EFFECTIVE _	April 2, 2000
ISSUED BY	C. W. Mueller	President & CEO	St. Louis, Missouri

PUBLIC COUNSEL'S PROPOSED GAS PROCUREMENT INCENTIVE SCENARIOS

Union Electric Company d/b/a Ameren UE Case No. GR-2000-512

Scenario 1 - Fixed price below benchmark and F-O-M

Benchmark Level \$2.50

Futures Contract Price \$2.25

Actual F-O-M Index Price \$2.45

Cost Reduction - \$2.45-\$2.25 = \$.20

Company's Profit = 10% of first \$.10, 20% second \$.10

= \$.01 + \$.02

= \$.03 per MMBtu

Scenario 2 - No Futures contracts purchased

Benchmark Level \$2.50

Futures Contract Price \$0

No potential profit for Company.

Scenario 3 - Futures below benchmark, above F-O-M

Benchmark Level \$2.50

Futures Contract Price \$2.25

Actual F-O-M Index Price \$2.00

No cost reductions, actual price less than futures contract price.

Scenario 4 - Futures below benchmark, F-O-M above benchmark

Benchamark Level \$2.50

Futures Contract Price \$2.25

Actual F-O-M Index Price \$3.00

Cost Reduction = \$2.50 - \$2.25 = \$.25

Company Profit = 10% of first \$.10, 20% of next \$.10, 30% of last \$.05

= \$.01 + \$.02 + \$.015

= \$.045 per MMBtu

MODIFIED SHARING MECHANISM

Union Electric Company d/b/a AmerenUE Case No. GR-2000-512

Sharing Grid for Prices below benchmark

Actual Price of Gas	Sharing Component Ratepayers/Company
90% - Benchmark*	90/10
80 - 90%	80/20
70 - 80%	70/30
60 - 70%	60/40
50 - 60%	50/50
Below 50%	Ratepayers receive 100%

Sharing grid for prices above benchmark

Actual Price of Gas	Sharing Component Ratepayers/Company	
Benchmark* - 110%	90/10	
110% - 120%	80/20	
120 - 130%	70/30	
130 - 140%	60/40	
140 - 150%	50/50	
Above 150%	Company responsible 100%	

^{*}Benchmark as established by AmerenUE's approved tariffs

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