COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

PUBLIC SERVICE COMMISSION

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUTMENT OF BASE RATES

CASE NO. 2009-00549

ATTORNEY GENERAL'S PRE-FILED TESTIMONY

Comes now the intervenor, the Attorney General of the Commonwealth of

Kentucky, by and through his Office of Rate Intervention, and files the following

testimony in the above-styled matter.

Respectfully submitted, **JACK QONWAY** ATTORNEY GENERA

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Certificate of Service and Filing

Counsel certifies that an original and ten photocopies of the foregoing were served and filed by hand delivery to Jeff Derouen, Executive Director, Public Service Commission, 211 Sower Boulevard, Frankfort, Kentucky 40601; counsel further states that true and accurate copies of the foregoing were mailed via First Class U.S. Mail, postage pre-paid, to:

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this 23 day of April, 2010 Q

Assistant Attorney General

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUTMENT OF BASE RATES

CASE NO. 2009-00549

AFFIDAVIT OF GLENN A. WATKINS

Commonwealth of Virginia

Glenn A. Watkins, being first duly sworn, states the following: The prepared Pre-Filed Direct Testimony, and the Schedules and Appendix attached thereto constitute the direct testimony of Affiant in the above-styled case. Affiant states that he would give the answers set forth in the Pre-Filed Direct Testimony if asked the questions propounded therein. Affiant further states that, to the best of his knowledge, his statements made are true and correct. Further affiant saith not.

Glenn A. Watkins

SUBSCRIBED AND SWORN to before me this 19th day of ______ 2010. NØTARY PUBLIC

My Commission Expires: 10-13-14 Registration No: 7315144



COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS BASE RATES

)) CASE NO. 2009-00549)

PREPARED DIRECT TESTIMONY AND SCHEDULES

OF

GLENN A. WATKINS

ON BEHALF OF THE

KENTUCKY OFFICE OF THE ATTORNEY GENERAL

APRIL 23, 2010

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I. <u>INTRODUCTION</u>

2		
3	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
4	А.	My name is Glenn A. Watkins. My business address is James Center III, 1051
5		East Cary Street, Suite 601, Richmond, VA 23219.
6		
7	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
8	A.	I am a Principal and Senior Economist with Technical Associates, Inc., which is
9		an economic and financial consulting firm with offices in Richmond, Virginia.
10		
11	Q.	ON WHOSE BEHALF ARE YOU TESTIFYING?
12	A.	I am testifying on behalf of the Office of Rate Intervention of the Kentucky Office
13		of Attorney General ("OAG").
14		
15	Q.	PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS.
ĵ	A.	Except for a six-month period during 1987 in which I was employed by Old
17		Dominion Electric Cooperative as its forecasting and rate economist, I have been
18		employed by Technical Associates continuously since 1980.
19		During my career at Technical Associates, I have conducted marginal and
20		embedded cost of service, rate design, cost of capital, and load forecasting studies
21		involving numerous electric, gas, water/wastewater, and telephone utilities, and have
22		provided expert testimony in Alabama, Arizona, Georgia, Kansas, Kentucky, Maine,
23		Maryland, Massachusetts, Michigan, North Carolina, New Jersey, Ohio, Illinois,
24		Pennsylvania, Vermont, Virginia, South Carolina, Washington, and West Virginia. I
25		hold an M.B.A. and B.S. in economics from Virginia Commonwealth University. I am a
26		member of several professional organizations as well as a Certified Rate of Return
27		Analyst. A more complete description of my education and experience is provided in my
28		Schedule GAW-1 to my testimony.
29		

30 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

•	A.	Technical Associates has been retained by the OAG to evaluate the
2		reasonableness of Louisville Gas & Electric Company's ("LG&E" or "Company")
3		proposed electric weather normalization adjustment, electric and natural gas class cost of
4		service studies (CCOSS), proposed distribution of revenues by class, and residential
5		electric and natural gas rate designs. The purpose of my testimony, therefore, is to
6		comment on LG&E's proposals on these issues and to present my findings and
7		recommendations based on the results of the studies I have undertaken on behalf of the
8		OAG.
9		
10	II.	ELECTRIC WEATHER NORMALIZATION
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12	Q.	IS LG&E PROPOSING A WEATHER NORMALIZATION ADJUSTMENT FOR
13		ITS ELECTRIC OPERATIONS IN THIS CASE?
14	A.	Yes. Consistent with LG&E's last several rate increase applications, the
15		Company is proposing a weather normalization adjustment for this case.
j		
17	Q.	HAS THIS COMMISSION EVER APPROVED AN ELECTRIC WEATHER
18		NORMALIZATION ADJUSTMENT?
19	A.	To the best of my knowledge, this Commission has not approved an electric
20		weather normalization adjustment.
21		
22	Q.	WHAT EFFECT DOES LG&E'S PROPOSED ELECTRIC WEATHER
23		NORMALIZATION HAVE ON ITS REQUESTED INCREASE?
24	A.	In this particular rate case, LG&E's proposed electric weather normalization has
25		the effect of reducing its requested revenue increase. That is, as a result of Mr. Seelye's
26		proposed methodology and analysis, he concludes that actual test year sales and revenues
27		were less than what would be expected under a more normal weather pattern.
28		Specifically, Mr. Seelye's proposed weather adjustment results in an increase to test year
29		revenue of \$5.751 million and an increase to variable expenses of \$1.899 million. The
30		net effect of Mr. Seelye's weather adjustment is to increase test year operating income,
L		before income taxes of \$3.252 million.

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Q. DO YOU AGREE WITH MR. SEELYE'S PROPOSED ELECTRIC WEATHER NORMALIZATION ADJUSTMENT?

No.

3 4 A.

5 Q. PLEASE EXPLAIN.

6 A. Although a portion of Residential and Commercial electricity usage is sensitive to 7 temperature for heating and cooling, over the course of an entire year short term 8 increased sales (due to colder than average temperatures in winter and warmer than 9 average temperatures in summer) are generally offset by short-term weather conditions in 10 the opposite direction. Furthermore, and unlike weather sensitive natural gas sales that are entirely weather dependent for heating load, electricity serves both heating and 11 12 cooling (air conditioning) load. As such, even if a winter is somewhat milder than 13 normal (and heating sales are less than expected), the following summers are often 14 somewhat more severe than normal (and cooling sales are more than expected). Under 15 these conditions, an electric utility's energy sales are evened out over the course of an ; entire year. For this reason, many, if not most, state utility Commissions do not 17 recognize weather normalization for ratemaking purposes.

In this case, Mr. Seelye has developed a methodology that evaluates whether individual monthly sales are greater than or less than an outside band of weather normalcy. If an individual month's expected heating degree days (HDD) or cooling degree days (CDD) fall outside of Mr. Seelye's band of what would be expected under relatively normal weather conditions, that month's sales are adjusted upward or downward.

24The flaw in Mr. Seelye's logic is that each month's analysis and determination of25weather normalcy is independent and mutually exclusive of all other months within the26same heating or cooling season.

Mr. Seelye's Exhibit 15 shows how his monthly sales adjustments are determined. Using Mr. Seelye's definition of LG&E's cooling season running from May 1 through October 31 as an example, we see that the month of May is evaluated to determine if that single month's weather pattern was outside of a band of normal weather. In this instance, the weather in May 2009 was not deemed to be abnormally warm (outside the band of normalcy), such that no adjustment was made to actual May sales. The same was true for
June, August, and September 2009. However, Mr. Seelye determined that the month of
July 2009 was cooler than normal (and outside of his normalcy band) so this month's
sales were adjusted upward. Although Mr. Seelye's mutually exclusive analysis is
conducted on a month by month basis, one could also apply the same logic on a weekly,
daily, or even hourly basis.

7 The flaw in using any of the sub-sets (partial periods) of an entire heating or 8 cooling season is that while a short-term period may fall outside of Mr. Seelye's weather 9 normalcy band such as more severe weather than expected the remaining sub-sets (partial 10 periods) within the same overall heating or cooling season may have been somewhat 11 milder than average and hence not subject to adjustment. However, when these 12 somewhat milder sub-sets (partial periods) are consolidated, we find that the entire 13 heating or cooling season overall cannot be said to be abnormal. For example, consider 14 the following hypothetical example: suppose July was abnormally cool and its weather pattern (CDD) fell outside of Mr. Seelye's band of normalcy. Also assume that June, 15 August, and September were just marginally warmer than average such that these 17 month's did not fall outside of the normalcy bands. Even though the total cooling degree 18 days over the entire summer period (cooling season) were the same as the historical 19 average (cooler July, yet somewhat warmer June, August and September), Mr. Seelye's 20 approach would result in a weather adjustment (an increase to sales) simply because one 21 month of the entire season was beyond a range of normal weather.

22

Q. WHAT WAS THE ACTUAL COOLING SEASON EXPERIENCE DURING THE TEST YEAR?

A. Mr. Seelye defines LG&E's cooling season as May through October. I disagree with the inclusion of May and October for reasons that I will explain later. For the test year months of June through September (2009), the 30-year average cooling degree days are 1,360. The standard deviation of this 30-year average, is 202. As such, using Mr. Seelye's banding approach of defining a range of normal weather, a normal weather range is between 1,158 CDDs and 1,562 CDD. The actual cooling degree days during the June through September 2009 (test-year) period were 1,142 which is 16 CDD beyond

, the "normal" band. As such, one may conclude that the test year cooling season was just slightly cooler (milder) than the range of expected normal weather. However, the above 2 3 determination is only true by accepting the subjective banding definition of plus or minus 4 one standard deviation from the thirty-year average. What this means is that about 68% of observations are expected to fall within the plus or minus one standard deviation and 5 6 would be considered as the limits of normalcy. The remaining 32% would be considered 7 "abnormal" under Mr. Seelye's approach. Although there are no established parameters 8 as to exactly what percentage should be considered to fall within an expected normal 9 range, extremes are often defined as those that are expected to occur less than 5% of the 10 time. This 5% level of significance is by statistical definition approximately plus or 11 minus two standard deviations. As such, if the definition of normal weather is expanded 12 from 68% (plus or minus one standard deviation) to 95% (plus or minus two standard 13 deviations) we see that the test year experience falls well within the band of normalcy.

It is not my intention to question whether one or two standard deviations are appropriate, but rather that Mr. Seelye's pre-selected definition of one standard deviation results in the test year being considered just slightly beyond his range of normalcy. In my opinion, this minor difference is not reason for this Commission to alter its long standing practice of not considering weather adjustments for electric utilities.

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Q. MR. SEELYE INCLUDED THE MONTHS OF MAY AND OCTOBER AS COOLING SEASON MONTHS. SHOULD THESE MONTHS BE INCLUDED AS "COOLING MONTHS"?

A. No. These months are considered shoulder months. Days in May and October can be cool or fairly warm such that these months are comprised of heating degree days and cooling degree days. As such, heating and air conditioning loads are not predictable in May and October. To illustrate, consider Mr. Seelye's Exhibit 15. On average, May has 72 HDDs throughout the month and 123 CDDs. Similarly, October is historically comprised of 221 HDDs and only 40 CDDs. Indeed, October tends to have significantly more heating load than air conditioning load.

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III.

ELECTRIC CLASS COST OF SERVICE

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Q. PLEASE EXPLAIN THE CONCEPT OF A CLASS COST OF SERVICE STUDY ("CCOSS").

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A. First, I note that there are two general types of cost of service studies used for public utility ratemaking: marginal cost studies; and embedded, fully allocated cost studies. LG&E has utilized a traditional embedded cost of service concept in this case for purposes of establishing its overall retail revenue requirement, as well as for its class cost of service study ("CCOSS"). As such, I will limit my explanation to embedded class cost of service studies.

11 Embedded cost of service studies are often referred to as fully allocated cost 12 studies. This is because the vast majority of an electric utility's plant investment serves all customers, and the majority of expenses are incurred in a joint manner such that these 13 costs cannot be specifically attributed to any individual customer or group of customers. 14 15 To the extent that certain costs can be specifically attributable to a particular customer (or ; group of customers), these costs are often directly assigned in a CCOSS. However, the 17 vast majority of LG&E's Production, Transmission, and Distribution plant and expenses 18 are incurred jointly to serve all (or most) customers. These joint costs are then allocated 19 to rate classes. It is generally recognized that to the extent possible, joint costs should be 20 allocated to classes based on the concept of cost causation; i.e., costs are allocated based 21 on specific factors that cause costs to be incurred by the utility. Although cost analysts 22 generally strive to abide by the concept of cost causation to the greatest extent practical, some costs (particularly overhead costs), cannot be attributed to specific exogenous 23 24 factors and must be subjectively assigned or allocated to rate classes. With regards to 25 those costs in which cost causation can be attributed, cost of service experts often 26 disagree as to what is the most cost causative factor; e.g., peak demand, energy usage, 27 number of customers, etc.

28

29 Q. PLEASE EXPLAIN HOW CCOSS RESULTS SHOULD BE USED IN THE 30 RATEMAKING PROCESS.

• A. Although there are certain principles used by all cost of service analysts, there are often significant disagreements on the specific factors that drive certain costs. These 2 3 disagreements can and do arise as a result of the quality of data and level of detail available from financial records, as well as fundamental differences in opinions regarding 4 5 the design or cost causation factors that should be considered to properly allocate costs to rate schedules or customer classes. Furthermore, and as mentioned earlier, cost causation 6 7 factors cannot be realistically ascribed to some costs such that subjective decisions are required. In this regard, two different cost studies conducted for the same utility and 8 9 time period can, and often do, yield different results. As such, regulators should consider 10 CCOSS results as one of many tools in assigning revenue responsibility.

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Q. PLEASE EXPLAIN HOW YOU PROCEEDED WITH YOUR ANALYSIS OF LG&E'S CCOSS.

14 A. The process in which I conducted my analysis in this case was identical to how I 15 evaluate all CCOSSs. First, I reviewed the structure and organization of the Company's • CCOSS sponsored by Mr. Seelye. Once the basic structure was understood, I reviewed 17 the accuracy and completeness of the primary drivers (allocators) used to assign costs to 18 rate schedules and classes. Next, I reviewed Mr. Seelye's selection of allocators to 19 specific rate base, revenue and expense accounts. Finally, I adjusted certain aspects of 20 the Company's study to better reflect cost causation and cost incidence by rate schedule 21 and customer class.

22

Q. DID YOU FIND THE COMPANY'S STUDY TO BE MATHEMATICALLY ACCURATE?

25 A. Yes. Perhaps the most fundamental requirement of an embedded CCOSS is that 26 the sum of the parts (classes) must equal the whole (system). This is true with respect to 27 the allocation of financial accounts, as well as the various allocation factors. 28 Furthermore, certain costs previously allocated are carried forward for other purposes 29 such as for the development of composite or internal allocators and for the assignment of 30 In all regards, I found Mr. Seelye's CCOSS to be mathematically income taxes. accurate. 4

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Q. DID YOUR EXAMINATION RESULT IN ANY DISAGREEMENTS WITH THE ASSUMPTIONS OR METHODOLOGIES USED BY MR. SEELYE?

A. Yes. Although I have two material disagreements with Mr. Seelye's CCOSS, my ultimate findings are not significantly different from Mr. Seelye's, with the possible exception of the lighting classes.

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Q. PLEASE PROVIDE A SUMMARY OF MR. SEELYE'S AND YOUR CCOSS FINDINGS.

9 10 A. The following is a summary comparison of Mr. Seelye's and my class rates of return at current rates:

11		Class ROR At	Current Rates
12	Class	Seelye	Watkins
13	Residential	3.19%	4.01%
14	General Service	9.12%	9.89%
15	PS-Primary PS-Secondary	4.86% 6.62%	4.01% 6.06%
ī	CTOD-Primary	4.47%	2.67%
17	CTOD-Secondary ITOD-Primary	4.42% 3.31%	3.57% 1.69%
18	ITOD-Secondary	5.27%	3.90%
19	RTS-Transmission Sp. Contract-Ft. Knox	2.91% -0.16%	1.47% -0.48%
20	Sp. Contract-Water Companies	-0.34%	-1.44%
21	Lighting-RLS & LS Lighting-LE	8.88% 3.38%	7.43% -2.72%
22	Lighting-Traffic	4.25%	-0.21%
23	Total Company	4.77%	4.77%

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Q.

PLEASE OUTLINE THE TWO MATERIAL DISAGREEMENTS YOU HAVE WITH MR. SEELYE'S CCOSS.

A. The two substantial disagreements that I have with Mr. Seelye are his "Modified
Base-Intermediate-Peak" method used to allocate generation costs and his classification
of distribution facilities between customer-related and demand-related portions.

A. Generation

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- 3Q.YOU INDICATE THAT ONE OF YOUR DISAGREEMENTS WITH MR.4SEELYE IS HIS USE OF WHAT HE REFERS TO AS A MODIFIED BASE-5INTERMEDIATE-PEAK METHOD TO ALLOCATE GENERATION COSTS.6ARE THERE OTHER METHODOLOGIES WHICH MAY BE USED TO7ALLOCATE GENERATION- RELATED PLANT AND EXPENSES?
- A. Yes. There are several demand allocation methods utilized in the electric
 industry. The current National Association of Regulatory Utility Commissioners
 ("NARUC") <u>Electric Utility Cost Allocation Manual</u> discusses at least thirteen embedded
 demand allocation methods, while Dr. James Bonbright noted the existence of at least 29
 demand allocation methods in his treatise, <u>Principles of Public Utilities Rates</u>.
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Q.

WHY DO SO MANY GENERATION ALLOCATION METHODS EXIST FOR THE ELECTRIC INDUSTRY?

- A. Utilities design and build generation facilities to meet the energy and demand requirements of their customers on a collective basis. Because of this, and the physical laws of electricity, it is impossible to determine which customers are being served by which facilities. As such, production facilities are joint costs; i.e., used by all customers. Because of this commonality, production-related costs are not directly known for any customer or customer group and must somehow be allocated.
- 22 If all customer classes used electricity at a constant rate throughout the year, there 23 would be no disagreement as to the proper assignment of generation-related costs: all analysts would agree that energy usage in terms of kWh would be the proper approach to 24 25 reflect cost causation and cost incidence. However, such is not the case in that LG&E 26 experiences periods (hours) of much higher demand during certain times of the year and 27 across various hours of the day. Moreover, all customer classes do not contribute in 28 equal proportions to these varying demands placed on the generation system. То 29 complicate matters, the electric utility industry is somewhat unique in that there is a 30 distinct energy/capacity trade-off relating to generation costs. That is, utilities design their mix of production facilities (generation and power supply) to minimize the total

costs of energy and capacity, while also ensuring there is enough available capacity to ۱ meet peak demands. The trade-off occurs between the level of fixed investment per unit 2 3 of capacity (KW) and the variable cost of producing a unit of output (kWh). Coal and nuclear units require high capital expenditures resulting in large investments per KW, 4 whereas smaller units with higher variable production costs generally require 5 significantly less investment per KW. Due to varying levels of demand placed on the 6 system over the course of each day, month, and year there is a unique optimal mix of 7 production facilities for each utility that minimizes the total cost of capacity and energy; 8 9 i.e., its cost of service.

Therefore, as a result of the energy/capacity cost trade-off, and the fact that the service requirements of each utility are unique, many different allocation methodologies have evolved in an attempt to equitably allocate joint production costs to individual classes.

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Q. PLEASE EXPLAIN.

Total production costs vary each hour of the year. Theoretically, energy and Ĵ A. capacity costs should be allocated to classes each and every hour of the year. This would 17 18 result in 8,760 hourly allocations during non-leap years. Although such an analysis is certainly possible with today's technology, the time and cost necessary for such an 19 undertaking would likely exceed the additional benefits obtained over simpler methods. 20 21 This is because the analyst does not know precise class loads each and every hour, and 22 subjective decisions must still be made regarding the assignment of fixed investment 23 (capacity costs) to individual hours. With this practical constraint in mind, each method has its strengths and weaknesses regarding its reasonableness in reflecting cost causation 24 25 as well as the cost and effort required to produce a study.

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BRIEFLY DISCUSS THE STRENGTHS AND WEAKNESSES OF COMMON Q. **PRODUCTION COST ALLOCATION METHODOLOGIES.** 28

29 A brief description of the most common fully allocated cost methodologies and A. 30 attendant strengths and weaknesses are as follows:

1 Single Coincident Peak ("1-CP") -- The basic concept underlying the 1-CP 2 method is that an electric utility must have enough capacity available to meet its customers' peak coincident demand. As such, advocates of the 1-CP method reason that 3 customers (or classes) should be responsible for fixed capacity costs based on their 4 respective contributions to this peak system load. The major advantages to the 1-CP 5 method are that the concepts are easy to understand, the analyses required to conduct a 6 7 CCOSS are relatively simple, and the data requirements are significantly less than some 8 of the more complex methods.

9 The 1-CP method has several shortcomings, however. First, and foremost, is the 10 fact that the 1-CP method totally ignores the capacity/energy trade-off inherent in the 11 electric utility industry. That is, the sole criterion for assigning one hundred percent of 12 fixed capacity costs is the classes' relative contributions to load during a single hour of 13 the year. This method does not consider, in any way, the extent to which customers use these facilities during the other 8,759 hours of the year. This may have severe 14 15 consequences because a utility's planning decisions regarding the amount and type of generation capacity to build and install is predicated not only on the maximum system j 17 load, but also on how customers demand electricity throughout the year, i.e., load 18 duration. To illustrate, if a utility had a peak load of 15,000 MW and its actual optimal 19 generation mix included an assortment of nuclear, coal, hydro, combined cycle and 20 combustion turbine units, the total cost of capacity is significantly higher than if the 21 utility only had to consider meeting 15,000 MW for 1 hour of the year. This is because 22 the utility would install the cheapest type of plant, (i.e., peaker units) if it only had to 23 consider one hour a year.

24 There are two other major shortcomings of the 1-CP method. First, the results 25 produced with this method can be unstable from year to year. This is because the hour in which a utility peaks annually is largely a function of weather. Therefore, annual peak 26 27 load depends on when severe weather occurs. If this occurs on a weekend or holiday, 28 relative class contributions to the peak load will likely be significantly different than if 29 the peak occurred during a weekday. The other major shortcoming of the 1-CP method is 30 often referred to as the "free ride" problem. This problem can easily be seen with a summer peaking utility that peaks about 5:00 p.m. Because street lights are not on at this £

time of day, this class will not be assigned any capacity costs at all and enjoy a free ride on the assignment of generation costs that this class requires.

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<u>Summer and Winter Coincident Peak ("S/W Peak"</u>) -- The S/W Peak method was developed because some utilities' annual peak load occurs in the summer during some years and in the winter during others. Because customers' usage and load characteristics may vary by season, the S/W Peak attempts to recognize this characteristic. This method is essentially the same as the 1-CP method except that two hours of load are considered instead of one. This method has essentially the same strengths and weaknesses as the 1-CP method, and in my opinion, is only marginally more reasonable than the 1-CP method.

11 <u>Twelve Monthly Coincident Peak ("12-CP")</u> -- Arithmetically, the 12-CP 12 method is essentially the same as the 1-CP method except that class contributions to each 13 monthly peak are considered. Although the 12-CP method bears little resemblance to 14 how utilities design and build their systems, the results produced by this method better 15 reflect the cost incidence of a utility's generation facilities.

Most electric utilities have distinct seasonal load patterns such that there are high system peaks during the winter and summer months, and significantly lower system peaks during the spring and autumn months. By assigning class responsibilities based on their respective contributions throughout the year, consideration is given to the fact that utilities will call on all of their resources during the highest peaks, and only use their most efficient plants during lower peak periods. Therefore, the capacity/energy trade-off is implicitly considered to a small extent under this method.

The major shortcoming of the 12-CP method is that accurate load data is required by class throughout the year. This generally requires a utility to maintain on-going load studies. However, once a system to record class load data is in place, the administration and maintenance of such a system is not overly cumbersome for larger utilities.

Peak and Average ("P&A") -- The various P&A methodologies rest on the premise that a utility's actual generation facilities are placed into service to meet peak load and serve consumers demands throughout the entire year. Hence, the P&A method assigns capacity costs partially on the basis of contributions to peak load and partially on the basis of consumption throughout the year. Although there is not universal agreement

on how peak demands should be measured or how the weighting between Peak and Average demands should be performed, many P&A studies use class contributions to coincident-peak demand for the "peak" portion, while some studies weight the Peak and Average loads based on the system coincident load factor and others give equal weight to energy usage and peak demand.

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The major strengths of the P&A method are that an attempt is made to recognize the capacity/energy trade-off in the assignment of fixed capacity costs, and that data requirements are minimal.

9 Although the recognition of the capacity/energy trade-off is admittedly arbitrary 10 under the P&A method, most other allocation methods also suffer to some degree of 11 arbitrariness.

12 Average and Excess ("A&E") -- The A&E method also considers both peak 13 demands and energy consumption throughout the year. However, the A&E method is 14 much different than the P&A method in both concept and application. The A&E method 15 recognizes class load diversity within a system, such that all classes do not call on the j utility's resources to the same degree, at the same times. Mechanically, the A&E method 17 weights average and excess demands based on system coincident load factor. Individual 18 class "excess" demands represent the difference between the class non-coincident peak 19 demand and its average annual demand. The classes' "excess" demands are then summed 20 to determine the system excess demand. Under this method, it is important to distinguish 21 between coincident and non-coincident demands. This is because if coincident, instead 22 of non-coincident, demands are used when calculating class excesses, the end result will 23 be exactly the same as that achieved under 1-CP method.

Although the A&E method bears virtually no resemblance to how generation systems are designed, this method can produce fair and reasonable results for many utilities. This is because no class will receive a free-ride under this method, and because recognition is given to average consumption as well as to the additional costs imposed by not maintaining a perfectly constant load.

A potential shortcoming of this method is that customers that only use power during off-peak periods will be overburdened with costs. Under the A&E method, offpeak customers will be assigned a higher percentage of capacity costs because their non-

coincident load factor may be very low even though they call on the utility's resources only during less costly off-peak periods.

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Equivalent Peaker ("EP") -- The EP method combines certain aspects of traditional embedded cost methods with those used in forward-looking marginal cost studies. The EP method often relies on planning information in order to classify individual generating units as energy- or demand-related and considers the need for a mix of base load intermediate and peaking generation resources.

The EP method has substantial intuitive appeal in that base load units that operate with high capacity factors are allocated largely on the basis of energy consumption with costs shared by all classes based on their usage, while peaking units that are seldom used and only called upon during peak load periods are allocated based on peak demands to those classes contributing to the system peak load. However, this method requires a significant amount of data.

14 Base-Intermediate-Peak ("BIP") -- The BIP method is an accepted allocation approach that attempts to recognize the capacity/energy trade-off that actually exists 15 j within a utility's portfolio of generation assets. A utility's base load units tend to run 17 during all (or most) periods of the year; i.e., both peak load periods as well as to satisfy energy requirements in the most efficient manner possible during minimum demand 18 19 periods (e.g., during the middle of the night). Because base load units operate regardless 20 of peak requirements, they are most appropriately classified as energy-related. At the opposite end of the spectrum are peaking units, such as combustion turbines. These units 21 22 operate with high variable costs and are only utilized to help meet peak period demands. 23 As such, peakers are classified as peak demand-related. Intermediate plants (e.g., many 24 combined cycle units) are not as efficient as large base load plants but more efficient than 25 peaking units. For this reason, Intermediate plants are not called upon (dispatched) 26 during periods of minimum (base) load but are dispatched before, and more frequently, than peaker units. Therefore, Intermediate plants can be said to serve a dual purpose: 27 28 partially energy-related and partially demand-related. Intermediate plants are typically 29 classified as partially energy-related and partially demand-related based on their respective capacity or availability factors.¹ In my opinion, the BIP method is an excellent cost allocation approach for many utilities as it captures the actual differences in the capacity/energy trade-off that exist across a utility's generation mix. The BIP method may not be appropriate for utilities that purchase the majority of their energy needs or for utilities with an inefficient mix of generating resources.

7 Q. MR. WATKINS, YOU HAVE DISCUSSED THE STRENGTHS AND 8 WEAKNESSES OF THE MORE COMMON GENERATION ALLOCATION 9 METHODOLOGIES. ARE ANY OF THESE METHODS CLEARLY INFERIOR 10 IN YOUR VIEW?

11 Yes. In my opinion the 1-CP and seasonal CP (such as 4-CP) methods do not A. reasonably reflect cost causation for integrated electric utilities because these methods 12 13 totally ignore the utilization of a utility's facilities. Perhaps the simplest way to explain 14 this is to consider that the methodology selected is used to allocate Generation plant investment. Generation investment costs vary from a low of a few hundred dollars per 15 j KW of capacity for high running cost (energy cost) peakers to several thousand dollars 17 per KW for base load nuclear facilities with low running costs. If a utility were only 18 concerned with being able to meet peak load with no regard to running costs, it would 19 simply install inexpensive peakers. Under such an unrealistic system design, plant costs 20 would be much lower than in reality but running costs; i.e., variable fuel costs would be 21 astronomical, and would result in a higher overall cost to serve customers. The 1-CP and 22 seasonal CP methods totally ignore this very important fact.

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Q. MR. SEELYE HAS USED WHAT HE REFERS TO AS A MODIFIED BIP METHOD TO ALLOCATE GENERATION COSTS. DID HE CALCULATE THE BIP METHOD IN A REASONABLE MANNER?

A. Mr. Seelye's Modified BIP method does not follow the generally accepted BIP
 approach, and in fact, I have never seen Mr. Seelye's method used in any other cases or
 utilities. However, I would be reluctant to say his approach is totally unreasonable.

¹ Capacity factor is the ratio of average utilization (output) over a year to peak hour output. Availability factor is the ratio of average utilization during periods when a unit is available for dispatch (i.e., excludes outages) to peak hour output.

Whereas Mr. Seelye's Modified BIP method does allocate a portion of generation 2 facilities based on energy (34.89%) and a portion on peak demands (65.11%), his approach does not reflect the actual mix of supply resources utilized by LG&E. At this 3 point, it should be noted that LG&E's and Kentucky Utilities' ("KU") generation 4 5 resources are centrally dispatched. Both Mr. Seelye and I have recognized this combined central dispatch in our allocation studies. When I refer to LG&E's actual generation 6 resources, I am referring to the joint resources of LG&E and KU and not the individual 7 8 legal ownership of these plants for booking purposes.

9 The traditional BIP method is a supply-based approach that classifies generation 10 plant between energy-related and demand-related; i.e., it considers the actual supply 11 characteristics of a utility's generation portfolio. These supply based classifications are 12 then allocated to classes based on demand-side criteria (kWh usage and KW peak 13 demand).

Mr. Seelye's approach ignores the actual supply-side characteristics of EON's 14 15 generation portfolio because it only considers relative differences in system usages and demands. In fact, given EON's retail customers combined usage and demand profiles, j 17 Mr. Seelye's approach would classify a utility's generation investment exactly the same 18 regardless of its actual portfolio mix of plants. Mr. Seelye's classification would be 19 identical if EON's portfolio mix was comprised entirely of base load units or entirely of 20 peaking units. In my opinion, this assumption (or result) is not consistent with the intent 21 of the BIP method. Namely, to recognize the capacity/energy tradeoff actually present in 22 a system.

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24 Q. PLEASE EXPLAIN THE ACTUAL COMPOSITION OF EON'S GENERATION 25 **RESOURCES.**

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A.

With the addition of Trimble County Unit #2, EON's generation capacity will be about 9,600 MW. The following is a summary of this generation portfolio by Fuel Type:

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2	Fuel	MW Capacity	% Of Total
3	Coal	6,998	73%
4	Gas/Oil	2,499	26%
5	Hydro	113	1%
C C	Total	9,610	100%

7 As can be seen above, about 73% of EON's generation comes from very low cost coal 8 plants. Furthermore, the combined LG&E and KU peak native load is about 6,550 MW, 9 which is lower than the capacity of EON's coal plants. This is especially relevant for cost allocation purposes since EON's coal plants tend to be base load plants in nature. 10 11 That is, they operate with low variable operating expenses per unit (KWH) and have very 12 high availability factors in the 80% to 90% range. This actual mix of generation assets is dissimilar to most electric utilities in the United States which rely on a much higher 13 14 percentage of intermediate (high variable cost) plants primarily utilizing natural gas for 15 fuel. Indeed, Kentucky ratepayers and shareholders alike are very fortunate to have an j abundance of low cost electric energy resources.

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Q. DOES MR. SEELYE'S COST ALLOCATION METHODOLOGY REFLECT THE FACT THAT EON'S GENERATION PORTFOLIO IS COMPRISED PRIMARILY OF BASE LOAD UNITS?

21 A. No.

Q. PLEASE EXPLAIN HOW YOU CONDUCTED YOUR TRADITIONAL BIP METHOD.

A. During the discovery phase of this proceeding, LG&E provided the order of economic dispatch for each of its generation units.² With this information, along with generating plant information provided in EON's 2008 Integrated Resource Plan ("IRP"), such as fuel type, nameplate capacity (MW), annual KWH generation, capacity factors, and availability factors, I was able to separate each generation unit into Base,

² Economic Order of dispatch is based on variable running costs. That is, the unit with the lowest running costs (primarily fuel) per unit of KWH output is dispatched first, followed by the next least expensive generation facility, and so forth.

, Intermediate, Peak, or Hydro. Base load units are classified as 100% energy-related as they are designed and utilized to meet energy requirements throughout the year; i.e., they 2 are low-cost units that serve energy needs and are not installed to meet short time period 3 peak load requirements. Conversely, peak load (peaker) units are classified as 100% 4 5 demand-related because of their high cost of output; i.e., they are dispatched and utilized 6 only to meet peak load requirements. Intermediate plants operate at higher variable costs 7 per unit than base load units yet are considerably less costly to operate than peak units, 8 and are dispatched during periods of Intermediate demand (higher than base load but 9 lower than peak period loads). I have followed the industry practice of classifying these 10 units between energy and peak demand based on each facility's capacity factor. Finally, I have classified EON's Hydro facilities as 100% energy-related as they are run of the river 11 12 or flood control facilities and have little or no ability to reliably meet peaking 13 requirements.

14 The results of my BIP generation classification is presented in my Schedule 15 GAW-2. My BIP generation classification study results in the following aggregate 3, generation classification:

Energy-related:

Demand-related:

82.12%

17.88%

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20Q.IN HIS REBUTTAL TO YOUR CCOSS FINDINGS IN LG&E'S 2008 RATE21CASE (CASE NO. 2008-000252), MR. SEELYE INDICATED THAT HE COULD22NOT RECALL EVER SEEING COST OF SERVICE STUDIES THAT23ALLOCATE SUCH A LARGE PERCENTAGE (82%) OF PRODUCTION AND24TRANSMISSION CAPACITY COSTS ON THE BASIS OF ENERGY. ARE YOU25AWARE OF OTHER UTILITY STUDIES WITH SIMILARLY HIGH26PRODUCTION AND TRANSMISSION PLANT ENERGY CLASSIFICATIONS?

A. Yes. Electric energy produced in the Pacific Northwest is comprised of a high
 percentage of base load hydro generation (primarily from the Columbia River System) as
 well as significant contributions from very large coal facilities in Western Montana
 (Colstrip, MT). As a result of this disproportionate mix of base load generation, all of the
 major investor-owned utilities in this region classify the vast majority of generation and

transmission rate base (capacity costs) as energy-related. In its 2009 rate case, Puget Sound Energy sponsored class cost of service study classified its generation and transmission assets as 79% energy and 21% demand. Avista's developed 2009 study classified generation assets as 76% energy-related, and PacifiCorp's 2009 CCOSS classified generation rate base as 88% energy-related.³

Q. HOW DO THESE LOW ENERGY COST ELECTRIC UTILITIES IN THE PACIFIC NORTHWEST RELATE TO THE COAL DOMINATED GENERATION MIX OF EON?

What is important to understand is that neither the Pacific Northwest utilities nor 10 A. 11 EON are "typical" U.S. utilities in terms of generation mix. Ratepayers and shareholders 12 are fortunate to reap the benefit of low energy cost generation for each of these utilities. 13 All ratepayers benefit from the low cost energy produced from their respective base load 14 dominated utility. In turn, all ratepayers should share in the costs required to provide this 15 low cost energy in a proportionate and fair manner. Remembering that base load units have a much higher capacity cost per KW than less efficient peaker units, all ratepayers 1 17 should proportionately share in the fixed costs associated with those base load units that 18 make low cost energy possible. In other words, it is not reflective of cost causation nor is 19 it fair for all customers to reap the benefits of low variable cost output (energy KWH) yet 20 ask certain groups of customers to pay a disproportionate share of the fixed capacity costs 21 that make this low cost energy possible. In my opinion, and as evidenced from the actual 22 cost structure of EON's generation facilities, Mr. Seelye's 35% energy classification does 23 not adequately reflect cost causation nor reasonably assign costs to classes proportionate to the benefits received. 24

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Q. WHAT ARE THE CLASS RATES OF RETURN ON RATE BASE AT CURRENT RATES UTILIZING YOUR TRADITIONAL BIP METHOD TO CLASSIFY GENERATION PLANT?

³ Puget Sound Energy, Washington Utilities and Transportation Commission ("WUTC") Docket No. UE-090704; Avista, WUTC Docket No. UE-090134; and, PacifiCorp, WUTC Docket No. UE-090205.

A. Individual class rates of return utilizing the traditional BIP classification method, compared to Mr. Seelye's Modified BIP are presented below. It should be noted that the following OAG results only reflect adjustments to generation and production costs, they do not reflect my other CCOSS adjustments that I will also explain in my testimony:

5 6	Class	OAG Traditional	Seelye Modified
7		BIP	BIP
8	Residential	3.66%	3.19%
0	General Service	10.09%	9.12%
9	PS-Primary	4.38%	4.86%
10	PS-Secondary	-6.50%	6.62%
	CTOD-Primary	3.00%	4.47%
11	CTOD-Secondary	-3.94%	4.42%
12	ITOD-Primary	-1.97%	3.31%
10	ITOD-Secondary	-4.32%	5.27%
13	RTS-Transmission	1.47%	2.91%
14	Sp. Contract-Ft. Knox	-0.24%	-0.16%
1 /	Sp. Contract-Water Companies	-1.23%	-0.34%
15	Lighting-RLS & LS	7.10%	8.88%
j	Lighting-LE	-2.50%	3.38%
17	Lighting-Traffic	-0.27%	4.25%
17	Total Company	4.77%	4.77%
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- 19 B. Distribution
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Q. AS WE MOVE DOWNSTREAM FROM GENERATION THROUGH TRANSMISSION TO THE DISTRIBUTION SYSTEM, HOW HAS MR. SEELYE ASSIGNED DISTRIBUTION COSTS TO RATE SCHEDULES AND CUSTOMER CLASSES?

A. Mr. Seelye has allocated Distribution plant and expenses partially on the basis of number of customers and partially on the basis of peak demand. I concur with Mr. Seelye's selection of customer and demand allocators for Distribution plant. However, there is often controversy regarding the portion of Distribution plant that should be allocated on number of customers and the portion that should be allocated on demand. This separation between customer-related and demand-related Distribution plant is referred to as the classification of Distribution plant.

Q. PLEASE EXPLAIN THE TERM "CLASSIFICATION OF DISTRIBUTION 2 PLANT."

3 A. In the broadest sense, an embedded CCOSS is undertaken using a three-tiered 4 First, costs are functionalized as Production, Transmission, Distribution, approach. 5 General, and/or customer. These functionalized costs are then classified as energy, 6 demand, or customer-related. Finally, classified costs are then allocated to individual 7 classes. With respect to the classification of Distribution plant, it is generally recognized 8 that there are no energy-related costs. That is, the distribution system is designed to meet 9 localized peak demands. However, largely as a result of differences in customer densities 10 throughout a utility's service area, electric utility Distribution plant often is classified as 11 partially demand-related and partially customer-related.

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Q.

WHY IS THE CLASSIFICATION OF DISTRIBUTION PLANT IMPORTANT IN CCOSS ANALYSES?

A. The classification of Distribution plant may be the single most important factor
affecting class rates of return. To illustrate the importance of this issue, consider the
Residential class: whereas this class may account for only 40% to 50% of peak demand,
it is responsible for a much higher percentage of the number of customers. Therefore,
given the level of investment associated with Distribution plant, wide variations in class
rates of return can result from different customer/demand classifications.

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Q. WHY ARE THE DIFFERENCES IN CUSTOMER DENSITIES IMPORTANT IN THE ASSIGNMENT OF DISTRIBUTION COSTS TO INDIVIDUAL CLASSES?

24 A. Possibly the best way to answer this question is by way of example. Consider two 25 different electric utilities: one similar to LG&E with urban, suburban, and rural service 26 areas and one similar to Consolidated Edison Company, which is mainly urban. With 27 respect to the utility with a rural service area, many miles of conductors and associated 28 plant must be installed in order to serve the demands of relatively few customers. 29 Conversely, many more customers are served on a per mile basis for the urban utility. 30 For the urban utility, it may be fair and reasonable to allocate Distribution plant solely on the basis of peak demands. However, with respect to the utility with a rural service area, 1

such an allocation may be unfair if some classes are located mainly in urban or suburban areas, while other classes of customers are located in urban, suburban, and rural areas. As a result, many utilities classify Distribution plant as partially demand- related and partially customer-related. In this manner, a portion of Distribution plant is allocated based on a peak demand, and a portion allocated based on number of customers.

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Q. HOW DOES ONE DETERMINE HOW MUCH DISTRIBUTION PLANT SHOULD BE CLASSIFIED AS DEMAND-RELATED AND HOW MUCH AS CUSTOMER-RELATED?

A. Once the decision is made that Distribution plant should be allocated considering both peak demand and number of customers, there are two generally accepted methods for determining the portions or percentages that should be allocated on each basis. These two methods are known as the minimum size and zero-intercept approaches. Under both methods, a study is conducted for each major plant account within the distribution system. That is, each account is studied and assigned its own customer and demand components.

17 The minimum size method rests on the premise that the minimum, or smallest 18 size, installed equipment makes up the distribution network to connect customers to the 19 distribution system, and that all larger sizes of equipment serve peak demands. In 20 practice, the cost per unit of the smallest sized installed equipment is determined. This 21 minimum cost per unit is then multiplied by the total number units in the system to arrive 22 at a total customer amount. The total customer amount is then divided by the total cost 23 for the account to determine the customer percentage. As the compliment, one minus the 24 customer percentage equals the demand percentage.

The zero-intercept method is similar to the minimum size method, except for the determination of the minimum cost per unit. The zero-intercept method recognizes that even the smallest installed piece of equipment has a demand component, because it too is designed and installed to meet the peak load placed on that equipment. The zerointercept method attempts to arrive at the "theoretical" cost of a piece of plant or equipment capable of carrying zero load. This is accomplished using statistical regression techniques whereby the per unit costs of various sizes of equipment are

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Q.

IS ONE METHOD PREFERRED OVER THE OTHER?

intercept cost then serves as the minimum, or zero size, cost per unit.

A. In general, I prefer to use the zero-intercept method when possible and appropriate. However, as with most aspects of ratemaking where there is not a universally accepted formula, each approach has its advantages and disadvantages. The major criticisms I have regarding the minimum size method is that this method tends to overstate the customer percentage because even the smallest installed size is used to meet some level of peak demand. The primary weaknesses of the zero-intercept method are that more data and a good working knowledge of statistical linear regression analyses are required, and sometimes there is no strong correlation between costs and sizes (capacity) of distribution equipment.

determined and a best fitting line is fitted into an equation form. The point at which the

fitted line intersects the cost axis at zero size is called the zero-intercept. The zero-

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Q. HOW APPROPRIATE IS EITHER METHOD FROM A DESIGN OR OPERATIONAL PERSPECTIVE?

A. First and foremost, the classification of Distribution plant as partially customerrelated and partially demand-related results from the view that the allocation of these plant items based solely on peak demands would not be equitable to some classes. I emphasize this point, because many analysts "lose sight of the forest for the trees". When classifying individual accounts within Distribution plant, analysts sometimes ignore how a distribution system is actually designed and constructed.

24 There are three major factors the analyst should keep in mind when classifying 25 Distribution plant. First, there are often alternatives across plant and equipment. For 26 example, the need for a particular transformer may be erased if a larger size conductor is used. Alternatively, fewer and smaller poles may be required if lighter conductors are 27 used. Second, and more importantly, is the fact that purchasing economies are usually 28 29 present. For example, there are dozens of various types of overhead conductors manufactured. However, due to purchasing economies, a utility may only purchase a few 30 different sizes of conductor. This may result in some "over capacity", yet, the total .

installed cost is less than if every segment of the system is optimally designed. Third, most components of the distribution system are somewhat oversized for other reasons such as safety, reliability, current looping and growth uncertainty.

Although, these three factors are reflective of how distribution systems are actually designed and installed, neither the minimum size nor the zero-intercept method account for these factors. In fact, the presence of these three factors can seriously skew the results of either method. If the weakness is not captured or recognized, inequitable class allocations may result.

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Q. HOW DID MR. SEELYE CLASSIFY DISTRIBUTION PLANT BETWEEN CUSTOMER-RELATED AND DEMAND-RELATED COMPONENTS?

A. My Seelye claims to have conducted a zero-intercept analysis to develop customer/demand classifications for distribution Overhead lines, underground lines, and transformers. I take exception to Mr. Seelye's reference to his proposed classifications as a "zero-intercept" derived study, and I disagree with his approach.

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Q.

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PLEASE EXPLAIN HOW AN INDUSTRY ACCEPTED ZERO-INTERCEPT STUDY IS CONDUCTED.

19 A. Under accepted industry practices, which are well documented in various cost allocation manuals,⁴ the zero-intercept method is very straight-forward. First, various 20 21 types of equipment are separated by capacity size and type. Next, historical accounting 22 costs are trended by vintage year to reflect cost differences over time. For each size and 23 type of equipment, the total dollars and total units (feet or number of units) are 24 considered as well as the capacity (size) of each type of equipment. Because the overall 25 objective is to estimate the cost of a "zero-size" piece of equipment, total costs are 26 divided by total units (feet or unit) for each type of equipment to derive an average cost 27 per foot or per unit. A regression model is then developed based on the following general 28 form:

cost/unit = a + b (size)

⁴ See for example the National Association of Regulatory Utility Commissions ("NARUC") Electric Utility Cost Allocation Manual, 1992, pages 92 through 94.

١	The resulting intercept (a) produces the estimated cost per unit of a "zero-size" piece of
2	equipment. This estimated zero-size cost per unit is then multiplied by the total units in
3	the system to estimate a zero-size total cost. The ratio of total zero size costs to trended
4	total actual costs represents the percentage of zero-size equipment and serves as the
5	customer percentage.
6	The above industry standard is in stark contrast to Mr. Seelye's method presented
7	in his Seelye Exhibits 25, 26, and 27. Mr. Seelye refers to his approach as a "weighted
8	regression analysis." Although this "weighted regression analysis" is a clever arithmetic
9	exercise, it violates theoretical statistical principles of linear regression and skews his
10	results. Moreover, on page 91 of his direct testimony, Mr. Seelye states:
11 12 13 14 15 16	"Like most electric utilities, the feet of conductors and number of transformers on LG&E's system is not uniformly distributed over all sizes of wire and transformer. For this reason, it was necessary to use a weighted regression analysis, instead of a standard least-squares analysis, in the determination of the zero intercept."
17	It is interesting that Mr. Seelye finds LG&E's system to be typical of other utilities, yet,
,	his approach varies dramatically from the industry practice that has been used by
19	countless utilities, commissions, and analysts for decades.
20	To understand the bias in Mr. Seelye's "weighted regression analysis," we must
21	fully understand the mathematical model he derives. Using Overhead Conductors as an
22	example, consider Mr. Seelye's analysis presented in his Exhibit 25. Although not shown
23	in his exhibit, Mr. Seelye's equation for Overhead Conductors is:
24	$(\text{cost per foot x feet}^{0.5}) = 0 + 0.75697(\text{feet}^{0.5}) + 0.00366(\text{size x feet}^{0.5})$
25	Notice that the equation's true intercept is forced to zero. However, if capacity is set to
26	zero, the second term $[0.00366(size x \text{ feet}^{0.5})]$ becomes zero. If we then ask what is the
27	cost for a foot of a zero size conductor we see that feet $^{0.5} = 1^{0.5} = 1$, such that the cost for
28	one foot becomes \$0.75697. This is the zero-intercept used by Mr. Seelye.
29	To illustrate the bias in Mr. Seelye's analysis, consider the following hypothetical
30	example of his approach for a system "not uniformly distributed over all sizes of wire":
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1		Cost
2		TotalPerCostFoot (y)Capacity (x)Feet (n) $y(n^{0.5})$ $n^{0.5}$ $x(n^{0.5})$
3		
4		\$350.00 3.50 2.00 100 35 10.00 20.00 250.00 5.00 4.00 50 35.355339 7.07 28.28
5		62,500.006.256.0010,000625100.00600.00
		164.008.208.002036.6715154.4735.78\$99.509.9510.001031.4646633.1631.62
6		
7		
8		Under the correct, and accepted zero-intercept method, the following regression equation
9		results:
10		cost/feet = 1.75 + 0.805(size)
11		
12		Therefore, a zero-size cost is estimated to be \$1.75 per foot. Using the same data, the
13		following equation is produced using Mr. Seelye's approach:
14		cost per foot x feet ^{0.5} = 0 + 1.9815(feet ^{0.5}) + 0.7120(size x feet ^{0.5})
15		
j		Mr. Seelye's approach results in a zero cost per foot of \$1.9815 as compared to the
17		industry accepted cost per foot of \$1.75.
18		
19	Q.	WHAT ARE THE RESULTS OF MR. SEELYE'S CLASSIFICATION OF
20	-	DISTRIBUTION PLANT?
21	A.	Mr. Seelye classifies distribution plant as follows:
22		
23		Percentage
23		Account Customer Demand
		Overhead Conductors 54.45% 45.55%
25		Underground Conductors 30.81% 69.19%
26		Line Transformers 45.67% 54.33%
27		
28	Q.	HAVE YOU UNDERTAKEN AN INDEPENDENT ANALYSIS OF THE
29		CLASSIFICATION OF ELECTRIC DISTRIBUTION PLANT FOR LG&E?
30	A.	Yes. I have taken a traditional zero-intercept approach to the analyses of LG&E

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Q.

PLEASE DISCUSS THE SIGNIFICANT REVISION YOU HAVE INCORPORATED IN YOUR ZERO-INTERCEPT ANALYSES OF ACCOUNTS 365, 367 AND 368.

Transformers). In my analyses, I have relied on Mr. Seelye's account data provided in

Seelye Exhibits 25, 26 and 27, except for one significant revision.

- 7 A. In his regression formulations of "average cost" as a function of "size," Mr. 8 Seelve's representation of "size" for the units of plant is a physical measurement 9 (circular-mils). As an example, with regard to Account 365 (Overhead Conductors), Mr. Seelye's representation of the "size" of 1/0 Conductor and 2/0 Conductor is, respectively, 10 11 105.6 and 133.1. These are the physical sizes of the conductor and not the load carrying 12 capacity of these wires. While I have used Mr. Seelye's 21 categories of LG&E's 13 various sizes and types of overhead conductors; e.g., average cost, quantity, etc., I have not used Mr. Seelye's representation of "size" in my analyses. I have used the electrical 14 15 load capability (ampacity) of each size and type of overhead conductor.
- j

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Q.

WHY HAVE YOU INCORPORATED THE CAPACITY (AMPACITY) RATHER THAN SIMPLY THE SIZE OF CONDUCTORS IN YOUR ANALYSES?

A. The purpose of the zero-intercept analysis is to calculate the average cost of a zero
load conductor in order to evaluate the customer portion as I have discussed previously.
In my zero-intercept analyses, therefore, I have incorporated the ampacity (capacity or
load capability) of LG&E's overhead conductors, rather than merely the physical size of
these conductors.

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Q.

HAVE YOU INCORPORATED THIS AMPACITY OR LOAD CAPABILITY IN ALL OF YOUR ZERO-INTERCEPT ANALYSES?

A. Yes. I have incorporated an ampacity measurement for each of the overhead
 conductors and underground conductors and KVA capacity for line transformers in my
 zero-intercept analyses.

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Q. PLEASE PROVIDE A COMPARISON OF THE RESULTS OF YOUR ZERO-INTERCEPT ANALYSES TO THAT OF MR. SEELYE'S.

A. The following table summarizes the results of my analyses and that of Mr. Seelye
for LG&E's three electric distribution accounts for which classification analyses were
performed:

6			Customer Portion		Demand Portion	
7			Watkins	Seelye	Watkins	Seelye
8		Account 365				
9		(Overhead Conductors)	26%	54%	74%	46%
10		Account 367				
11		(Underground Conductors)	19%	31%	81%	69%
12		Account 368				
13		(Transformers)	46%	46%	54%	54%
14						
15		The details supporting my classification	n of distributio	on plant are p	provided in my	/ Schedule
Ĵ		GAW-3 which consists of three pages.				
17						
18	Q.	DO YOU HAVE ANY OTHER CO	MMENTS R	EGARDING	G ZERO-INI	ERCEPT
19		ANALYSES OF LG&E'S DISTRIB	UTION PLA	NT ACCOU	NTS?	
20	A.	Yes. While I have used the ac	count data pre	esented by M	fr. Seelye, as I	discussed
21		above, I question why the data Mr. So	eelye used for	his Overhe	ad Conductors	(Account
22		365) and Underground Conductors (Account 367) analyses are exactly the same for				
23		LG&E and KU, and different for Line Transformers (Account 368). The data used for				
24		the analyses clearly should be different between LG&E and KU, and in fact, the data				
25		were different data presented in the last case.				
26						
27	Q.	WHAT ARE YOUR CCOSS RESU	JLTS USING	THESE C	USTOMER/I	DEMAND
28		CLASSIFICATIONS?				
29	A.	My recommended distribution	plant classific	ations couple	ed with a tradi	tional BIP
30		approach to classify generation resource	ces are reflecte	ed in my reco	ommended CC	OSS. The
í		detail of this CCOSS is provided in my	v Schedule GA	W-4 and are	e summarized	below:

۲		ROR At Current Rates			
2		Class	OAG Recommended	Seelye	
3				• 100/	
		Residential	4.01%	3.19%	
4		General Service	9.89% 4.01%	9.12% 4.86%	
5		PS-Primary PS-Secondary	4.01% 6.06%	4.80% 6.62%	
6		CTOD-Primary	2.67%	4.47%	
		CTOD-Secondary	3.57%	4.42%	
7		ITOD-Primary	1.69%	3.31%	
8		ITOD-Secondary	3.90%	5.27%	
0		RTS	1.47%	2.91%	
9		Sp. Contract-Ft. Knox	-0.48%	-0.16%	
10		Sp. Contract-Water Companies	-1.44%	-0.34%	
11		Lighting-RLS & LS	7.43%	8.88%	
		Lighting-LE	-2.72%	3.38%	
12		Lighting-Traffic	-0.21%	4.25%	
13		Total Company	4.77%	4.77%	
14					
15		As can be seen above, although the	re are some differences in i	ndividual class rates of	
j		return, our studies produce relatively			
, 17		Totarii, our studies produce rotativery	Similar resards.		
	TX 7			T	
18	IV.	ELECTRIC CLASS REVENUE INCREASE DISTRIBUTION			
19					
20	Q.	HOW DOES MR. SEELYE P	ROPOSE TO ASSIGN I	LG&E'S PROPOSED	
21		OVERALL \$94.6 MILLION INCE	REASE ACROSS RATE CI	LASSES?	
22	A.	Mr. Seelye proposes to assig	n the Company's overall req	uested revenue increase	
23		to individual classes on an equal percentage basis. That is, all rate classes would receive			
24		the same percentage increase in revenue responsibility (12.2%).			
25					
26	Q.	IS MR. SEELYE'S PROPO	SED CLASS REVEN	UE DISTRIBUTION	
27	C.	REASONABLE?			
28	٨	Yes, given the fairly narrow	range of achieved class m	tes of return under my	
	A.	, C	0		
29		CCOSS as well as under Mr. Seelye's analysis, an across the board (equal percentage)			
30		increase is fair and reasonable. In	this regard, it should be ren	nembered that allocated	

•		cost of service results are not surgically precise and should, therefore, serve only as a
2		guide in evaluating class revenue responsibility.
3		
4	V.	NATURAL GAS CLASS COST OF SERVICE
5		
6	Q.	HAVE YOU EXAMINED MR. SEELYE'S NATURAL GAS CLASS COST OF
7		SERVICE STUDY?
8	A.	Yes.
9		
10	Q.	WHAT METHODOLOGY DID MR. SEELYE USE FOR PURPOSES OF HIS
11		NATURAL GAS CCOSS?
12	А.	Mr. Seelye used what is known as the Peak Responsibility method to allocate
13		Mains costs. Furthermore, Mr. Seelye separated LG&E's Mains into "high pressure" and
14		"low pressure" systems. Finally, Mr. Seelye classified both high pressure and lower
15		pressure Mains as partially customer-related and partially demand-related. In short, Mr.
j		Seelye has allocated Mains investment costs based partially on customer counts and
17		partially on contributions to estimated design day demand.
18		
19	Q.	DO YOU HAVE ANY MAJOR DISAGREEMENTS WITH MR. SEELYE'S
20		NATURAL GAS CCOSS?
21	А.	Yes.
22		
23	Q.	PLEASE OUTLINE YOUR DISAGREEMENTS.
24	А.	I disagree with Mr. Seelye's use of the Peak Responsibility method to allocate
25		distribution Mains (low and high pressure).
26		
27	Q.	PLEASE EXPLAIN PEAK RESPONSIBILITY METHOD.
28	А.	The Peak Responsibility method is similar in concept to the 1-CP method
29		previously discussed for the electric industry. The major difference is that whereas the 1-
30		CP electric method is generally based on actual loads and demands, the Peak
1		Responsibility method is based on estimated loads at design day temperatures. In other

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words, design day demands are not known historical loads, but rather estimated class demands under the most extreme weather conditions.

Q. IS THERE A METHOD THAT IS PREFERRED OVER THE PEAK RESPONSIBILITY METHOD FOR LG&E'S NATURAL GAS OPERATIONS?

A. Yes. The Peak and Average method is far superior for LG&E's natural gas operations.

9 Q. PLEASE EXPLAIN WHY THE PEAK AND AVERAGE METHOD IS 10 PREFERRED.

11 A. There are several reasons why the Peak and Average Method is preferred and why 12 the Peak Responsibility method is not appropriate for LG&E. The first is the recognition 13 of how and why natural gas consumers are customers of LG&E. Customers connect to 14 LG&E's system in order to meet their natural gas needs throughout the year. Indeed, the 15 Company's Mains are utilized each and every day of the year and recognition of annual 16 usage (throughput) is a logical basis for cost assignment.

- Another shortcoming of the Peak Responsibility method using design day demand is that the "design day" is a moving target over time. That is, whereas natural gas Mains are planned and installed to serve customers in excess of fifty years into the future, design day demand (as used by Mr. Seelye) is a function of the mix, usage per customer, and number of customers today. In addition LG&E's commercial customers have obviously changed over the last few decades. Yet, Mr. Seelye assumes the entire Company system was optimally designed and installed to meet today's mix and level of customers.
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Q.

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HAVE YOU CONDUCTED A CLASS COST OF SERVICE STUDY THAT UTILIZES THE PEAK AND AVERAGE METHOD?

A. Yes. I have accepted all other aspects (allocators and classifications) of Mr.
Seelye's natural gas CCOSS except for his use of the Peak Responsibility method. It
should be noted that while I disagree conceptually with Mr. Seelye that <u>any</u> portion of
distribution Mains should be classified as partially customer related, I have accepted his

۰, classification since his recommended customer percentages of Mains are relatively small.5 2 3 PLEASE PRESENT THE RESULTS OF YOUR NATURAL GAS CCOSS 4 Q. 5 UTILIZING THE PEAK AND AVERAGE METHOD. 6 A. The following is a summary of class rates of return at current rates utilizing my recommended Peak and Average method to allocate distribution Mains. Also provided 7 8 are Mr. Seelye's results using his Peak Responsibility method. 9 ROR at Current Rates 10 OAG Seelve Peak & Peak 11 Responsibility Class Average 12 RSG 4.53% 3.90% CGS 7.61% 7.01% 13 IGS 4.28% 4.36% 14 3.27% 16.85% AAGS 2.32% 25.71% FT 15 SP 1.25% 25.05% j 5.06% **Total Company** 5.06% 17 18 The details of my recommended natural gas CCOSS are provided in my Schedule GAW-19 5. 20 21 VI. **NATURAL GAS CLASS REVENUE DISTRIBUTION** 22 23 LG&E'S ITS Q. PLEASE DESCRIBE PROPOSED DISTRIBUTION OF 24 **REQUESTED OVERALL NATURAL GAS REVENUE INCREASE** TO 25 INDIVIDUAL CUSTOMER CLASSES. 26 LG&E witness Seelye presents the Company's proposed distribution of requested A. 27 \$22.59 million revenue increase to customer classes. A summary of Mr. Seelye's 28 proposed natural gas revenue increase for each customer class is shown below. Note, that 29 the percentage increases reflect increases to Base (non-gas) rates.

⁵ Mr. Seelye customer percentage of high pressure mains is 6.97% while high customer percentage of low pressure mains is 14.82%.

		Current		
-		Base Rate	LG&E Propo	sed Natural
2		(Non-Gas)	Gas Increas	ses (\$000)
3	Rate Class	Revenue	Amount	Percent
4	Sales:			
5	Residential (RGS)	\$76,545	\$16,197	21.2%
	Commercial (CGS)	\$27,700	\$5,362	19.4%
6	Industrial (IGS)	\$1,759	\$363	20.4%
7	As-Available (AAGS)	\$198	\$0	0%
8	Transportation:			
9	Firm Transportation (FT)	\$4,364	\$0	0%
10	Special Contracts:			
11	Intra-Company	\$7,381	\$665	21.8%
10	Special Contract A	\$263	\$0	0%
12	Special Contract B	<u>\$179</u>	\$0	0%_
13			# 22 500	10.10/
14	Total LG&E	\$118,448	\$22,588	19.1%

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Q. ARE MR. SEELYE'S PROPOSED CLASS REVENUE INCREASES REASONABLE?

18 A. When all factors are considered, I do not object to Mr. Seelye's class revenue 19 Although the results of my CCOSS indicate that the Transportation and increases. 20 Special Contract customers are providing significantly lower rates of return than other 21 classes, Mr. Seelye's study indicates exactly the opposite; i.e., these classes are over 22 contributing. Notwithstanding the differences in our CCOSS results, Mr. Seelye also 23 claims that there is a potential for by-pass for transportation and Special Contract 24 customers if their rates are increased.

While Mr. Seelye provides no evidence as to whether any of these customers have a realistic ability to by-pass the LG&E system, I acknowledge that this is a valid concern when a real potential for by-pass exists. Mr. Seelye indicates that a natural gas transmission pipe runs through LG&E's service area. However, this is in no way indicative of any customers having a realistic ability to by-pass LG&E. In order for an end user to by-pass its local distribution gas company, it must secure easements and/or rights of way to run a service lateral (pipe) to the transmission pipeline. Even if such

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۱ easements and/or rights of way can be secured, the transmission pipeline must agree to a new interconnection point. Finally, and perhaps most importantly, the distance between 2 the end-user and the transmission pipeline must be close enough such that the capital 3 costs to the customer constructing a service line make such a project economically viable. 4 5 For some Industrial end-users whose facilities are adjacent to transmission pipelines, bypass is a rather simple and economically viable alternative. However, as the distance 6 7 between the end-user and transmission pipeline increases, the realistic threat of by-pass decreases. In this regard, I recommend that in its next case LG&E present detailed 8 9 evidence of any specific customer's potential for by-pass, if special price considerations 10 are requested for that customer.

11 In agreeing to accept Mr. Seelye's recommendation for no increase to Transportation and Special Contract customers in this case, I recommend that even if 12 13 these customers' revenue were increased, the corresponding required increase to other 14 customers would be de minimus in percentage terms. As such, I do not object to Mr. Seelye's proposed revenue increase allocation in this case, with the caveats noted for 15 ĵ future rate cases.

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VII.

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RESIDENTIAL RATE DESIGN

Q. DOES LG&E PROPOSE ANY SIGNIFICANT CHANGES TO ITS ELECTRIC AND GAS RESIDENTIAL RATE STRUCTURES?

22 A. Yes. LG&E proposes to substantially change its electric Residential base rate 23 structure from a largely volumetric basis to a largely fixed fee charge per month basis. 24 That is, whereas LG&E currently collects approximately 15% of its non-fuel base rate 25 revenue from fixed monthly customer charges, (85% from energy charges) its proposed changes to rate design would collect approximately 33% of non-fuel base rate revenues 26 27 from fixed customer charges. In order to accomplish this shift in revenue collection, LG&E proposes to increase its monthly electric Residential customer charge from \$5.00 28 29 to \$15.00 and at the same time, reduce its base rate energy charge from 6.7140¢ per 30 KWH to 6.6100¢ per KWH.

With regard to LG&E Residential natural gas rates, the Company proposes to collect 100% of its distribution (non-gas margin) revenue from fixed monthly charges thereby eliminating the variable usage (per MCF) component of its rates.

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Q. MR. WATKINS, HAVE YOU IDENTIFIED A COMMON OBJECTIVE IN LG&E'S RESIDENTIAL RATE DESIGN PROPOSALS?

A. Yes. It is clear from the testimony of Mr. Seelye that the primary objective of LG&E's Residential rate design is to guarantee revenue collection and profitability associated with fixed monthly customer charges. Indeed, as stated on page 39 of his direct testimony, Mr. Seelye claims that "by recovering its fixed distribution [gas] costs through a fixed monthly charge, the Company would be severing the relationship between its natural gas delivery revenue and its sales of natural gas.

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14 Q. WHY DOES LG&E DESIRE MORE ELECTRIC AND ALL NATURAL GAS 15 RESIDENTIAL REVENUE RECOGNITION FROM CUSTOMER CHARGES?

A. Fixed monthly customer charges represent guaranteed revenue to LG&E. This
 guarantee of revenue obviously reduces the risk of LG&E's operations and provides
 much more assurances of net income available to shareholders.

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20 Q. OTHER THAN DECOUPLING THE LINK BETWEEN PROFITABILITY AND 21 **VOLUMETRIC** SALES, DOES MR. SEELYE PROVIDE **OTHER** JUSTIFICATIONS FOR HIS PROPOSAL TO COLLECT SUBSTANTIALLY 22 MORE OF ITS ELECTRIC RESIDENTIAL AND 100% OF ITS GAS 23 24 BASE RATE REVENUES FROM FIXED **MONTHLY** RESIDENTIAL 25 **CHARGES?**

A. Yes. Mr. Seelye provides two underlying reasons for his partial electric, and total natural gas, revenue decoupling rate design proposals. Mr. Seelye claims that traditional volumetric based rate design provides a disincentive for the Company to promote conservation and because of the high percentage of fixed cost inherent in providing electric and natural gas service, prices (rate design) should reflect the Company's relationship between fixed and variable costs.

Q. IS LG&E CURRENTLY COMPENSATED FOR ITS CONSERVATION EFFORTS?

A. Yes. LG&E currently has a Demand Side Management surcharge for both electric and natural gas service, which compensates the Company for its conservation program costs. In fact, not only is LG&E compensated for its costs to administer conservation efforts, it is also allowed an extra profit incentive over and above the costs of its DSM programs and compensation for its lost sales.

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9 Q. NOTWITHSTANDING LG&E'S RECENT DSM INCENTIVES AND 10 ATTENDANT RATE RIDERS, HAVE RESIDENTIAL CUSTOMERS BEEN 11 USING ELECTRICITY AND NATURAL GAS IN A MORE EFFICIENT 12 MANNER OVER THE LAST COUPLE OF DECADES?

A. Absolutely. Virtually all Residential electric and natural gas appliances are much
 more energy efficient than they were even ten years ago. As a result, the average
 Residential energy consumption per appliance has been declining steadily over the last
 decade or two. These market-based conservation measures have prevailed in spite of the
 so-called "disincentives" to conserve energy resources as alluded to by Mr. Seelye.

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Q.

DOES THE LONG-TERM DECLINE IN THE RESIDENTIAL AVERAGE USAGE PER CUSTOMER SUPPORT THE NEED FOR GUARANTEED REVENUE RECOVERY?

A. No. While LG&E's electric and natural gas declining usage per appliance is similar to that experienced by other utilities, LG&E's Residential rates (prices) have reflected this decline in usage in every rate case. Secondly, there is no doubt that both Residential electric usage per appliance and total natural gas usage per customer have been declining over the last ten to twenty years; this declining use has been true for LG&E as well as the electric and natural gas industry in general. Indeed, this change in usage is nothing new to LG&E or the industry.

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Q.

HAVE THE ELECTRIC AND NATURAL GAS UTILITY INDUSTRIES BEEN ABLE TO REMAIN FINANCIALLY VIABLE OVER THE YEARS ABSENT A FIXED CHARGE RATE DESIGN?

A. Yes. For decades the pricing structure of electric and natural gas LDC's have been largely volume based. These industries have remained viable and have achieved at the very least, respectable returns on their investments with this volumetric based rate structure. For example, faced with declining Residential usages per customer and largely volumetric rate structures, the Value Line group of natural gas utility companies have achieved the following average rates of return on common equity each year since 2000:

10 11		Value Line Natural Gas Utility Rate of Return on
12	Year	Common Equity <u>a</u> /
13	<u> </u>	Common Equity <u>u</u>
14	2000	12.4%
	2001	12.8%
15	2002	12.3%
j	2003	12.1%
	2004	11.2%
17	2005	12.0%
18	2006	12.4%
	2007	11.6%
19	2008	11.8%
20	2009	12.4%
	10-yr. Avg.	12.1%
21	<u>a</u> / Calculated per	Schedule GAW-6.
22		

	Rate of Return on
Year	Common Equity <u>a</u> /
2000	11.3%
2001	12.2%
2002	8.4%
2003	9.5%
2004	9.9%
2005	10.4%
2006	11.0%
2007	11.2%
2008	10.3%
2009	9.6%
10-yr. Avg.	10.3%
<u>a</u> / Calculated per	Schedule GAW-7.

Similarly, the electric utility industry has achieved the following annual rates of return:

As such while it is true that the electric and natural gas industries have been faced with declining usages per appliance or customer due to improvements in appliance efficiency, earnings (with revenue calculated largely from volumetric based prices) have been achieved at high levels. These high earnings are largely a result of periodic rate increases, cost savings from technological advances, and economies of scale due to mergers.

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Q. DOES LG&E'S PROPOSAL TO COLLECT A SUBSTANTIAL PORTION OF ITS ELECTRIC NON-FUEL REVENUE AND 100% OF ITS RESIDENTIAL NATURAL GAS MARGIN REVENUE FROM FIXED MONTHLY CHARGES COMPORT WITH THE ECONOMIC THEORY OF COMPETITIVE MARKETS OR THE ACTUAL PRACTICES OF SUCH COMPETITIVE MARKETS?

A. No. The most basic tenet of competition is that prices determined through a
 competitive market ensure the most efficient allocation of society's resources. Because
 public utilities are generally afforded monopoly status under the belief that resources are
 better utilized without the duplication of the fixed facilities required to serve consumers,
 a fundamental goal of regulatory policy is that regulation should serve as a surrogate for

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competition to the greatest extent practical.⁶ As such, the pricing policy for a regulated public utility should mirror those of competitive firms to the greatest extent practical.

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Q. PLEASE BRIEFLY DISCUSS HOW PRICES ARE GENERALLY STRUCTURED IN COMPETITIVE MARKETS.

A. Economic theory tells us that efficient price signals result when prices are equal to long-run marginal costs. It is well known that in the long-run all costs are variable and, hence, efficient pricing results from the incremental variability of costs even though a firm's short-run cost structure may include a high level of sunk or "fixed" costs or be reflective of excess capacity. Indeed, competitive market-based prices are generally structured based on usage, i.e. volume based pricing.

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Q. PLEASE EXPLAIN HOW THIS THEORY OF COMPETITIVE PRICING SHOULD BE APPLIED TO REGULATED PUBLIC UTILITIES, SUCH AS LG&E.

A. Due to LG&E's investment in system infrastructure, there is no debate that many of its short-run costs are fixed in nature. However, as discussed above, efficient competitive prices are established based on long-run costs, which are entirely variable in nature.

20 Marginal cost pricing only relates to efficiency. This pricing does not attempt to 21 always address fairness or equity. From a perspective of fair and equitable pricing of a 22 regulated monopoly's products and services, it is generally agreed that payments for a 23 good or service should be in accordance with the benefits received. In this regard, those 24 that receive more benefits should pay more in total than those who receive fewer 25 benefits. With respect to electric and natural gas usage, the volume of consumption is the most direct, and in my opinion the best indicator of benefits received, such that 26 27 volumetric pricing promotes the fairest pricing mechanism to customers and to the 28 utility.

The above philosophy is, and has been, the belief of economists, regulators, and the marketplace for many years. As an illustration, consider utility industry pricing in its

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James C. Bonbright, et al Principles of Public Utility Rates at 141 (2d ed. 1988).

infancy (1800s). In the beginning, customers paid a fixed monthly fee and consumed as
much of the utility commodity/service as they desired (usually water). It soon became
apparent that the fixed monthly fee rate schedule was inefficient and unfair. Utilities
soon began metering their commodity/service and charging only for the amount actually
consumed. In this way, consumers receiving more benefits from the utility than others
paid more in total for the utility service because they used more of the commodity.

Furthermore, virtually every capital intensive industry is faced with a high percentage of fixed costs in the short-run. This includes the manufacturing and transportation industries. Prices for competitive products and services in these industries are invariably established on a volumetric basis, including those that were once regulated; e.g., motor transportation, airline travel, and rail service.

Accordingly, the position of Mr. Seelye that LG&E's fixed costs should be recovered through fixed monthly charges, in my view, is incorrect since pricing should reflect long-run cost incidence wherein all costs are variable or volumetric in nature, and that users requiring more of LG&E's products and services pay more than customers who use less of these products and services.

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Q. DOES LG&E'S PROPOSAL TO COLLECT A SUBSTANTIALLY GREATER PORTION OF ITS ELECTRIC RESIDENTIAL REVENUES AND 100% OF ITS NATURAL GAS MARGIN REVENUES FROM FIXED MONTHLY CUSTOMER CHARGES COMPORT WITH PROPER RATEMAKING PRINCIPLES?

A. No. Perhaps the most highly regarded, and certainly the most commonly used
 reference to ratemaking principles is Dr. James Bonbright's treatise entitled <u>Principles of</u>
 <u>Public Utility Rates</u>. With regard to the collection of revenue solely (or largely) through
 a fixed customer charge, Dr. Bonbright states:

- ... there remains a choice as to the unit of service to which the uniform rate shall be applied. Among a variety of alternatives, three receive closest consideration: a uniform charge per customer; a uniform charge per unit of energy (kilowatt-hour); and a uniform charge per unit of the customer's maximum monthly kilowatt demand.
- 31Uniformity of charge per customer (say, \$10 per month for any32desired quantity of service) has charm in avoiding metering costs.Nevertheless, it is soon rejected because of its utter failure to

recognize either cost differences or value-of-service differences between large and small customers. [Page 396] [Emphasis added].

45Q.6MR. SEELYE CHARACTERIZES LG&E'S PROPOSED NATURAL GAS RATE6DESIGN AS A "STRAIGHT-FIXED VARIABLE" RATE DESIGN. IS IT7CORRECT TO CHARACTERIZE THIS RATE STRUCTURE AS STRAIGHT-8FIXED VARIABLE?

9 A. No. The straight-fixed variable (SFV) term was coined and adopted by the FERC 10 in its famous Order 636 in which fixed pipeline costs are recovered through demand 11 charges. The concepts of demand charges and customer charges are entirely different. 12 First, demand charges vary by customer based on their self determined contract 13 entitlements to pipeline capacity. Although a customer's demand charges are fixed 14 during a given year, each pipeline shipper (often LDCs) determines its own level of 15 contract demand that can and do vary from year to year. As such, the total pipeline 16 demand charges incurred by individual customers vary tremendously based on the size 7 and needs of each customer. Such is not the case with fixed customer charges since small residential customers pay the same as large residential customers regardless of the 18 19 demands placed on the system.

Another fundamental difference between a demand charge based rate structure (i.e., true straight-fixed variable) and a fixed customer charge rate structure is that customers purchasing pipeline capacity under the SFV method have the ability to shed unwanted (unneeded) demand charge costs through capacity release to other users. Obviously such revenue (cost) shifting is not possible under a fixed customer charge rate structure.

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Q. PLEASE EXPLAIN WHY THE FERC ADOPTED ITS STRAIGHT-FIXED VARIABLE RATE DESIGN IN ITS ORDER 636.

29 A. 30

FERC Order 636 had two primary goals. The first was to enhance gas competition at the wellhead by completely unbundling the merchant and transportation

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1		functions of pipelines. ⁷ The second goal was to encourage the increased consumption of
2		natural gas in the United States. In the introductory statement of the Order, the FERC
3		stated:
4 5 6 7 8		"The Commission's intent is to further facilitate the unimpeded operation of market forces to stimulate the production of natural gas \ldots [and thereby] contribute to reducing our Nation's dependence upon imported oil \ldots ." [Order at 8].
9		With specific regard to the SFV rate design adopted in Order 636, the FERC stated:
10 11 12 13 14 15 16		"Moreover, the Commission's adoption of SFV should maximize pipeline throughput over time by allowing gas to compete with alternate fuels on a timely basis as the prices of alternate fuels change. The Commission believes it is beyond doubt that it is in the national interest to promote the use of clean and abundant gas over alternate fuels such as foreign oil. SFV is the best method for doing that" [Order at 128-129].
17	Q.	HOW DOES FERC'S OBJECTIVE TO INCREASE NATURAL GAS
18		CONSUMPTION USING THE SFV RATE DESIGN COMPORT WITH THE
18 ว		CONSUMPTION USING THE SFV RATE DESIGN COMPORTWITH THELDCINDUSTRY'SCLAIMEDSOCIETALNEEDFORREVENUE
3	А.	LDC INDUSTRY'S CLAIMED SOCIETAL NEED FOR REVENUE
ີ 20	A.	LDC INDUSTRY'S CLAIMED SOCIETAL NEED FOR REVENUE DECOUPLING AND GUARANTEED REVENUE RECOVERY?
) 20 21	A.	LDCINDUSTRY'SCLAIMEDSOCIETALNEEDFORREVENUEDECOUPLING AND GUARANTEED REVENUE RECOVERY?The FERC's objective for SFV is diametrically in opposition to a major claimed
) 20 21 22	А.	LDCINDUSTRY'SCLAIMEDSOCIETALNEEDFORREVENUEDECOUPLING AND GUARANTEED REVENUE RECOVERY?The FERC's objective for SFV is diametrically in opposition to a major claimedneed for revenue decoupling and/or guaranteed revenue recovery. That is, the LDC
) 20 21 22 23	A.	LDCINDUSTRY'SCLAIMEDSOCIETALNEEDFORREVENUEDECOUPLING AND GUARANTEED REVENUE RECOVERY?The FERC's objective for SFV is diametrically in opposition to a major claimedneedfor revenue decoupling and/or guaranteed revenue recovery.That is, the LDCindustry claims that because retail rates have been historically volumetric based, there has
) 20 21 22 23 24	A.	LDCINDUSTRY'SCLAIMEDSOCIETALNEEDFORREVENUEDECOUPLING AND GUARANTEED REVENUE RECOVERY?The FERC's objective for SFV is diametrically in opposition to a major claimedneed for revenue decoupling and/or guaranteed revenue recovery.That is, the LDCindustry claims that because retail rates have been historically volumetric based, there hasbeen a disincentive for LDCs to promote conservation or encourage reduced consumption
 20 21 22 23 24 25 	A.	LDCINDUSTRY'SCLAIMEDSOCIETALNEEDFORREVENUEDECOUPLING AND GUARANTEED REVENUE RECOVERY?The FERC's objective for SFV is diametrically in opposition to a major claimedneed for revenue decoupling and/or guaranteed revenue recovery.That is, the LDCindustry claims that because retail rates have been historically volumetric based, there hasbeen a disincentive for LDCs to promote conservation or encourage reduced consumptionof natural gas.As is clearly discussed in the FERC Order, the price signal that results
 20 21 22 23 24 25 26 	A.	LDC INDUSTRY'S CLAIMED SOCIETAL NEED FOR REVENUE DECOUPLING AND GUARANTEED REVENUE RECOVERY? The FERC's objective for SFV is diametrically in opposition to a major claimed need for revenue decoupling and/or guaranteed revenue recovery. That is, the LDC industry claims that because retail rates have been historically volumetric based, there has been a disincentive for LDCs to promote conservation or encourage reduced consumption of natural gas. As is clearly discussed in the FERC Order, the price signal that results from SFV pricing is meant to promote additional natural gas consumption, not reduce
 20 21 22 23 24 25 26 27 	A.	LDC INDUSTRY'S CLAIMED SOCIETAL NEED FOR REVENUE DECOUPLING AND GUARANTEED REVENUE RECOVERY! The FERC's objective for SFV is diametrically in opposition to a major claimed need for revenue decoupling and/or guaranteed revenue recovery. That is, the LDC industry claims that because retail rates have been historically volumetric based, there has been a disincentive for LDCs to promote conservation or encourage reduced consumption of natural gas. As is clearly discussed in the FERC Order, the price signal that results from SFV pricing is meant to promote additional natural gas consumption, not reduce consumption. A rate structure, therefore, that is based on a fixed monthly customer
 20 21 22 23 24 25 26 27 28 	A.	LDC INDUSTRY'S CLAIMED SOCIETAL NEED FOR REVENUE DECOUPLING AND GUARANTEED REVENUE RECOVERY: The FERC's objective for SFV is diametrically in opposition to a major claimed need for revenue decoupling and/or guaranteed revenue recovery. That is, the LDC industry claims that because retail rates have been historically volumetric based, there has been a disincentive for LDCs to promote conservation or encourage reduced consumption of natural gas. As is clearly discussed in the FERC Order, the price signal that results from SFV pricing is meant to promote additional natural gas consumption, not reduce consumption. A rate structure, therefore, that is based on a fixed monthly customer charge sends an even stronger price signal to consumers to use more natural gas. Indeed,
 20 21 22 23 24 25 26 27 28 29 	A.	LDC INDUSTRY'S CLAIMED SOCIETAL NEED FOR REVENUE DECOUPLING AND GUARANTEED REVENUE RECOVERY? The FERC's objective for SFV is diametrically in opposition to a major claimed need for revenue decoupling and/or guaranteed revenue recovery. That is, the LDC industry claims that because retail rates have been historically volumetric based, there has been a disincentive for LDCs to promote conservation or encourage reduced consumption of natural gas. As is clearly discussed in the FERC Order, the price signal that results from SFV pricing is meant to promote additional natural gas consumption, not reduce consumption. A rate structure, therefore, that is based on a fixed monthly customer charge sends an even stronger price signal to consumers to use more natural gas. Indeed, a rate structure comprised of fixed monthly customer charges is even more at odds with

⁷ Federal Energy Regulatory Commission, Docket Nos. RM91-11-001 and RM87-34-065, Order No. 636, page 7.

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Q. IN CASE IT IS NOT OBVIOUS, WHY DO SFV AND FIXED CUSTOMER CHARGE RATE STRUCTURES PROMOTE ADDITIONAL CONSUMPTION?

characteristics are not present or possible with fixed customer charge pricing.

coupled with the ability to shed revenue responsibility (through capacity release), such

These rate structures promote consumption because the consumers' price of 6 A. 7 incremental consumption is de minimus, or at the very least, less than what an efficient 8 price structure would otherwise be. As discussed in its Order 636, the FERC's adoption 9 of the SFV pricing method was a result of national policy (primarily that of Congress) to 10 promote the additional use of domestic natural gas by promoting additional interruptible (and incremental firm) gas usage. Furthermore, when Order 636 was issued, the electric 11 12 industry was actively promoting the need for additional natural gas supplies at lower prices to fuel the need for additional capacity and movement away from its reliance on 13 14 coal and nuclear generation. As such, the FERC's SFV pricing mechanism greatly 15 reduced the price of incremental (additional) natural gas consumption thereby significantly increasing the demand for, and use of, natural gas in the United States Ĵ 17 subsequent to 1992 (when Order 636 was issued).

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MR. WATKINS, A CUSTOMER'S TOTAL ELECTRIC OR NATURAL GAS 19 **Q**. 20 BILL IS COMPRISED OF A BASE RATE COMPONENT AND A FUEL OR GAS 21 COMMODITY COST COMPONENT. FUEL AND GAS COSTS ARE 22 VOLUMETRICALLY PRICED AND REPRESENT THE MAJORITY OF A 23 CUSTOMER'S BILL. DOES THE VOLUMETRIC PRICING OF FUEL OR GAS COSTS OVERSHADOW THE NEED FOR A PROPER PRICING SIGNAL 24 25 **FROM BASE RATES?**

A. No. The rationale of the SFV pricing approach escapes me as an economist and policy advisor. This notion implies that even though marginal rates may be inefficiently structured, this error is acceptable due to other aspects within a customer's bill. To me, this argument is no more plausible than establishing rates that provide for clearly excessive monopolistic profits under the notion that the additional cost to consumers only represents a small portion of their energy bills and/or cost of living. 1Q.EARLIER IN YOUR TESTIMONY YOU EXPLAINED THAT VOLUMETRIC2PRICING PREDOMINATES IN COMPETITIVE MARKETS. IS THERE ANY3DATA OR EXPERIENCE REGARDING THE PRICING OF FIXED PUBLIC4UTILITY SERVICES THAT HAVE RECENTLY BEEN DEREGULATED?

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A. Yes. There is a limited amount of data available. Retail electric competition for generation services exists in several states. Invariably, customer choice for generation supply is volumetrically priced. However, competition in electric generation alone does not necessarily provide a good apples-to-apples comparison with bundled electric service or natural gas LDC distribution base rates.

However, Texas has implemented total retail electric competition for consumers for most of the States' ratepayers, including distribution service. Under the Texas model, consumers select their electricity provider for all bundled electric services including generation, transmission, distribution and metering. The customers' selected service provider supplies all services from the generator to the meter box. Electric providers compete for customers and are free to set their own prices and pricing structure.

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17 Q. HOW ARE COMPETITIVE RESIDENTIAL ELECTRIC RATES STRUCTURED 18 IN TEXAS?

A. Every electric service provider in Texas has a volumetric component within their rate structure. With regard to Residential fixed monthly customer charges, there are three different pricing structures: those with no fixed monthly charge; those that have a minimum bill amount; and, those with traditional fixed monthly customer charges (regardless of consumption). The following is a summary of the rate structures regarding customer charges for the 30 providers that offer competitive residential electric service in Texas:

26		Number Of Providers	Percentage Of Providers
27			
28	No fixed charge	4	13%
29	Fixed charge waived with usage threshold	11	37%
30	Traditional fixed monthly customer charge	15	50%
1	Total	30	100%

1 Of the 15 providers that utilize a traditional fixed monthly customer charge the minimum 2 charge is \$2.15 per month, the maximum customer charge is \$11.69 per month, with an 3 average customer charge of \$6.24 per month. The details supporting these amounts are 4 provided in my Schedule GAW-8.

From this data, half of the providers have maintained the traditional fixed monthly customer charge, an eighth of the companies have abandoned fixed charge pricing altogether, and somewhat more than a third of the providers waive any fixed fees once a minimum level of consumption (KWH) is achieved.⁸ The conclusions that can be drawn from this data are:

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- (1) half of the competitive service providers (15) have abandoned traditional fixed customer charge pricing in favor of no customer charges at all or waiver of such with reasonably low levels of consumption;
- (2) of the 15 providers that continue to utilize a traditional fixed monthly customer charge, variable energy charges recover more than just generation and transmission (i.e., they include a substantial portion of distribution) costs as the maximum customer charge is only \$11.69 with an average customer charge of \$6.24; and,
 - (3) no competitor relies on fixed customer charge pricing for the majority of its revenue.

From this data and analysis, it is clear that when prices for a service identical to LG&E's electric operations and similar to LG&E's natural gas operations are established based on competition and determined by the market (customers and sellers), the resulting rate structure is similar to that found for most other competitive goods and services, i.e., predominantly based on volumetric pricing, and not fixed charge pricing.

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- 29Q.HAS MR. SEELYE CONDUCTED AN ANALYSIS OF COSTS THAT HE30CONTENDS SHOULD BE CONSIDERED IN DEVELOPING THE31RESIDENTIAL CUSTOMER CHARGE FOR ELECTRIC SERVICE?
- 32 A. Yes.
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⁸ As indicated in the notes to Schedule GAW-8 customer charges are waived with a minimum monthly usage of 500 KWH or 1,000 KWH. For purposes of comparison, LG&E's average residential customer usage is about 1,000 KWH per month.

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Q.DO YOU AGREE WITH MR. SEELYE'S CUSTOMER COST ANALYSIS?A.No.

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Q. PLEASE EXPLAIN.

5 A. Mr. Seelye estimates LG&E's monthly electric Residential customer "cost" to be 6 \$15.80. However, Mr. Seelye's analysis includes a significant level of distribution, 7 administrative, general, and other overhead costs. Electric utilities are in the business of 8 providing electric energy to customers. Administrative, general and other overhead costs 9 are a normal cost of business for any enterprise and should be recovered based on the 10 level of service provided (i.e., on a volumetric basis). That is, these costs are incurred in the provision of services rendered. As such, these costs should be recovered in relation to 11 12 the level of services provided.

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Q. HOW ARE ADMINISTRATIVE, GENERAL AND OVERHEAD EXPENSES TYPICALLY RECOVERED IN COMPETITIVE MARKETS?

A. As discussed previously, the pricing structures in competitive markets are predominately volumetrically priced. This volumetric pricing recovers all of a business's costs: fixed; variable; administrative; general; overhead; profit; etc.

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20 0. NOTWITHSTANDING THE EFFICIENCY REASONS AS TO WHY 21 **REGULATION SHOULD SERVE AS A SURROGATE FOR COMPETITION,** ARE THERE OTHER RELEVANT ASPECTS TO THE PRICING STRUCTURES 22 23 IN COMPETITIVE MARKETS VIS A VIS THOSE OF REGULATED 24 **UTILITIES?**

A. Yes. In competitive markets, consumers, by definition, have the ability to choose various suppliers of goods and services. Such is obviously not the case with regulated monopoly utilities. Consumers and the market have a clear preference for volumetric pricing. Utility customers are not so fortunate in that the local utility is a monopolist. The only reason utilities are able to achieve pricing structures with high fixed monthly charges is due to their monopoly status. In my opinion, this is a critical consideration in establishing utility pricing structures. That is, competitive markets and consumers in the U.S. have demanded volumetric based prices for generations: a regulated utility's pricing structure should not be allowed to counter the collective wisdom of markets and consumers simply because of its market power.

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HAVE YOU CONDUCTED AN ANALYSIS OF THE COSTS THAT SHOULD BE CONSIDERED IN DETERMINING LG&E'S RESIDENTIAL CUSTOMER CHARGES FOR ELECTRIC AND NATURAL GAS SERVICE?

Yes. As I discussed earlier, there is no doubt that the majority of LG&E's non-8 A. fuel or non-gas costs are fixed in the short-run and that efficient, competitive pricing 9 dictates volumetric pricing. However, traditional ratemaking has recognized a minimum 10 level of fixed customer charges to reflect the direct costs of maintaining a customer's 11 account. These direct customer costs include the Company's investment in meters and 12 service lines as well as the operating expenses associated with meter reading, customer 13 service, accounting and customer records and collections. I have conducted a traditional 14 direct customer cost analysis for LG&E which is presented in my Schedules GAW-9 15 (Electric) and GAW-10 (Gas). These studies indicate a monthly LG&E customer cost of 17 \$3.58 per month for electric service and \$6.86 for natural gas service.

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REGARDING WHAT ARE YOUR RECOMMENDATIONS LG&E'S Q. **RESIDENTIAL CUSTOMER CHARGES?** 20

Although my customer cost analyses indicate that reductions to LG&E's electric 21 A. and natural gas customer charges are warranted, in the interest of gradualism and rate 22 continuity I recommend that LG&E's current Residential electric and natural gas 23 customer charges be maintained at the current levels of \$5.00/mth for electric service and 24 25 \$9.50/mth for natural gas service.

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DOES THIS COMPLETE YOUR TESTIMONY? Q.

28 A. Yes.

BACKGROUND & EXPERIENCE PROFILE GLENN A. WATKINS VICE PRESIDENT/SENIOR ECONOMIST TECHNICAL ASSOCIATES, INC.

EDUCATION

1982 - 1988	M.B.A., Virginia Commonwealth University, Richmond, Virginia
1980 - 1982	B.S., Economics; Virginia Commonwealth University
1976 - 1980	A.A., Economics; Richard Bland College of The College of William and Mary,
	Petersburg, Virginia

POSITIONS

Jul. 1995-Present	Vice President/Senior Economist, Technical Associates, Inc.
Mar. 1993-1995	Vice President/Senior Economist, C. W. Amos of Virginia
Apr. 1990-Mar. 1993	Principal/Senior Economist, Technical Associates, Inc.
Aug. 1987-Apr. 1990	Staff Economist, Technical Associates, Inc., Richmond, Virginia
Feb. 1987-Aug. 1987	Economist, Old Dominion Electric Cooperative, Richmond, Virginia
May 1984-Jan. 1987	Staff Economist, Technical Associates, Inc.
May 1982-May 1984	Economic Analyst, Technical Associates, Inc.
Sep. 1980-May 1982	Research Assistant, Technical Associates, Inc.

EXPERIENCE

I. Public Utility Regulation

A. <u>Costing Studies</u> -- Conducted, and presented as expert testimony, numerous embedded and marginal cost of service studies. Cost studies have been conducted for electric, gas, telecommunications, water, and wastewater utilities. Analyses and issues have included the evaluation and development of alternative cost allocation methods with particular emphasis on ratemaking implications of distribution plant classification and capacity cost allocation methodologies. Distribution plant classifications have been conducted using the minimum system and zero-intercept methods. Capacity cost allocations have been evaluated using virtually every recognized method of allocating demand related costs (e.g., single and multiple coincident peaks, non-coincident peaks, probability of loss of load, average and excess, and peak and average).

Embedded and marginal cost studies have been analyzed with respect to the seasonal and diurnal distribution of system energy and demand costs, as well as cost effective approaches to incorporating energy and demand losses for rate design purposes. Economic dispatch models have been evaluated to determine long range capacity requirements as well as system marginal energy costs for ratemaking purposes.

B. <u>Rate Design Studies</u> -- Analyzed, designed and provided expert testimony relating to rate structures for all retail rate classes, employing embedded and marginal cost studies. These rate structures have included flat rates, declining block rates, inverted block rates, hours use of demand blocking, lighting rates, and interruptible rates. Economic development and special industrial rates have been developed in recognition of the competitive environment for specific customers. Assessed alternative time differentiated rates with diurnal and seasonal pricing structures. Applied Ramsey (Inverse Elasticity) Pricing to marginal costs in order to adjust for embedded revenue requirement constraints.

GLENN A. WATKINS

- C. <u>Forecasting and System Profile Studies</u> -- Development of long range energy (Kwh or Mcf) and demand forecasts for rural electric cooperatives and investor owned utilities. Analysis of electric plant operating characteristics for the determination of the most efficient dispatch of generating units on a system-wide basis. Factors analyzed include system load requirements, unit generating capacities, planned and unplanned outages, marginal energy costs, long term purchased capacity and energy costs, and short term power interchange agreements.
- D. <u>Cost of Capital Studies</u> -- Analyzed and provided expert testimony on the costs of capital and proper capital structures for ratemaking purposes, for electric, gas, telephone, water, and wastewater utilities. Costs of capital have been applied to both actual and hypothetical capital structures. Cost of equity studies have employed comparable earnings, DCF, and CAPM analyses. Econometric analyses of adjustments required to electric utilities cost of equity due to the reduced risks of completing and placing new nuclear generating units into service.
- E. <u>Accounting Studies</u> -- Performed and provided expert testimony for numerous accounting studies relating to revenue requirements and cost of service. Assignments have included original cost studies, cost of reproduction new studies, depreciation studies, lead-lag studies, Weather normalization studies, merger and acquisition issues and other rate base and operating income adjustments.

II. <u>Transportation Regulation</u>

- A. <u>Oil and Products Pipelines</u> -- Conducted cost of service studies utilizing embedded costs, I.C.C. Valuation, and trended original cost. Development of computer models for cost of service studies utilizing the "Williams" (FERC 154-B) methodology. Performed alternative tariff designs, and dismantlement and restoration studies.
- B. <u>Railroads</u> Analyses of costing studies using both embedded and marginal cost methodologies. Analyses of market dominance and cross-subsidization, including the implementation of differential pricing and inverse elasticity for various railroad commodities. Analyses of capital and operation costs required to operate "stand alone" railroads. Conducted cost of capital and revenue adequacy studies of railroads.

III. Insurance Studies

Conducted and presented expert testimony relating to market structure, performance, and profitability by line and sub-line of business within specific geographic areas, e.g. by state. These studies have included the determination of rates of return on Statutory Surplus and GAAP Equity by line - by state using the NAIC methodology, and comparison of individual insurance company performance vis a vis industry Country-Wide performance.

Conducted and presented expert testimony relating to rate regulation of workers compensation, automobile, and professional malpractice insurance. These studies have included the determination of a proper profit and contingency factor utilizing an internal rate of return methodology, the development of a fair investment income rate, capital structure, cost of capital.

Other insurance studies have included testimony before the Virginia Legislature regarding proper regulatory structure of Credit Life and P&C insurance; the effects on competition and prices resulting from proposed insurance company mergers, maximum and minimum expense multiplier limits, determination of specific class code rate increase limits (swing limits); and investigation of the reasonableness of NCCI's administrative assigned risk plan and pool expenses.

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IV. Anti-Trust and Commercial Business Damage Litigation

Analyses of alleged claims of attempts to monopolize, predatory pricing, unfair trade practices and economic losses. Assignments have involved definitions of relevant market areas(geographic and product) and performance of that market, the pricing and cost allocation practices of manufacturers, and the economic performance of manufacturers' distributors.

Performed and provided expert testimony relating to market impacts involving automobile and truck dealerships, incremental profitability, the present value of damages, diminution in value of business, market and dealer performance, future sales potential, optimal inventory levels, fair allocation of products, financial performance; and business valuations.

MEMBERSHIPS AND CERTIFICATIONS

Member, Association of Energy Engineers (1998) Certified Rate of Return Analyst, Society of Utility and Regulatory Financial Analysts (1992) Member, American Water Works Association National Association of Business Economists Richmond Association of Business Economists National Economics Honor Society

		LIFER	JURISDICTION	NO.	TESTIMONY
	SAVANNAH ELECT. & PWR CO.	YES	GA. PSC	3523U	SALES FORECAST, RATE DESIGN ISSUES
	CENTRAL MAINE PWH CO.	SE V	ME. PUC	89-68	MARGINAL COST OF SERVICE
	COMMONWEAL IN GAS SERVICES (COUMDIA GAS) WARNER FRIJEHALIF	NON TEX	VA. SUU: U.S. BANKRUPTCY CT.	PUE900034	ULASS CUST OF SERVICE VALUE OF STOCK COST OF CAPITAL
	W. VA. WATER	YES	WVA PSC	91-140-W-42T	RATE DESIGN
	S.C. WORKERS COMPENSATION	YES	SC DEPT OF INSUR	92-034	INTERNAL RATE OF RETURN
	GHASS V. AI LAS PLUMBING, et.al.		HICHMOND CIRCUT CT	n/a Di IEANANA4	DAMAGES, BREACH OF COVENANT NOT TO COMPETE (PROFFERED TEST)
	VINGINIA IVALORAE CAS		N.L. DEPT OF INSUE	NS 06174-02	JURIJUIO LIUUVAL & CLASS VUOL UT SCHYICE COST ALL OCATIONS PROFITARII ITY
	ALLETATE INSURANCE COMPANY (REBUTTAL)		N.J. DEPT OF INSUR	INS 06174-92	COST ALLOCATIONS. PROFITABILITY
	MOUNTAIN FORD V FORD MOTOR COMPANY		FEDERAL DISTRICT CT	n/a	VEHICLE ALLOCATIONS, INVENTORY LEVELS, INCREMENTAL PROFIT, & DAMAGES
393	SOUTH WEST GAS CO.	YES	AZ. CORP COMM	U-1551-92-253	DIRECT: OLASS COST ALLOCATIONS
393	SOUTH WEST GAS CO. DOTOMAC EDISON CO.	YES VES	AZ, COHP COMM	U-1551-92-253 DI IE020033	SURHEBUTIAL: CLASS COST ALLOCATIONS
305	VIRGINIA AMERICAN WATER CO.	YES	VA. SCC	PUE95003	JURISDICTIONAL ALLOCATIONS
395	NEW JERSEY AMERICAN WATER COMPANY	YES	N.J. B.P.U.	WH95040165	COST ALLOCATIONS, RATE DESIGN
695	PIEDMONT NATURAL GAS COMPANY	YES	S.C. P.S.C.	95-715-G	COST ALLOCATIONS. RATE DESIGN, WEATHER NORMALIZATION
1995	CYCLE WORLD V. HONDA MOTOR CO.	<u>e</u>		None	MARKET PERFORMANCE, FINANCIAL IMPACT OF NEW DEALER
1996	HOUSE BILL # 1513 MIDCINE AMEDICANI WATED CO		VA. GEN'L ASSEMBLY	N/A	WAITER / WASTEWATER CONNECTION FEES
	VIRGINIA AMERICAW YAJEH CO. FI 1788FTHTOWN WATER CO	YES VEC		PUESSOUUS WIDDE110FE7	JUMISIDICI I UNAL ALLOCA I UNS POST & 1 DOATONS DATE DESIGNI
966	ELIZABETHTOWN WATER CO.		N.J. B.P.U.	WR85110557	SUPPERITTAL COST ALL OCATIONS PATE DESIGN
866	SOUTH JERSEY GAS CO.	YES	N.J. B.P.U.	GR96010032	CLASS COST OF SERVICE
966	VIRGINIA LIABILITY INSURANCE COMPETITION	YES	VA. SCC	INS960164	COST ALLOCATIONS, INSURANCE PROFITABILITY
996	SOUTH JERSEY GAS CO.	YES	N.J. B.P.U.	GR96010032	REBUTTAL - CLASS COST OF SERVICE
£ 6	HOUSE BILL # 1513 NISCAN V. CRIMARI ER NISCAN		VA. GEN'L ASSEMBLY	N/A Mono	WATER / WASTEWATER CONNECTION FEES
265	PHILADELPHIA SUBURBAN WATER CO. (DIRECT)	VES	PA, PIIC	B-00973952	MATAL DE CAMINALION & CONCIMINACE COST à 1 OCATIONS RATE DESIGN PATE DISCOMINTS
697	PHILADELPHIA SUBURBAN WATER CO. (REBUTTAL)	KES I	PA. PUC	R-00973952	COST ALLOCATIONS, RATE DESIGN, RATE DISCOUNTS
266	PHILADELPHIA SUBURBAN WATER CO. (SURREBUTTAL)	YES	PA. PUC	R-00973952	COST ALLOCATIONS, HATE DESIGN, RATE DISCOUNTS
260	VIRGINIA AMERICAN WATER CO.	YES	VA SOC	PUE970523	JURISDICTIONAL/CLASS ALLOCATIONS
000	VINGINIA ELECTRIC POWEN COMPANY NEW JERSEV AMERICAN WATER COMPANY	YES VES		PUE860296	CLASS COSI OF SERVICE and TIME DIFFERENTIATED FUEL COSTS Of ASS COST OF SERVICE BATE DESIGN, DEVENINGS
866	AMERICAN ELECTRIC POWER COMPANY	YES	VA. SCC	PIJE960296	CLASS COST OF SERVICE, BUT THAT I DESIGN, REVENUES CLASS COST OF SFERVICE and THAT DIREPENDATED FILE COSTS
866	FREEMAN WRONGFUL DEATH	YES	FIEDERAL DISTRICT CT.		LOST INCOME, WORK EXPECTANCY
866	EASTERN MAINE ELECTRIC COOPERATIVE	YES	MAINE PUC	98-596	REVENUE REQUIREMENT
866	CREDIT LIFE/AH RATE FILING	YES	VA. SCC		PRIMA FACIA RATES, LEVEL OF COMPETITION
666	CHEDIT LIFE & A&H LEGISLATION	Q L	VA. GEN'L ASSEMBLY	N/A	COST ALLOCATIONS, INSURANCE PROFITABILITY
660	MILLEN VULNSWAGEN V. VOLNSWAGEN OF AMERICA	YES	VA DMV	NON8 DilE040207	VEHICLE ALLOCATIONS/CSI
666	NCCI (WORKERS COMPENSATION INSURANCE)	VES 4	VA SCO	INSQUEE	WORKERS COMPENSATION RATES
1999	ROANOKE GAS	YES	VA SCC	PUE980626	Rate Design/ Weather Norm
2000	PERSON-SMITH v. DOMINION REALITY	QN	RICHMOND CIRCUIT	п/в	LOST INCOME
2000	CREDIT LIFE/AH RATE FILING	YES	VA. SCC		PRIMA FACIA RATES, LEVEL OF COMPETITION
2000	UNITED CITIES GAS	YESW	VA. SCC		Cost Allocations/ Rate Design
2001	VEHMONT WORKERS COMPENSATION RATE CASE	YES	VT. INSURANCE COMM.	n/a	WORKERS COMPENSATION RATES
	SERRA CHEVROLET V. GENERAL MOTORS CORP. VIRGINIA DOMER ELECTRIC RESTRICTIONIC		ALABAMA CIRCUIT CT.	98-2089 Di IEAAA694	
	ANTRATA PONEN ELECTING RESTRUCTORING AMERICAN ELECTRIC POWER RESTRUCT IRING	202			RATE Design (UNBUNDLING) DATE Design / INDI INDI
2001	NCCI (WORKERS COMPENSATION INSTIRANCE)	N HA	VA SCC	INSO10100	TANIE DESIGN (UNBUNDENNG) WADERERS AANDENISATION DATES
· n	PHILADELPHIA SUBURBAN WATER CO. (DIRECT)	YES	PA PUC	R00016750	COST ALLOCATIONS AND RATE DESIGN
2002	HAROLD MORRIS PERSONAL INJURY	YES	FED. DIST CT (RICHMOND)		LOST WAGES
~ .	PIEDMONT NATURAL GAS	YES	S.C. PSC	2002-63-G	REVENUE ROMT, COST OF CAPITAL
2002	VIHGINIA AMERICAN WATER COMPANY ROANOKE GAS COMPANY	YES Ves	VA. SOC	PUE-2002-00375 DHE-2002-00375	JURISDICTIONAL/CLASS ALLOCATIONS
2002	SOUTH CAROLINA ELECTRIC & GAS (ELECTRIC)	XES	S.C. PSC	2002-223-E	YEAINER ROMT. REVENUE ROMT.
2003	NCCI (WORKERS COMPENSATION INSURANCE)	Kes Kes	VA SCC	INS-2003-00157	WORKERS COMPENSATION RATES
2003	CREDIT LIFE/AH RATE FILING	YES	VA, SCC		PRIMA FACIA RATES, LEVEL OF COMPETITION

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> EXPERT 1. JONY PROVIDED BY GLENN A. WATKINS

YEAR	CASE NAME	PRE	JURISDICTION	NO.	TESTIMONY
2003	SOUTHWESTERN VIRGINIA GAS CO.	YES	VA. SCC	PUE-2003-00426	WEATHER NORMALIZATION ADJUSTMENT RIDER
5004	SOUTH CAROLINA FIFELINE COMPANY VIRGINIA AMERICAN WATER COMPANY	YES	VA. SCC	2004-0-0 PIIE-2003-00539	UCST UP GAS AND INTERUPT, SALES PROGRAM
100	SCEAG FUEL CONTRACT	YES	S.C. PSC	2004-126-E	GAS CONTRACT FOR COMBINED CYCLE PLANT
2004	WASHINGTON GAS LIGHT	YES	VA. SCC	PUE-2003-00603	RATE DESIGN/ WNA RIDER
2004	ATMOS ENERGY	YES	VA. SCC	PUE-2003-00507	RATE DESIGN/ WNA RIDER
2004		YES	S.C. PSC	2004-178-E	COST OF CAPITAL/ REV ROMT.
2004	MEDICAL MALPRACTICE LEGISLATION	2	VA. GENERAL ASSEMBLY	NA	INDUSTRY RESTRUTURE/ PROFITABILITY
2004	ATLAS HONDA V. HONDA MOTOR CO.		VA. DMV	None	NEW DEALER PROTEST
10	NCCI (WORKERS COMPENSATION INSURANCE)	KES I	VA. SCC	INS-2004-00124	WORKERS COMPENSATION RATES
2004		YES	PA. PUC	H00049656	COST ALLOCATIONS/ RATE DESIGN
8	WASHING ION GAS LIGHI	XEX X			WEATHER NOHMALIZATION ALJUSTMENT RIDER
85		S		0-2002	טבע הלעד גם אדר לידה והרי
	NEW LOWN AN LESIAN WALEH				REV. HUMI, HALE STRUCTURE
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0002	Commuta Gas of Virginia	2027		PUE-2005-00085	Hevenue Hequirements/ Alt. Hegulation Plan
8	FFL G85 MOCI ANDREDS CONDENSATION INSTIDAMOES			11-00001350	COST ALEOUATIONS TATE DESIGN
	NUCI (WUNNENS CONFIGNOATION INCOMPANDE)	3 8	Mo Dott of locur	143-2000-00 131	Princip Door Anto found of communities
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	Weilstord Electric	2007		D-00070240	
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	NCCI (WOHKEHS COMPENSATION INSURANCE)		VA SUC	1/12-200/-UU224	
ng s				25000-0	COST AUDCARDONS/HARE LESIGN
ŝ				1-2018-2011621	COST ALLOCATIONS' HAIE DESIGN
8 00			VA. GENERAL ASSEMISLT		
8002	Puger sound Energy (Electric)	ΩĽ	We. UIC	UE-0/2300	COST Allocations/Hate Lesign
800	Puget Sound Energy (GBS)	Ĩ	Wa. UIG	0520 22201	Cost Allocations/Hale Lesign
		ដ	NA Pac		
2008	Columbia Gas of Ohio	YES	OH PUC	. ت	a Cost Allocations/Hate Design
ROB	Virginia Natural Gas	YES	Va SCC	PUE-2008-00060	Nati Gas Conservation/ Hevenue Decouping
800	Equitable Natural Gas	YES	PA. PUC	H-2008-2029325	Cost Allocations/Rate Design/ Discounted Rates
2008	LG&E (Electric)	YES	Ky PSC	2008-000252	Cost Allocations/Rate Design/ Weather Normalization
2008	LG&E (Natural Gas)	YES	Ky PSC	2008-000252	Cost Allocations/Rate Design
8008	Kentucky Utilities	YES	Ky PSC	2008-00251	Cost Allocations/Rate Design/ Weather Normalization
8008	Pike County Natural Gas	YES	PA. PUC	R-2008-2046520	Cost Allocations/Rate Design
2008	Pike County Electric	YES	PA, PUC	R-2008-2046518	Cost Allocations/Rate Design
2008	Newtown Artesian Water	YES	PA. PUC	R-2008-2042293	Revenue Requirement
2009	l sechirch Water & Sewer	YES	Va. Cimit C	Civil Antion 42736	
8000	Carries Paner Gas Inc.	YES		B_02008_2070675	
0000	Damo Natural Gae Inc	XEX		B-2008-2070660	
		3		1-2-2-2012-000	
				TV8	
5000	Fairtax County V. City of Pails Church Virginia		Fairtax Circuit Ot. (Va.)	CL-2008-16114	vvater Hevenue Hequitement
800		3	Wa. UIC	UE-090134	Efecting rate Design
2009	Avista Utilities (Gas)	YES	wa. UIC	UE-090135	Gas Rate design
6003	Columbia Gas of Kentuky	YES	Ky PSC	2009-00141	Cost Allocations/Rate Design
2009	NCCI (Workers Compensation Hates)	YES	VA SCC	INS-2009-00142	Workers Compensation Rates
2003	Duke Energy of Kentucky (Gas)	YES	ky. PSC	2009-00202	Rate Design
2009	Duke Energy Carolinas (Electric)	YES	NC UC	E-7 Sub 909	Cost Allocations/Rate Design
2009	PacifiCorp	YES	Wa. UTC	UE-090205	Hate Design/Low Income
600	Puget Sound Energy (Electric)	YES	Wa. UTC	UE-090704	Cost Allocations/Hate Design
2009	Proet Sound Energy (Gas)	YES	We. UTC	11G-090705	Cost Allocations/Refe Decim
2010	Arris Virrinis Inc	N N		DITE-SOLD DORD	oos Muudii o anaa baayii
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Note: Does not include Expert Reports submitted to Courts or Regulatory agencies in which cases that settled prior to testimony. Testimony prior to 2003 may be incomplete.

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EXPERT). JNY PROVIDED BY GLENN A. WATKINS

Source: KU Responses to AG 1-219 through AG1-222

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Generating Unit: Mill Creek 1 Trimble Counly 1: Mill Creek 4 Mill Creek 3 Mill Creek 2	·	Generator 356 568 544 463 356		Generation 1 2 3 4 5		Net Investment -\$54,631,912 \$342,381,617 \$251,798,310 \$129,748,881 \$43,236,558	nt 912 617 881 558	Factor 77.9 89.6 81.3 81.2 70.9	Factor Facto Avg Avg 77.9 89.6 81.3 81.3 81.2 70.9	Factor Fac Avg Av 77.9 Av 89.6 81.3 81.2 70.9	Factor Factor Ellip Pct Energy Avg Avg 85.6 Base 100.00% 89.6 90.1 Base 100.00% 81.2 87.5 Base 100.00% 81.2 89 Base 100.00% 70.9 86.3 Base 100.00%	Factor Factor Avg Avg BillP 77.9 85.6 Base 89.6 90.1 Base 81.3 87.5 Base 81.2 89 Base 70.9 86.3 Base	Capacity Availability Factor Factor Avg Avg Bill Pct Energy Pct D 77.9 85.6 Base 100.00% 100.00% 89.6 90.1 Base 100.00% 100.00% 81.2 87.5 Base 100.00% 81.2 89 Base 100.00% 70.9 86.3 Base 100.00%
Mill Creek 3 Mill Creek 2	Coal	356	2,768,596	4.01	\$124,822,261	\$129,748, \$43,236,	558	- -	81.2 70.9	81.2 89 70.9 86.3	81.2 89 Base 70.9 86.3 Base	81.2 89 Base 100.00%	81.2 89 Base 100.00% 0.00% \$
Ghent 1	Coal	557	2,950,195	, , ,	\$493,607,411	\$271,159,395	9,395		84.2	84.2 87.9	84.2. 87.9 Base	84.2 87.9 Base 100.00%	84.2 87.9 Base 100.00% 0.00%
Cane Run 4	Coal	164	966,602	11	\$72,507,681	\$14,641,808 .\$14,641,808	41,808	(Th	51.3	51.3	51.3 86.9	51.3 86.9 Base	51.3 86.9 Base 100.00%
Ghent 3 Cane Run 6	Coal	557 272	3,363,968	13 13	\$784,290,812 \$141,803,002	\$533,5 \$54,1	\$533,549,718 \$54,133,803	49,718 78 33,803 51.2	(1)	78 51.2	78 85.5 51.2 84	78 85.5 Base	78 85.5 Base 100.00% 51.2 84 Base 100.00%
Cane Run 5 Green River 4	Coal	209	933,114 396.032	15 14 15	\$93,964,064 \$44 909 090	\$29,1	\$29,847,094 \$9 588 636	347,094 38.7 38.7	38.7 84.7 31.0 85.0	38.7	38.7 84.7 Intermediate	38.7 84.7 Intermediate 38.70% (38.7 84.7 Intermediate 38.70% 61.30%
Green River 3	Coal	75. Me	226,460	16 ,	\$20,882,040	\$4	\$4,223,782		21.2 83	21.2 83	21.2 83 Intermediate	21.2 83 Intermediate 21.20%	21.2 83 Intermediate 21.20% 78.80% \$885,438
Brown 3 Brown 2	Coal	446 180	1,834,351 627,235	17 18	\$167,769,218 \$51,604,493	818 19\$	\$61,483,147 \$19,960,742	,483,147 52.9 1,960,742 37.7	52.9 81.3 37.7 86	52.9 37.7	52.9 81.3 37.7 86	52.9 81.3 Intermediate	52.9 81.3 Intermediate 52.90% 37.7 86 Intermediate 37.70%
Brown 1	Coal	114	289,333	19	\$58,239,565	\$18	\$19,914,445		41 83.4	41 83.4	41 83.4 Intermediate	41 83.4 Intermediate 41.00%	41 83.4 Intermediate 41.00% 59.00% \$8,164,922 \$
Trimble County 5	Gas	199	43,621	20	\$63,318,704	\$47	\$47,453,510	,142,131 20.9 ,453,510 17.4		20.9 17.4	20.9 51.5 17.4 82.8	17.4 82.8 Peak	20.9 61.0 intermediate 20.90%
Trimble County 6	Gas	199	24,504	3 13	\$59,494,178	s 44	\$44,963,635	•	14.9	14.9 83,4	14.9 83.4 Peak	14.9 83.4 Peak 0.00%	14.9 83.4 Peak 0.00% 100.00% \$0
Trimble County 8	Gas	199	34,284	23 1	\$51,954,657	\$42	\$42,261,302	,261,302 8.6	_	8.6	8.6 83,4	8.6 83.4 Peak	8.6 83.4 Peak 0.00%
Trimble County 9	Gas	199	23,995	24	\$52,109,272	\$42	\$42,802,901		7.1	7.1 83.4	7.1 83.4 Peak	7.1 83.4 Peak 0.00%	7.1 83.4 Peak 0.00% 100.00% \$0
Trimble County 10	Gas	-	19,039	25	\$58,438,142	\$48	\$48,466,389	466,389 5.5	ូ ភូមា	5.5 83,4	5.5 83,4 Peak	5.5 83,4 Peak 0.00%	5.5 83,4 Peak 0.00% 100.00% \$0
Brown 7	Gas,Oi	1 177	- 34,203 40,139	27 28	364,152,496 365,080,354	\$53 \$54	\$54,834,899 \$53,169,501	,834,899 9 1,169,501 10.6	_	10.6	9 82.2 10.6 82.2	9 82.2 Peak	9 82.2 Peak 0.00%
Brown 8	Gas,Oi		7,547	28	\$36,379,638	\$23	\$23,135,828	~	1.4	1.4 88	1.4 88 Peak	1.4 88 Peak 0.00%	1.4 88 Peak 0,00% 100.00% \$0
Brown 9 Brown 10	Gas,Oil	126 126	1,524 2 504	3 8	\$48,505,028	8 1 2	\$28,291,775	6,291,775 1		5 5 4	1 1 85.7	1 1 85.7 Peak 0.00%	1 1 85.7 Peak 0.00% 100.00% \$0
Brown 11	Gas,Oil		4,493	31	\$44,435,742	8	\$27,303,037	-	0.5	0.5 89.1	0.5 89.1 Peak	0.5 89.1 Peak	0.5 89.1 Peak 0.00%
Brown 5	Gas	123	2,592	88	\$47,749,126	. 8	\$35,132,623		1.9	1.9 89.1	1.9 89.1 Peak	1.9 89.1 Peak 0.00%	1.9 89.1 Peak 0.00% 100.00% \$0
Paddys Run 11	Gas	18	20	¥ 8	\$1,609,957	ę	\$43,043,004 (\$28,342)	(\$28,342) 0,1		0.1	0.1 50	0.1 50 Peak	0.1 50 Peak 0.00%
Cane Run 11	Gas,Oil		212	35	\$3,249,070	••	\$1,357,866		0.1	0.1 50	0.1 50 Peak	0.1 50 Peak 0.00%	0.1 50 Peak 0.00% 100.00%
Paddys Run 12	Gas	: : :	224	រំនូ	\$3,183,011		(\$213,388)			0.1 50) 0.1 50 Peak	0.1 50 Peak 0.00%	0.1 50 Peak 0.00% 100.00%
Haefling 1-3	Gas,Oil		-439	38	\$5,695,570	25	\$1,417,461	- :	- :	0.2 50	0.2 50 Peak	0.2 50 Peak 0.00%	
Dix Dam 1-3 Ohio Falls 1-8	Hydro	86	56,130 230.869	1 1	\$12,391,689 \$41.596.196	۵ ۹	3,980,168 3.670.611	58.8 58.3		28.8 none 68.3 none	68.3 none Hydro	68.3 none Hydro 100.00%	y u.1 50 Peak 0.00% 100.00%
Trimble County 2	Coal	838		Projected Top 6	÷	\$87			68.3	89.7 89.4	60 J 60 J 0000	89.7 89.4 Base 100.00%	0.1 50 Preak 0.00% 100.00% 12.38 none Hydro 100.00% 0.00% \$3,980 68.3 none Hydro 100.00% 0.00% \$3,980
Total							0,200,000	\$870,200,000 89.7	68.3 none 89.7		00,1 07,4 DASC		y 0.1 50 Peak 0.00% 100.00% 0.2 50 Peak 0.00% 100.00% 28.8 none Hydro 100.00% 0.00% \$3,980, 68.3 none Hydro 100.00% 0.00% \$33,670,1 89.7 89.4 Base 100.00% 0.00% \$870,200,0

Kentucky Utilities and Louisville Gas & Electric Test Year Generation Statistics

Schedule GAW-2

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Louisville Gas & Electric Co. Overhead Lines Classification

Exclude small Quantities

					Ln	Total				
	Size	Ampacity	Avg cost/ft	Quantity	Avg cost/ft	Cost				
6	26.24	105	0.19	18421	-1.660731	3499.99	Regression	i Output:		
4	41.74	140	0.24	89519	-1.427116	21484.56	Constant		-1.0112	0.3637823
2	66.36	184	0.67	971519	-0.400478	650917.73	Std Err of Y Est		0.6552882	
1	83.69	212	1.31	88940	0.2700271	116511.4	R Squared		0.590519	
1/0	105.6	242	1.38	39898	0.3220835	55059.24	No. of Observations		14	
2/0	133.1	276	1.44	713507	0.3646431	1027450.1	Degrees of Freedom		12	
3/0	167.8	315	1.6	1954687	0.4700036	3127499.2				
4/0	211.6	357	1.63	112230	0.48858	182934.9	X Coefficient(s)	0.0033942		
266	266	449	1.8	288794	0.5877867	519829.2	Std Err of Coef.	0.0008159		
266.8	266.8	450	1.85	20263	0.6151856	37486.55				
300 MCM	300	492	3.57	9557	1.2725656	34118.49				
397 MCM	397	576	0.86	265460	-0.150823	228295.6				
500 MCM	500	690	6.95	7511	1.9387417	52201.45				
795 MCM	7 9 5	884	4	113204	1.3862944	452816				
				4,693,510		6,510,104	Intercept	0.3637823		
				, .			Q	4,693,510		
							Zero load Cost	1,707,416		
	a tha thair						Total Cost	6,510,104		
							Pct Cust	26.23%		

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Ampacty Source: Southwire ACSR

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Louisville Gas & Electric Co. Underground Lines Classification

Excludes Small Quantities

	Size	Ampacity	Avg cost/ft		Ln Avg cost/ft	Total Cost				
12	6.53	20	0.17	102463	-1.771957	17418.71	Regression	Output:		Anti-log
6 Cu	26.24	65	0.31	147560	-1.171183	45743.6	Constant		-1.228544	0.2927183
2 Cu	66.36	115	1.4	807125	0.3364722	1129975	Std Err of Y Est		0.479928	
1	83.69	100	0.94	9181	-0.061875	8630.14	R Squared		0.8599632	
1/0	105.6	120	1.35	95476	0.3001046	128892.6	No. of Observations		9	
2/0 Cu	133.1	175	1.44	2768745	0.3646431	3986992.8	Degrees of Freedom		7	
4/0 Cu	211.6	230	2	1164717	0.6931472	2329434				
350 MCM Cu	350	310	2,92	20435	1.0715836	59670.2	X Coefficient(s)	0.0083349		
1000 MCM	1000	445	10.5	10980	2.3513753	115290	Std Err of Coef.	0.0012713		
				5126682		7822047.1			-	
							Intercept	0.2927183		
							Q	5126682		
							Zero load Cost	1500673.8		
							Total Cost Pct Cust	7822047.1 19.19%		

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Ampacity Source: National Electric Code Table 310-16

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Louisville Gas & Electric Co. Transformer Classification

OH 1P Eliminate small Observations

	Size 15 25 37.5 50 75 100 167	Quantity 1526 3191 2612 1903 611 408 265	total Cost 1549125 4839002 4456030 4443475 1773189 1279833 929949	\$1,516.45 \$1,705.98 \$2,334.98 \$2,902.11 \$3,136.85	Ln Avg cost/ft 6.9227956 7.3241294 7.4418973 7.7557604 7.9731932 8.050973 8.1631552	Regression Constant Std Err of Y Est R Squared No. of Observations Degrees of Freedom X Coefficient(s) Std Err of Coef.	n Output: 16.090686 3.0866039	1223.7422 399.83394 0.8446052 7 5
		10516	19270003					0.6677981
Pad 1∂P	25	610	1155666	1804 5344	7.5467284	Regressior	Quinut	
Fault	37.5		3798390			Constant	i ouput.	1132.5527
•- •	50	2503		3514.9013		Std Err of Y Est		919.68546
	75	1791	5928607	3310.2217	8.1047704	R Squared		0.8739168
	100	556		3839.2158		No. of Observations		8
	150	174		6010.7241		Degrees of Freedom		6
	167	139	662878	4768.9065	8.4698723			
	225	104	981881	9441.1635	9.1528345	X Coefficient(s) Std Err of Coef.	31.629177 4.9046251	
	;	7386	24505690					
								8365034.5
	÷							0.3413507
						i		
Pad 3 P	150	101	811424	8033.901	8.9914255	Regressior	output:	
	225	50	502613	10052.26	9.2155528	Constant	·	6811,3849
	300	265	3252302	12272.838	9.4151438	Std Err of Y Est		2439.9074
	500	143	2015204		9.5533864	R Squared		0.9725983
	750	169	3363344			No. of Observations		9
10.E1.0	1000	.98	2386094			Degrees of Freedom		7
:	1500	53		29281.434				
	2000	39		43963.436		X Coefficient(s)	16.215832	
	2500	32	1410663	44083.219	10.693834	Std Err of Coef.	1.0287553	
		950	17008134					
	•							6470815.7
		1	•	• -				0.3804542

Use Linear	Pct	Total Cost	Weighted Pct
OH 1P	0.6677981	19270603	21.17%
Pad 1P	0.3413507	24505690	13.76%
Trd 3P	0.3804542	17008134	10.65%
	n: :	00704407	AE EON
. Jal j		60784427	45.58%
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Louisville Gas & Electric Electric Cost of Service Study (Summary)

Pro-Forma Adjustments: Eliminata Unbilled Revenue Cost of Service Summary – Pro-Forma Total Operating Revenue Total Pro-Forma Operating Revenue Sepreciation and Amorfization Expenses Mismatch in Fuel Cos Recovery To Reflect a Full Year of the FAC Rol-In Accretion Expense Depreciation for Asset Retirement Cost: Remove ECR Revenue VDT Surcredit Revenues USGC Settlement Weather Normalized Electric Operating Revenues Adjustment for Merger Surcredit Eliminate ECR, MSR, DSM, FAC, GSC Adjustment for Customer Billing and Rate Switching Year End Revenue Adjustment Eliminate DSM Revenue Eliminate Brokered Sales Remove Off-System ECR Revenues To Reflect a full Year of the ECR Roll-In flocation of Interruptible Credit mortization Expense Storm Damage Adjustment Eliminate advertising expenses Adjustment for retired mainframe Adjustment for MISD Exit Fee ain on Disposition of Allowances Acct. No. perty and Other Taxes eration and Maintenance Expenses ortization of Investment Tax Credit Adjustment for increase in property insurance Adjustment for increase in liability insurance Eliminate DSM Expenses Ekminata brokered sales expenses Reflect full year of ECR roll-in Eliminate mismatch in fuel cost recovery djustment for MISO RSG Settlement djustment for USGC Settlement Amorezedion of rate case expenses Adjustment for SW Power Pool Expense djustment for Hazard Tree program Adjustment for pension/post retir benefit abor adjustment rear end Expense adjustment Depreciation adjustment tments to Operating Expenses; cific Assignment of Interruptible Credit latory Credits and Federal Income Taxes ustment for CMRG Asset Iova ECR expenses Expenses int for 2008 Wind Storm for KCCS Asset for 2009 Winter Storn Account Description ***** 7 5 5 5 5 F (\$2,871,000) (\$32,833,449) (\$3,104,008) (\$3,104,008) (\$8,394,624) (\$8,394,624) (\$12,207,248) (\$12,20 (\$66,274) \$46,763,814 (\$2,667,453) \$2,667,453 \$974,466,040 1958,491,752 \$382,037,590 (\$27,088,657) (\$3,707,947) \$3,377,839 (\$248,375) (\$7,314,584) \$7,856,825 \$1,827,123 \$1,827,125 \$1,827,125 \$1,825,685 \$55,685 \$55,685 \$1,769,000 \$4,970,600 \$1,900,000 \$1,900,000 \$2,7,630,386 \$2,7,630,396 \$2,630,396\$2,630,30 (\$1,158,313) (\$11,844,697) (\$1,421,315) (\$3,345,623) \$2,304,814 \$367,491,643 \$134,422,206 \$19,202,954 \$187,384,298 \$21,962,628 \$250,673,608 \$45,860,753, \$267,986 \$593,411 \$2,363,249 \$7,883,577 \$7,883,577 \$7,883,577 \$7,902,114 \$22,813,907 \$19,089,397 \$19,089,397 \$1,190,545 (89,771,567) (81,477,778) (81,135,388) (85,510,855) (85,510,855) (85,510,855) (85,510,855) (85,510,855) (85,510,857) (85,510,011 (8423,107) (844,730) (844,7 5-0 -\$1,344,775 \$4,284,606 \$1,012,681 (\$246,163) \$0 (\$751,473) (\$3,667,120) (\$9,197,044) \$8,138,925 \$137,184,375 \$20,622,875 \$199,788,423 \$79,507,312 \$12,806,137 (\$219,006) \$190,756 \$2347,457 \$211,599 \$2,247,457 \$211,699 \$2,247,457 \$21,683,759 \$11,683,271 \$1,683,271 \$1,683,271 \$1,683,271 \$1,683,271 \$1,683,271 (4423.2291) (34,094,614) (31,229,000) (31,226,326) (31,226,326) (31,226,329) (31,115,633) (31,115,633) (31,115,633) (31,115,633) (31,115,633) (31,226,939) (31,226,939) (32,226,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,256,939) (32,257,939)
(32,257,939) (32,25 (\$3.377.2980) (\$1.252.1200 (\$30.975) (\$30.975) (\$36.558 \$57.65,588 \$57.65,588 \$57.65,588 \$57.65,588 \$57.65,588 \$58.199 \$54.962 (\$59.260) (\$12.960) \$14,582,618 1 \$2,255,881 \$35,253 \$16,173 \$31,789 \$37,789 \$37,899 \$37,899 \$37,899 \$37,899 \$37,899 \$37,899 \$30,972 \$30 \$31,899 \$30,972 \$30 \$31,899 \$30,972 \$30 \$31,899 \$30,972 \$30 \$31,899 \$30,972 \$30,9 (\$60,157) (\$723,298) (\$173,299) (\$175,921) (\$14,151 (\$248,477) (\$248,477) (\$248,477) (\$248,477) (\$248,477) (\$255,033) \$211,611) \$22,107 (\$555,033) \$22,037 (\$555,033) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,035) \$22,04 (\$555,045) \$22,04 (\$555,045) \$22,04 (\$555,045) \$22,04 (\$555,045) \$22,04 (\$555,045) \$22,045) (\$654,277) (\$654,277) (\$5,999) (\$5,999) (\$1,28,121 (\$6,209 \$7,214 \$10,454 \$10,454 \$10,454 \$10,454 \$12,575
\$12,575 \$12, Rate PS Rate CTOD Rate CTOD Rate ITOD Rate ITOD Rate RTS Secondary Primary Secondary Primary Secondary Transmission 3 \$132,443,125 1 \$20,844,884 1 \$267,144,884 1 \$219,8100 1 \$219,8100 1 \$21) (\$52,567)) (\$7,109,530)) (\$7,109,530)) (\$1,760,923)) (\$1,760,923)) (\$1,760,923)) (\$1,760,923)) (\$1,760,923)) (\$1,760,923)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)) (\$1,280,905)] (\$2,280,950) \\ (\$2,280,950) \\ (\$2,280 (\$5.764,765) (\$5.764,765) (\$5.77,809) \$5.45,293 (\$5.778) (\$5.778) (\$5.778) (\$5.778) \$5.05,619\$5.05,619 \$5.05,619\$\$5 \$17,580,327 \$2,682,268 (\$480,004) \$41,784 \$137,219 \$445,980 \$455,980 \$455,9 \$23,737,046 \$28,229,215 \$102,334,431 (\$68,781) (\$125,200) (\$125,200) (\$202,980) (\$202,980) (\$229,976) (\$229,877) (\$229,887)
(\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$229,887) (\$239,883) ((\$574,001) (\$85,786 (\$7,281) (\$1,51,52 \$1,532 \$1,532 \$1,532 \$1,533 \$1,535 \$1,535 \$1,535 \$1,555\$\$1,55 \$26,193,642 \$95,186,697 (\$12,743) (\$1,69,2,743) (\$1,60,865) (\$243,550) (\$243,550) (\$243,550) (\$243,550) (\$243,483) (\$263,483) (\$263,483) (\$263,483) (\$263,483) (\$263,483) (\$263,483) \$56,063 \$ \$20,096,448 \$3,145,617 \$48,690 \$6,48690 \$5,48,690 \$5,42,132 \$527,862 \$527,862 \$522,911 (\$1,884) (\$1,884) (\$1,884) \$578,437 (\$107,576) (\$107,577) \$61,891 \$1,567 \$1,78,808 \$1,98,808\$1,9808 \$1,9808\$\$1,98 \$42,01815,067 \$12,0191,785 \$12,0191,785 \$190,832 \$219,832 \$524,553 \$521,176 \$2,019,888 \$202,142 \$2,019,883 \$202,142 \$1,766,7633 \$250,479 (4226,605) (54,442,711) (57,66,612) (58,62,594) (58,62,594) (58,5,791) (58,5,791) (58,5,791) (51,375,464)
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Louisville Gas & Electric Electric Cost of Service Study (Summary)

Net Cost Rate Base Adjustment to Reflect Depreciation Reserve Cash Working Cepital Adjusted Net Cost Rate Base Total Net Operating Income ~ Pro-Forma Total Operating Expenses Adjustment for Amortization of Investment Tax Credit I Expense Adjustments Adjustment for tex basis depreciation reduction Acct. No. Prior income tax adjustments Adjustment for domestic production activities Federal & State Income Tax Adjustment Federal & State Income Tax Interest Adjustment Adjustment for property tax expense Adjustment for EKPC settlement charges **Reflect Weather Normalized Electric Sales Margins** Adjustment to Correct Edison Electric Institute Invoice Adjustment for Interest Rate Swap Amortization Adjustment for Injuries and Damages Adjustment to Remove FERC Hydropower Program Change - Account Description-****** **4**5
 11
 (S157,125)
 (S19)

 22
 S113,583
 S113,588

 22
 S205,788
 S125,588

 23
 S82,735
 S26,602

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 S82,736
 S24,602

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 S82,736
 S24,7048

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 S82,736
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 S845,661
 S24,7048

 28
 S264,846
 S1,452,124

 27
 S453,864,5520
 (S12,556,271)

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 S264,749
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 \$223,503,339 \$335,083,294 \$110,541,576 \$17,846,905 \$165,566,938 \$20,736,717 \$24,256,510 \$91,675,990 \$2,768,162 \$23,717,577
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 <th \$90,882,701 \$32,398,348 \$23,780,630 \$1,655,980 \$21,787,382 \$1,225,911 \$1,937,232 \$3,610,717 \$238,832 SystemRate RS Total ateRS GSS - Primary \$ (\$19,962) \$20,692 \$20,692 \$1,924 \$1,02,07 \$1,228 \$1,42,859 \$1,42,859 \$1,42,859 \$1,42,859 \$1,228,9869 \$571,786 \$571,796 \$571,596 \$571,596 \$571,596 \$571,596 \$571,596 \$571,596 \$571,596 (\$3,709) (\$33,614) 5,279 \$12,779 \$1,279 \$11,847 \$1,279 \$11,847 \$1,279 \$11,847 \$1,574 \$153,440 \$21,845 \$153,846 \$18,978 \$199,060 \$1,8478 \$159,060 \$1,8478 \$199,060 \$1,2859 \$24,736 \$49,260 \$45,736 \$462,240 \$45,731 \$562,240 \$57,015 \$55,240 \$55,240 \$55,240 Rate PS Rate CTOD - Rate ITOD Rate ITOD Secondary Primary Secondary Primary Secondary (\$4,399) (\$4,399) (\$4,927 \$1,510 \$1,510 \$26,511 \$20,957 \$26,511 \$20,957 \$26,511 \$20,957 \$20 \$1,786 \$6,834 \$23,123 \$82,299 \$30,114 \$122,277 \$31,060 \$52,217,7911 \$32,080 \$52,217,7911 \$38,098 \$52,245 \$58,098 \$52,245 \$58,098 \$52,245 \$52,1990 \$518,400 \$25,2990 \$517,455 \$53,804 \$57,455 \$53,804 \$57,455 (\$\$,123) \$8,901 \$5,834 (\$20,099) \$33,987 \$22,276 \$202 \$2,622 \$3,528 \$0 (\$72,115) (\$399) \$6,850 (\$3,267) (\$2,83) \$5,112 \$5,112 (\$567) \$1,009 \$662 \$50,928,344) (\$169,772) \$207,456 \$50,966,028 Rate RTS Transmission \$1,577 \$21,528 \$34,278 \$542,678 (\$542,678) (\$542,678) (\$648) (\$2,648) \$4,124 (\$2,322) \$4,124 (\$2,322) \$9,128 \$9,128 \$751,072 (\$5,528) \$8,287 \$5,432 Sp. Contract \$30,954,691 (\$102,296) \$106,855 \$30,959,260 \$13,292,089 \$3,362,688 \$14,288,715 (\$149,819) (\$110,311) \$3,943,359 (\$2,977) (\$743) (\$1,228) 55,081 \$1,258 \$8,974 \$1,330 \$5,258 \$8,974 \$1,320 \$5,253 \$1,752 \$1,720 \$4,523 \$1,752 \$1,720 \$4,523 \$1,752 \$1,720 \$4,523 \$1,752 \$1,720 \$4,523 \$8,603 \$1,720 \$4,523 \$8,603 \$1,720 \$4,523 \$8,603 \$1,720 \$4,523 \$8,603 \$1,720 \$1,720 \$1,885 \$2,597 \$1,285 \$29,885 \$2,545 \$2,545 \$1,886,388 \$1, 91 \$7,577,754 \$53,178,529 96) (\$25,345) (\$163,163) 15 \$27,806 \$70,024 10 \$7,660,215 \$53,085,390 Sp. Contract St. Lighting Water Co. RLS & LS ۶Ļ \$572,888 (\$1,856) \$2,001 \$573,033 (\$15,569) \$242,057 Lighting Traffic SL (\$46) \$94 \$19 \$224 \$19 \$224 \$102 \$103 \$104 \$104 \$104 \$313,932 \$943,010 (\$2,977) \$2,306 \$942,339 (\$2,023) \$11,943 \$31 \$407 \$315 \$315 \$150 \$120 \$180 \$180 \$173. 2103 \$157

Rate of Return

4.77%

4.01%

9.89%

4.01%

6,06%

2.67%

3.57%

1,69%

3.90%

1.47%

-0,48%

-1.44%

7,43%

-2.72%

-0.21%

דסזא. עזועזץ פונאד	TOTAL PLANT-IN-SERVICE	CWIP Common Plact Total CWIP	CWIP Treasmission CWIP Distribution Plant	Construction Work In Progress CWIP Production	OTHER	105 FLANT HELD FOR FUTURE USE PROPERTY HELD UNDER CAPITAL LEASE	108 COMPLETED CONSTR NOT CLASSIFIED 105 FLANT HELD FOR FUTURE USE	Total General Plant TOTAL COMMON PLANT	General Plant	Total Distribution Plant	374 ASSET RETIRE OBLIGATIONS DIST PLANT	349 SERVICES 370 METERS	Customer Demand	368 IRANSFORMERS	Demand Secondary Curtomet	Primary Customer	CHANDER Demand 388-387 UNDERGROUDUN I INFR	Demand	And A Character	Distribution Plant 380-382 TOTAL ACCTS 360-362 384 ast Comparison of California	Total Transmission Plant	Transmission Plant	Total Production Plant	Energy Demand	Demand 340 Other Production Generation	330 Hydro Baseload Generation Energy	Energy.	Production Plant State Production Commission	Sub-total	301.00 ORGANIZATION - COMMON 302.00 FRANCHISE AND COMMENTS	303.00 SOFTWARE	301.00 URGANIZATION	Plant in Service	RATE BASE	Acct. No. Account Description		
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\$1,529,325,637 \$1,549,028,436 \$	- 1		\$75,021,939 \$16,099,445			\$372,452 \$1,572,853	\$32,135,751 \$18,574,624	\$7,167,415		1	400,202,462 \$0	\$43,391,536 \$22,105,235	\$50,061,890	\$228,494 \$719,230	369,558,346		\$17,720,396 \$37,238,655	\$55,361,707 \$88,486,627	an,,,20,405		\$90,975,613 \$90,975,613		\$852,183,891	568,509,440	\$12,318,154 \$3,317,733	\$159,052,561			1	\$19,065, \$26				111111	Residential Date by	E State	
\$483,725,137 \$491,023,147	\$37,298,010	\$1.169.203 \$1.169.200	\$25,343,895 \$5,438,711			\$80,818 \$531,341	\$15,466,603 \$5,510,352	\$2,125,287	1 100 12 1200	\$5,178	\$4,022,994 \$0	\$14,160,499 \$2,644,625	\$5,989,313	\$27,337 \$234,715	\$18,802,032	a substantial second	12,120,036	\$6,623,374 \$23,918,458	311,550,281		\$30,733,362		\$287,884,611	\$23,683,146	\$4,258,284 \$1,023,828	\$49,082,457				SS,65	\$283 \$13			.000	Gen. Service	Louisville Gar & Electric Electric Cost of Service Study (Rate Base)	
\$72,653,464 \$0 \$79,018,755 \$1			\$4,708,539 \$1,010,436			\$6,698			90,/02,304		\$62,879	88	5	S0 S0	\$7,523 \$3,006,177	ě	50	\$14,335 53,824,221	\$1,846,725		\$5,709,826	and to for a	\$870,691	\$4,587,204	\$824,790 \$156,552	\$7,505,139		- \$907,128	[95 607'16	\$905,762	545 545			Primery	Rate PB	e Study	
\$074,187,027 \$732,509,762	31,737,160 \$58,322,765	\$4,751,379	\$42,676,079 \$9,158,137		11, 1405	\$71,826	\$12,979,775	83 02 ER	393,964,035	30 54,744	\$1,346,111	\$194,800	Se41 172	\$2,014 \$143,150	\$256,041 \$25,943,437	57,411,693	\$156,162	\$487,877 \$33,003,189	S 15,937,319	And the state	\$51,751,294	enen, 100, 140	\$8,349,451	\$41,118,455	\$7,393,192 \$1,501,250	\$354,430,648 \$71,970,148		\$8,415,971	311,544 SSB4	\$8,403,304	5421			Secondary	Rate PS		
	\$7,510,265	\$\$05,618	\$5,585,092		5117,093	ət,uai,519 \$7,643	\$2,923,643	*A01 021	\$9,999,185	\$509	\$11,267	388	5 5	3 8	\$1,755 \$1,458,357	5	S 0	\$3,345 \$4,399,448	\$2,124,504	10/71/06	\$6,772,781	363,441,783	0ET,7065	\$5,566,821	\$1,000,927	\$47,984,583 \$7,819,128		\$1,070,737		\$1,069,125				Primery	- Rute CTOD		
	\$8,030,547	\$668,915	\$6,504,124		5136,361	\$1,233,587 \$10,112	\$3,462,465		\$13,228,575	\$676	\$45,069	\$1,299,953	547,547	55	\$7,022 \$3,708,219	\$1,115,620	\$4,283	\$13,380	\$2,277,997	\$7,867,248	\$7,887,248	\$73,881,191			\$1,136,991	\$54,507,507 \$10,478,865		\$1,268,072		\$1,266,163				Secondary	Rate CTOD		
7,725,744	\$999,014	\$5,475,985 \$2,112,488	\$25,517,592		\$534,982	\$4,708,277 \$31,934	51,816,789 513,215,318		\$41,778,902	\$2,121 \$2	5129,028	88	50	50	\$3,762 \$14,424,326	8	00. 201/24-Care	\$7,168	\$8,861,011	\$30,943,995	\$30,943,995	\$289,857,651	\$3,882,144	810,8698	\$4,620,295	\$221,497,564 \$33,463,099		\$4,839,896		\$4,832,612				Primary	Rate (Top)		
	\$29,638				\$15,090	\$139,919 \$139,919	\$53,991 \$392,729		\$1,726,299	20	547,977	\$180,999	53,000	511	\$1,421 \$450,290	\$155,334	ChC'Crace	\$2,708	\$282,761	\$872,824	\$872,824	\$8,175,688	3743,030 \$129,283			\$6,077,178 \$1,114,386		\$143,831						Primary Socndary			
	\$243,151					\$1,145,953						8 8 8	8	8	8 S	8 8	8 8	8	8	\$8,510,928	326 015 82	\$79,723,290	\$7,197,927 \$937,478	\$168,561	\$1,294,204	\$62,044,302 \$8,080.819		\$1,177,965						Transmission			
	\$149,370				579,243	\$703,971	\$1,975,971				3 3	88	\$0	50	52.317 840	50 S0	\$2,948,572	\$159	\$1,423,873	\$4,583,519	64 Set 616	\$42,934,600	\$3,626,280			\$31,257,614		\$723,650						Sp. Contract FL Knox			
	\$78,842 \$36,965				51,192 519,773	\$174,214	\$67,224		\$1 660 404			88	ងរ	8	\$167 \$167	8 8	\$683,883	6165	\$330,249	\$1,143,688		\$10,713,118	\$951,743 \$141,482	\$25,439		\$8,203,785		\$12						PL Knox Water Co. RLIS & LS			
\$103,454,849 \$103,454,849 \$109,518,619 \$	\$3,904,042 \$266,715	\$334,460	*) 600 CC1		\$59,017 \$32,675	\$1,257,010	\$485,044	277,208,870	1509	50 567,647,227	8	\$1,529,340	27,562	45 000	\$3,87,574	\$391,520	\$1,783,816	\$1,691,244	\$861,409	\$1,889,983		\$17,703,793	\$1,806,593 \$0	05 000'1700	05 P	\$15,572,371		\$1,292,149						St. Lighting RLB & LS		Pag)
	\$13,364 \$2,773				\$202 \$1,236	\$13,060	\$5,039	\$284,282	53	\$9,450 \$76,456	\$6,879	\$1,728	5256	347,545	\$1,003	\$612 \$13,275	\$60,483	1	\$29,207	\$71,515 \$71,515	ien'eree	5000 804	\$68,359 \$0	0 5 167715		5589		513,425						St. Lighting Traffic SL		Schedule GA Page 3 of 15	
\$1,28,795 \$1,200,482 \$1,927,257	\$4,548 \$4,641	\$13,896 \$13,712			\$673 \$1,340	\$61,388 \$21,871	\$8,439	\$860,986	\$	\$77,780 \$627,222	556,336 556,336	\$14,115	\$118 \$54	\$21,927	\$8,192	\$4,996 \$6,122	\$12,893 \$27,893	****	\$13,470	577,483	841'C71+	and and	566,183 57,882	\$11,900 \$1,417	\$67,937	\$570,479		12 12 12 12 12 12 12 12 12 12 12 12 12 1					Ē	Traffic SL		Schedule GAW-4 Page 3 of 15	

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Louisville Gas & Electric Sectric Cost of Service Study (Rate Base)	
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Schedule GAW-4

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PC Knox	Sp. Contrac		
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Accumulated Reserve for Depreciation

Less: Accumulated Deferred Income Texts FAS 109 Deferred Income Texts Asset Reintenent Obligations - Regalatory Liabilities Asset Reintenent Obligations - Regalatory Liabilities Sub-total	Working Capital Assets Cath Working Copital - Operation and Mainemano Expenses Materials and Sepplics Programs Mill Creak Ash Drukging Project Sub-tettal Other Farte Base Jerns	Net Utility Plant Rate Base Adjustments and Working Capital	Production Transmission Distribution General & Common Plant Lounghle Plant TOTAL ACCUMULATED RESERVE FOR DEPREGIATION
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\$338,601,920 \$37,321,362 \$3,342,267 (\$703,528) \$178,562,050	\$70,626,882 \$78,422,682 \$3,238,889 \$1,238,827 \$153,314,450	\$2,131,622,334	\$1,132,202,431 \$132,956,587 \$397,101,732 \$89,963,313 \$0 \$1,752,214,063
\$144,261,482 \$15,900,794 \$1,423,974 (52,99,739) \$161,286,511	527,814,523 533,412,079 51,379,082 5386,891 5582,882,574	\$807,049,382	\$425,763,036 \$492,998,364 \$127,886,149 \$38,327,485 \$9 \$741,977,034
\$42,799,950 \$4,717,497 \$422,469 (\$88,927) \$47,850,989	\$3,735,459 \$3,912,800 \$409,150 \$130,599 \$19,783,170	\$269,481,972	\$143,831,859 \$16,890,436 \$49,448,640 \$11,370,240 \$11,370,240 \$224,541,175
\$6,854,920 \$735,563 \$67,663 (\$14,243) \$7,663,904	\$1,589,171 \$1,587,653 \$55,530 \$24,282 \$3,283,838	\$43,239,795	\$26,721,935 \$3,138,005 \$4,058,125 \$1,820,894 \$0 \$35,778,980
\$63,5%,148 \$7,009,697 \$627,744 (\$132,137) \$71,101,452	\$14,457,951 \$14,759,361 \$607,954 \$200,082 \$30,015,348	\$401,032,255	52A2,195,594 528,441,468 543,946,933 \$16,893,532 \$16,893,532 \$10,893,532
\$8,091,301 \$891,840 \$79,867 (\$16,812) \$9,046,197	\$1,912,311 \$1,874,008 \$77,350 \$28,803 \$3,802,471	\$51,042,025	\$31,696,557 \$3,722,184 \$4,576,514 \$2,149,310 \$2 \$42,244,585
\$9,582,395 \$1,056,191 \$94,586 (\$19,910) \$10,713,263	\$2,189,870 \$2,219,257 \$91,604 \$33,542 \$4,534,373	\$60,434,818	\$36,912,251 \$4,334,673 \$6,186,998 \$2,545,424 \$0 \$2,545,424 \$0 \$20
\$36,574,219 \$4,031,285 \$361,016 (\$75,992) \$40,890,528	\$8,798,482 \$3,470,873 \$349,635 \$131,595 \$17,750,585	\$230,752,757	\$144,817,622 \$17,006,196 \$19,539,037 \$9,715,212 \$0 \$181,078,087
\$1,086,861 \$119,795 \$10,728 (\$2,258) \$1,215,127	\$246,955 \$251,726 \$10,390 \$1,712 \$51,712	\$2 ,652,496	54,084,807 5479,586 5807,389 5288,714 50 50 50
\$8,902,704 \$981,274 \$87,877 (\$18,498) \$9,953,358	\$2,431,586 \$2,061,935 \$85,106 \$36,194 \$4,614,822	\$58,288,879	\$39,831,059 \$4,677,434 \$6,630 \$2,364,596 \$2,364,596 \$0 \$46,479,719
\$5,468,453 \$602,744 \$53,978 (\$11,362) \$6,113,813	\$1,252,444 \$1,266,536 \$22,276 \$19,492 \$2,590,748	\$59,209,679 \$34,497,041 \$9,536,083	\$21,450,828 \$5,352,449 \$2,519,010 \$628,548 \$1,130,676 \$729,224 \$1,452,596 \$359,479 \$1,452,596 \$57,069,710
\$1,353,305 \$149,164 \$13,358 \$13,358 \$1,513,015	\$325,914 \$313,436 \$12,937 \$12,937 \$4,864 \$4,864		
\$9,758,909 \$1,075,647 \$96,328 \$96,328 \$10,910,607	\$820,747 \$2,260,239 \$23,291 \$20,182 \$3,182,315	\$80,831,401	\$8,845,105 \$1,038,697 \$36,109,562 \$2,593,755 \$0 \$40,597,218
\$101,435 \$11,180 \$1,001 \$1,001 \$113,405	\$23,453 \$23,493 \$970 \$994 \$48,220	\$638,632 \$1	\$334,689 \$39,303 \$123,609 \$26,947 \$10 \$10 \$10 \$10
\$169,838 \$18,720 \$1, <i>676</i> \$189,881	\$17,026 \$39,136 \$1,624 \$130 \$69,316	\$1,064,887	\$362,621 \$42,583 \$412,037 \$45,130 \$45,130

TOTAL RATE BASE Lets: Customar Advances

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500 500 500 500 500 500 500 500 500 500	\$6,654 \$2,421,107 \$27,273 \$3,805 \$3,805 \$3,805 \$3,805 \$3,805 \$1,964 \$316,654 \$316,654 \$316,654 \$316,654 \$31,964 \$316,654		51,3496,551 51,3496,551 51,3404,967 51,2404,967 51,256,345 51,061 517,6521 51,256,345 51,061 517,6521 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,256,345 51,062,17 51,075,17 51,075,17 51,075,175,175,175,175,175,175,175,175,175,1	Louisville Gur & Electric Electric Cest of Service Study (Exponses) Rate PS Rate PS Primary Secondary
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Sill Sill Sill <td></td> <td>52,175,284 84.58 8185 8185 8185 8185 8185 8185 8185 8</td> <td>\$1,631,053 \$1,631,280 \$13,149 \$12,118 \$12,118 \$12,57 \$19,267 \$19,267 \$19,267 \$19,267 \$12,57 \$</td> <td>Sp. Contract 1 Water Co.</td>		52,175,284 84.58 8185 8185 8185 8185 8185 8185 8185 8	\$1,631,053 \$1,631,280 \$13,149 \$12,118 \$12,118 \$12,57 \$19,267 \$19,267 \$19,267 \$19,267 \$12,57 \$	Sp. Contract 1 Water Co.
stat.,778 stat.,778		51,007,915 51,255 51,257 51,25	\$18,694 \$1,114,499 \$17,421 \$1,449 \$1,469 \$1,469 \$1,469 \$1,469 \$1,469 \$1,469 \$1,469 \$1,603 \$1,603 \$1,603 \$1,603 \$1,603 \$1,603 \$1,604 \$1,605\$1,605\$1,605\$1,605\$1,605\$1,605\$1,605\$1,605\$1,605\$1,605\$1,605	Schedule (Page 5 of Sp. Contract St. Lighting St. Lighting Fr. Knox. Writer Co., RLS & L.
(2007) (2007)			\$707 \$118,644 \$1,3,233 \$8,343 \$8,343 \$8,343 \$8,343 \$8,343 \$8,343 \$1,544 \$1,557 \$1,565 \$1,565 \$1,565	Schedule GAW-4 Page 5 of 15
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Page 6 of 15	Schedule GAW-

Louisville Gas & Electric Electric Coat of Service Study {Expenses}

General Exponent 202 ADMIN & GEN, SALARES-212 OFFICE SUPPLIES AND EXCROSES 222 ADMINISTRATIVE EXCROSES TRANSFERRED 222 OVISIDE SCRUCKICES APRILOYED 242 PROPERTY INSURANCE 254 PROPERTY INSURANCE 254 PROPERTY INSURANCE 254 PROPERTY INSURANCE 255 INJURIES AND DAAMAGES - INSURAN 82333 58888 ********** 903 CUSTOMER ASSISTANCE EXPENSES 904 CUSTOMER ASSISTANCE EXPENSENTIVE 909 INFORMATION AND SETTIUCTIONAL 909 INFORMATION AND SETTIUC - LOAD MGAT 910 MESCELLANEOUS CUSTOMER SERVICE 911 DEMONSTRATION AND SELLING EXP 912 DEMONSTRATION AND SELLING EXP 913 DAVERTISME EXPENSES 913 MUSIC SALES EXPENSE 116 MISC SALES EXPENSE Curching Accounts Expanse 101 SUPERVISION/CUSTOMER ACCTS 102 METER READING EXPENSE 103 RECORDS AND COLLECTION 101 UNCOLLECTIBLE ACCOUNTS 104 UNCOLLECTIBLE ACCOUNTS Sub-tent 26 ENFLOYEE BENEFITS 27 FRANCHISE REQUIREMENTS 28 REGULATIOR COMMISSION FEES 29 DUPLICATE CHARGES 30 MISCELLANEOUS CONCENAL EXPENSES 31 DUPLICATE CHARGES 31 DUPLICATE CHARGES 94 UNDERGROUND LINE EXPENSES 98 STREET LIGHTING EXPENSE 98 METTRE EXPENSES 97 CUSTOMER INSTALIATIONS EXPENSE 98 MESCELANEOUS DISTREITION EXP 98 MESCELANEOUS DISTREITION EXP 99 MESCELANEOUS DISTREITION EXP Tratamission - Energy Tratamission - Denand Ott, Poles - Spath Dist Shotation - General Dist Shotation - General Dist Shotation - General Dist Shotator Dist Meas - Channet Dist Meas - Channet Dist Meas - Channet Dist Meas - Channet Lighting TOTAL DEPREGATION EXPENSES RENTS MAINTENANCE SUPERVISION AND EN STRUCTURES MAINTENANCE OF STATION EQUIPME MAINTENANCE OF OVERHEAD LINES MAINTENANCE OF LINDERGOUND LIN MAINTENANCE OF LINE TRANSFORME MAINTENANCE OF STATIOTTA & SIG SYSTEMS Deprectation Expense Power Production - Energy Power Production - Demand MAINTENANCE OF METERS MISCELLANEOUS DISTRIBUTION EXPENSES TOTAL OBM EXPENSE Less PURCHASED POWER TOTAL O& MEXPENSES NTS AND LEASES sumer Service & Information Expense PERVISION ENANCE OF GENERAL PLANT Account Description 838 ន \$585,007,135 \$222,518,181 \$69,483,675 \$12,713,384 \$115,883,606 \$15,298,489 3642,828,778 \$250,873,808 \$78,587,312 \$14,582,616 \$132,443,125 \$17,580,327 \$14,165,874 44,344,577 (\$2,280,054) \$2,394,146 \$1,716,338 \$3,394,146 \$1,716,338 \$3,394,146 \$1,276,338 \$1,276,338 \$1,277,100 \$1,287,100 \$1,387,100 \$1,387,100 \$1,387,100 . 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Service \$13,806,137 58,112,701 51,950,554 5580,666 \$139,611 \$330,207 \$1,510,151 \$415,577 \$575,056 \$75,606 \$115,012 \$0 \$83,973 \$221,641 \$557,191 \$251,239 \$1,154,818 88 \$951,472 - Rate PS Primary \$1,571,354 \$298,257 \$278,811 \$48,570 \$44,435 \$106,179 \$267,974 \$267,974 \$269,511 \$252,768 \$22,776 \$23,974 \$24,975 \$25,974 \$25,9775 \$25,9775 \$25,9775 \$25,9775 \$25,9775 \$25,9775 \$25,9775 \$ \$112,470 \$21,348 \$52,795 \$195,910 \$0 \$0 \$1,793 \$0 \$1,793 \$0 \$2 \$10,406 \$10,406 \$29,341 \$0 \$146 (\$7) \$16,110 \$20,025 (\$62,929) \$27,359 5244 513,076 5322 54,749 516 587 587 \$18,485 \$1,632 \$1,632 \$1,903 \$1,903 Rate PS Secondary \$14,085,194 \$2,860,118 \$1,008,147 \$204,713 \$455,627 \$1,706,588 \$220,530 \$220,530 \$220,530 \$25,559 \$14 \$3,569 \$38,484 \$30 \$48,788 \$48,788 \$1,567 \$1,577 \$1,5 \$55,552 \$146,625 \$368,604 \$166,867 \$165,312 \$763,959 \$629,438 \$8,305 \$445,011 \$10,961 \$10,961 \$10,961 \$10,951 \$161,633 \$161,633 \$161,633 \$162,635 \$163,635 \$165,655 \$165,655 \$165,655 \$165,655 \$165,655 \$165,655 \$165,655\$\$155,655\$ \$165,655\$ \$165,655\$\$ Rata CTOD Primary \$1,906,924 \$310,739 \$329,278 \$101,059 (\$22,478) \$125,298 \$125,299 \$1 \$6,409 \$1,852 \$1,852 \$1,483 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,514 \$1,515\$\$1,515\$\$1 \$763 \$2,05 \$2,28 \$2,28 \$10,47 58,631 Rata CTOD Secondary \$17,518,982 \$70,387,859 \$1,975,643 \$19,452,690 \$2,166,147 \$416,434 \$20,098,448 \$3,145,817 \$135,042 \$29,806 \$65,125 \$241,474 \$37,510 \$12,638 \$37,510 \$1,288 \$384,506 \$118,009 (\$61,280) \$146,439 \$46,674 \$94,587 \$14,981 \$744) \$1,814 \$744) \$1,814 \$744) \$1,814 \$20,557 \$20,598 \$6,922 \$7,459 \$6,922 \$1,550 \$1 \$34,524 \$1455 \$14,408 \$1601 \$1865 \$1602 \$1603 \$1603 \$1,047 \$20,217 \$9,151 \$1,443 \$41,902 Rute ITOD Primary \$12,051,78 \$30,515,067 \$8,802,389 \$1,329,835 \$630,031 \$95,183 \$10,523,324 \$937,335 \$10,689 \$13,689 \$13,689 \$13,689 \$13,689 \$13,689 \$13,689 \$13,689 \$14,689 \$15,183\$1,183 \$15,183 \$1 \$18,495 \$10,531 \$10,531 \$1,903 \$10,531 \$1,903 Rate ITOD Secridary -\$2,262,737 \$17,286 \$17,286 \$20,019 \$2,024 \$1,372 \$1,372 \$1,372 \$1,372 \$1,372 \$1,372 \$1,372 \$241,509 \$44,286 \$44,591 (\$7,107) \$16,981 \$16,981 \$10,764 \$20,764 \$21,075 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$111,395 \$112,685 \$122,685\$ 1355,604 \$1,782 \$1,782 \$1,782 \$1,782 \$1,943 \$1,945\$ \$1,945\$ \$1 \$1,627 \$1,628 \$4,092 \$1,857 \$292 \$2,480 56,98 Trans \$22,368,863 Rate RTS \$2,465,662 \$321,135 \$298,882 \$122,421 (\$62,571) \$151,905 \$184,729 \$184,729 \$386,471 \$586,471 \$596,471 \$197,710 \$197,710 \$196,713 \$196,463 \$196,463 \$1,451 \$28 \$28 \$2 \$28 \$28 \$29 \$1,203 \$2,492 \$2,492 **\$2,05**5 o FL Knox \$10,018,548 \$2,607,308 \$11,500,178 \$2,993,408 \$7,287,013 \$1,242,188 \$258,628 \$4,293 542,893 542,544 511,421 512,421 512,421 513,440 513,440 513,440 513,440 513,440 513,440 513,440 513,440 513,440 513,540 510,540 5488 510 5488 Ě រនេនខ្លួនរនន្ត្ Sp. Contract St. Lighting Water Co. RLS & LS \$326,021 \$48,465 \$139,172 \$13 \$9% \$1,143 \$1,143 \$1,143 \$1,143 \$1,143 \$1,143 \$1,17 \$23,335 \$3,469 \$34,997 \$0 \$0 \$0 \$0 \$986 \$191 \$248 191 \$348 191 \$822 \$6,565,979 \$179,794 (\$25,180 (\$25,180 (\$25,847) \$48,470 \$21,825 \$449,153 \$720 \$71,85 \$31,555 \$31,555 \$32,556 \$33,597 \$212,559 \$212,559 2618,851 20 (\$171,083) \$238,530 \$1,288 \$1,288 \$1,515 \$9,341 544,294 50 524,627 5164,821 527,088 527,088 526,764 50 (\$72,262) \$20,920 (\$7,666) \$508,593 \$0 \$218,197 \$1,265 \$19,257 \$50,828 \$127,778 \$57,845 \$29,121 \$284,829 \$4,268 \$10,273 \$1 008,C2 ង្ក \$157,624 \$214,903 \$23,417 50 Lighting \$1,676 \$2,676 \$3,172 \$3,172 \$1,975 \$1,975 \$1,975 \$1,976 \$4,082 \$1,253 \$1,001 \$1,255 \$1,001 \$1,255 \$1,005 \$1,255 \$1,005 \$1,255 \$1,005 \$1,255 \$1,005 \$1,255 \$1,005 \$1,255 \$1 ភនឧត្ត<u>ខ</u>នឧន_{ដ្ឋ}ន 5285 S 4 5 52 \$247 \$218,208 \$242,988 S1,623 S1,623 S1,623 S195 S195 S195 S1,623 S195 S2,105 S1,611 S1,770 S1,611 S1,611 S1,611 S1,770 S1,611 S1, \$1,178 \$1,179 \$2,444 \$2,014

Other Expanses

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Louisville Gas & Electric Electric Cost of Service Study (Expenses)

Operating Expenses Interest Expense	Total Operating Revenue	Calculation of Taxable accome and Allocation of Income Taxes:	TOTAL EXPENSES	Total Other Expenses.	Other Expenses	Interest	Gain on Disposition of Altowances	Amortization of invastment Tax Credit	Property Taxes & Other	Composi	Distribution	Transmission	Production	Accretion Expense	Common	Distribution	Transmission	Production	Regulatory Credits	Acct No. Account Description
						8	23	23	23	59	53	52	5	2	5	53	52	2	2	Allocator .
\$771,828,055 \$48,502,810	\$958,491,762		\$820,428,855	\$68,643,978	B	\$48,502,810	(\$63,274)	\$1,881,232	\$18,568,593	\$1,163	\$15,865	S65')S	\$1,483,472	2	.(\$1,189)	(\$16,231)	(\$1,457)	(cec.con, ne)		Total System
\$305,086,512 \$20,592,502	\$382,037,680 \$137,184,375		\$225,078,118 \$102,071,342 \$18,222,348 \$108,227,828 \$21,070,385 \$25,182,522 \$100,317,757 \$2,439,404 \$27,174,572 \$14,413,488 \$3,714,859 \$12,097,488 \$288,112 \$329,441	\$29,164,554		\$20,592,602	(\$28,138)	\$790,214	\$7,883,577	\$496	\$9,105	\$525	008,1 000		(\$507)	(\$15,92)	(2002)	(010,1406)		Residential Rate RS
\$95,939,578 \$8,131,763			\$102,071,342	\$8,677,823		\$6,131,766	(\$8,378)	\$235,299	\$2,347,457	\$147	\$1,976	5177	006,8875		(05130)	(120,22)	(58136)	(940,0176)		Residential Oen. Service -, Rado PS Rada RS
\$17,245,590 \$988,765	\$20,622,875		\$18,222,366	\$1,395,808 \$12,940,317		\$986,765	(\$1,348)	\$37,855	\$377,769	124	\$164	12	cin/cot	10.30	(524)	(Safe)	3	(002,000)		
\$157,080,540 \$8,147,387	\$199,708,423		\$166,227,628	\$12,940,317		39,147,387	(312,499)	2321019	\$3,501,943	8218	\$1,756	\$2,98	800,100	C117 318	(\$223)	(001,10)	(HICC)	(nro'ance)		Rata PS Secondary
\$20,705,454 \$1,184,832	\$23,737,046		\$21,870,393	51,647,811 \$1,200,467			(\$1,592)					£1			(828)	(1616)	(140)	(141,145)	1017 1111	Rate CTOD F Primary
\$23,613,710 \$1,378,823	528,229,215 5102,334,431		\$25,162,532 \$			\$1,378,823	(31,884)	222,911	\$527,862	1	\$241	5	100,000	AND 164	(954)	(5676)	(040)	finnitret		Rate CTOD P Secondary
\$95,050,046 \$6,287,711	102,334,431		100,317,757	a/,430,803		33,267,711	(57, 198)	\$202,142	\$2,016,666	5126	18/5	21.18	1177, 140	4190 749	(8215)	(6614)	(0016)	(ccr.0176)	1111 1111	Primary S
\$12,883,144 \$158,280	\$3,197,444		\$2,839,404	500,0276			(5214)								(¥)	(664)		()		Rate ITOD Rate RTS Secondary Transmission
\$28,888,505 \$1,288,067	\$28,722,557		27,174,572	\$1,021,044		\$1,288,007	(51,760)	\$49,428	\$493,118	53	ļŔ	, Y	201,202	467 180	(106)			(acc), con)	AC 40 0000	ute RTS Sp Insmission
\$13,626,134 \$ \$787,353	\$14,005,641 \$3,519,708 \$15,551,883		14,413,468 S	al,113,700			(31,076)								. (cie)	(0716)	(010)	(refere)	1111 (12)	JA Contract Sp. Contract St. Lighting FL Knox ' Water Co. RLS & LS
\$3,520,053 \$10 \$184,808 \$1	3,519,708 \$15		3,714,859 \$12		1000 A	16 006'6616	(\$266)	21.419	574,617 5	5	11	2	3	1013	(re)					Contract St. I abér Co. RU
\$10,729,629 \$2 \$1,367,639 \$,097,488 S	÷.		ב ענט,זמנ	(\$1,869)	122,481	523,581	334	1,41	221	COL ⁴¹¹⁶	CT1 480	(+00)	(01,410)	(ITC)		1141 1911	Rate RYS SJA Contract Sp. Contract SL. Lighting St. Lighting Trattic SL Transmission FL Knox Water Co. RLS & LS LE TLE
\$253,588 \$3 \$14,524 \$	\$243,100 \$3		38,112 \$3	e controe			(920)										38			ghting Traft E TL
\$306,374 \$24,067	\$309,681		29,441	100		100,001	(513)	3924	\$9,214	5	10	ŝ	3	2476	(16)	(12)			1840	

Revenue	\$956,491,762	\$382,037,580	\$137,184,375	\$20,622,875	\$199,798,423	\$23,737,046	\$28,229,215	\$102,334,431	\$3, 197,444	8,722,557	\$14,005,641	\$3,519,708 \$15,551,683		\$243,100	\$309,881
8 73 83	\$771,828,055 \$305,085,612 \$95,939,578 \$17,245,580 \$157,080,540 \$20,705,464 \$20,013,710 \$35,550,046 \$2,843,144 \$2 \$46,542,610 \$20,552,602 \$3,131,768 \$388,785 \$3,147,387 \$1,144,638 \$1,378,623 \$5,267,711 \$169,280 \$	\$305,086,512 \$20,592,602	\$95,939,578 \$8,131,763	\$17,245,590 \$986,765	\$157,080,540 \$8,147,387	\$20,705,454 \$1,184,833	\$23,813,710 \$1,378,823	\$95,050,046 \$6,287,711	\$2,883,144 \$158,280	8,688,505 1,288,067	\$13,626,134 \$787,353	\$3,520,053 \$ \$184,808 \$	\$10,729,629	\$253,588 \$14,524	\$306,374 \$24,067
	\$138,062,887	350, 358,476	\$35,113,033	\$2,380,520	\$33,568,497	\$33,568,487 \$1,856,853	\$3,038,583	\$2,016,674 \$158,040	\$358,040	(\$452,015)	(\$407,846) (\$195,251)	(\$195,251)	\$4,454,214	(\$25,012)	(\$19,780)

\$48,783,814 \$19,083,297 \$11,893,271 \$2003,702 \$11,370,115 \$022,281 \$1,023,587 \$583,075 \$121,273 (\$153,104) (\$133,143) (\$63,134) \$1,503,704 (\$3,472) (\$3,700)

Taxable Income Income Taxes

State & Federal Income Texes

•		_	Electric Cost : (L	Electric Cost of Service Study (Labor)													
Any No.	Allocator	Total R System	Residential (Rote RS	· Gen. Service 085	Rate PS Primary	Rate PS . Secondary	Rate CTOD P Primary E	Rate CTOD Rate ITOD Becondary Primary	Rate ITOD I Primary	tals ITOD Secondary Ir	Rato RTS Sj ansmissioj	p. Contract S Fl. Knox	ip. Contract Water Co.	Rate ITOD Reth RTS Sp. Contract Sp. Contract St. Lighting St. Lighting Scendary Ingustuisator FL Knox Watter Co. RLS & LS LE	St. Lighting LE	Traffic SL TLE	
Labor Expenses																	
Steam Pawer Generation Operation Expenses 500 OPERATION SUPERVISION & ENGINEERING			\$557,010	5188,806		1319,391 \$621,197	.\$42,019 \$84,101		\$192,287 \$388,210	\$5,400 \$10,651	\$53,041 \$108,743	\$28,270 \$54,784	\$7,109 \$14,378	SI2.025	\$455 \$1,033		
SOL FUEL SOL STEAM EXPENSES	5 5 5 5 5 5	\$11,242,697 \$\$63,792	\$4,227,820 \$211,992	\$1,428,241 \$71,615		\$2,404,987 \$120,591	\$314,745 \$15,782	\$18,379	\$1,438,030 \$72,106	\$40,562 \$2,034	\$19,832	\$213,005 \$10,681	\$33,149 \$2,665	\$4,404 \$4,404	5167 5167	53,601 5181	
			\$1,646,777 \$0	\$556,314 \$0	05 05	\$936,765 \$0	\$122,596 \$0		\$560;126 \$0	\$15,799 \$0	\$154,059 \$0	382,368	20, 02 20, 075	304,211 30	50 20		
Total Steam Power Operation Expenses	5	\$20,544,933	\$7,678,604	\$2,602,769	\$486 ,607	\$4,402,931	\$579,242	\$671,962	\$2,650,760	\$74,447	\$731,195	\$389,707	\$98,004	\$165,764	\$6,272	\$6,667	
Steam Power Generation Maintenance Expenses 510 MAINTEMANCE SUPERVISION & ENGINEERING	61		\$S12,740	\$177,106	\$34,255	\$307,166	\$41,539	\$47,224	5191,679	\$5,264	\$53,660	\$27,093	S7,099	\$13,419 \$7 207	582 5022		
511 MAINTENANCE OF STRUCTURES 512 MAINTENANCE OF SOLLER PLANT 513 MAINTENANCE OF BLECTING FLANT			\$106,214 \$2,317,715 \$335,215	353,881 \$801,215 \$185,019	\$155,188 \$35,837	\$1,391,062 \$321,229	\$188,329 \$43,490	\$213,930 \$49,401	\$200,748	\$23,852 \$1,508	\$243,510 \$56,232	\$122,679 \$78,330	\$32,198 \$7,435 \$7,835	\$61,118 \$14,114 \$414	\$2,313 \$534 \$16	515 S15	
		\$9,653,527	\$3,487,595	\$1,204,653	\$232,997	\$2,089,306	\$282,541	\$321,214	\$1,303,776	\$35,804	\$364,990	\$184,285	\$48,286	\$91,271	\$3,454	\$3,355	
Total Steam Power Generation Expense		\$30,198,460	\$11,166,200	\$3,807,422	\$719,605	\$6,492,237	\$861,783	\$993,177	\$3,954,536	\$110,251	\$110,251 \$1,096,184	\$\$73,992	\$146,290	\$257,035	\$9,726	510,022	
Hydraulic Power Generations Operation Expense 535 OPERATION SUPERVISION & ENGINEERING 536 WATER FOR POWER 537 HYDRAULIC EXPENSES	5 5 5	\$76,594 \$0	50 50 50	50,730 50	508 50 808,1\$	\$16,385 \$0 \$0	52,144 50 50	\$2,497 \$0 \$4,223	\$9,797 \$0 .\$0 \$17352\$489	489 50 50 50	569,52 589,52	\$1,451 \$0 \$2,570	\$362 \$0 \$641	\$598 \$0 \$1,060	5 50 50 50 50	2. 8 8 8 K	
540 RENTS	2	ŧ	ţ								1	21107	51 047	1171	\$65	21	
Total Hydraulte Power Operation Expenses		424,2346	100,000	4													
Hydraelie Power Generation Maintenance Expense 541 MAINTENANCE SUPERVISION & ENGINEERING 542 MAINTENANCE OF STRUCTURES 543 MAINTENANCE OF BLECTRUC FLANT 544 MAINTENANCE OF BLECTRUC FLANT 545 MAINTENANCE OF MISC HYDRAULIC FLANT		\$76 \$22,785 \$49,157 \$110,859 \$0	\$28 \$1,568 \$18,486 \$39,993 \$0	510 \$2,895 \$6,245 \$13,825 \$13,825	\$2,678 \$1,160 \$2,678	\$16 \$4,874 \$10,515 \$24,003 \$224,003	\$2 \$638 \$3,250 \$3,250 \$0	53 5743 53,693 53,691 50	\$10 \$2,914 \$6,288 \$15,000\$412 \$0	50 5177 5177 5177	53 5802 51,729 54,202 50	\$1 \$432 \$2,117 \$2,117 \$0	50 5232 5356 50				
Total Hydraulic Power Generation Maint Expense		\$182,877	\$67,074	\$22,974	\$4,378	\$39,409	\$5,266	\$6,039	\$24,212\$67	671	56,736	\$3,481	3685				
Total Hydraulic Power Generation Expense		\$404,401	\$150,378	\$51,116	506,622	\$86,796	S 11,468	\$13,262	\$52,547	SI,471	\$14,529	\$7,678	\$1, 943	\$3,348	\$ \$127	7 \$133	
Other Power Generation Operation Expense 546 OPERATION SUPERVISION & ENGINEERING	51	\$72,899	\$8,611	\$7,909	\$540	\$4,898 \$0	\$641 \$0	\$747 \$0				S 434 S 0					
547 FUEL 548 GENERATION EXPENSE 549 MISC OTHER POWER GENERATION 550 RENTS	2523,	\$77,953 \$10 \$10	\$29,314 \$0 \$0	05 E06'65	\$1,840 \$0 \$0	\$16,0	2	\$2,541 \$0	59,971 50 50	\$281 \$0 \$0		\$1,477 \$0 \$0					
Total Other Power Generation Expenses		\$100,852	\$37,925	\$12,812	52,38 0	\$21,574	2,82	\$3,288	\$12,900\$364	\$364	53,548	116'15	\$477	88/ 5	30	0 3.2	
Other Parter Generation Maintenance Expense 551 MAINTENANCE SUPERVISION & ENGINEERING 552 MAINTENANCE OF STRUCTURES 553 MAINTENANCE OF MISC OTHER POWER GEN PLT 554 MAINTENANCE OF MISC OTHER POWER GEN PLT	5 S	\$38,860 \$48,205 \$215,080 \$33,614	\$14,613 \$18,128 \$80,881 \$12,641	\$4,937 \$6,124 \$17,323 \$4,270	\$917 \$1,138 \$5,076 \$793	\$8,313 \$10,312 \$46,009 \$7,191	\$1,088 \$1,350 \$6,021 \$941	\$1,267 \$1,572 \$7,012 \$1,096	\$4,971 \$6,166 \$27,510\$776 \$4,299	\$140 \$174 \$174 \$121	\$1,367 \$1,696 \$7,567 \$1,183	\$736 \$913 \$4,075 \$637	\$184 \$228 \$1,017 \$159	5304 51,680 5263	4 311 7 \$14 3 \$64 3 \$10	11 14 15 15 15 11 11	, ,-
Total Other Power Generation Maintenance Expense		\$335,759	\$126,262	\$42,654	\$7,924	\$71,824	\$9,400	\$10,945	\$42,946	\$1,211	511,812	36,361	\$1,587	7 \$2,623	3 899	9 SI08	~
Total Other Power Generation Expense		\$436,611	\$164,188	\$55,466	\$10,305	\$93,398	\$12,223	\$14,234	\$55,846	\$1,375	\$15,360	S8,272					-
Total Production Expense		\$31,039,472	\$31,039,472 \$11,480,766	\$3,914,003	\$739,515	5 \$6,672,431		53 85,474 \$1,020,673	\$4,062,929		\$113,296 \$1,126,073	\$589,942	\$1.50,298	8 \$163,794	4 \$9,982	2 5 10,295	~

Purchased Portor

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Louisville Gan & Electric Electric Cost of Sarvice Study

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Louisville Osa & Electric Electric Cost of Bervice Study

	907 SUPERVISION 908 CUSTOMER ASSISTANCE EXPENSES 908 CUSTOMER ASSISTANCE EXPLOAD MGMT 909 INFOSMATIONAL AND INSTRUCTIONA	Total Castomer Accounts Labor Expense Customer Service Expense	905 MISC CUST ACCOUNTS	901 SUPERVISIONCUSTOMER ACCTS 902 NETER READING EXPENSES 908 RECORDS AND COLLECTION 904 UNCOLLECTIBLE ACCOUNTS	Curlomer Accounts Expense	Production, Transmission and Distribution Labor Ecocases	Fransmission and Distribution Labor Expenses	Total Distribution Operation and Meluterators I shop Frances		59% MAINTENANCE OF METERS 59% MAINTENANCE OF MISC DISTR PLANT		594 MAINTENANCE OF UNDERGROUND LIN		591 MAINTENANCE OF STRUCTURES	Distribution Maintenance Labor Expense 590 MAINTENANCE SUPERVISION AND EN	Total Distribution Operation Labor Expense	589 RENTS		586 METER EXPENSES - LOAD MANAGEMENT 587 CUSTOMER ENSTALL ATOMS EXTENTS	586 METER EXPENSES	584 UNDERGROUND LINE EXPENSES		510 OPERATION SUPERVISION AND ENGI 531 LOAD DISPATCHING 537 CFATTAN EVENTATED	Distribution Operation Labor Expense	Total Transmitsion Labor Expenses		570 MAINT OF STATION EQUIPMENT 571 MAINT OF OVERHEAD I MES	569 MAINTENANCE OF STRUCURES		561 LOAD DISPATCHING 562 STATION EXPENSES	Transmission Labor Expenses 560 OPERATION SUPERVISION AND ENG	Total Purchasod Power Labor	337 OTHER EXPENSES	355 FURCHASED POWER 556 SYSTEM CONTROL AND LOAD DISPATCH	Account Description	
e	ب وبور		6	с, с, с, С, с,					չ	3	13	58	12	28	65			<u>ہ</u>	. !	15 26	58	28 55	54 28			51 21	2	5	51	2 2	15		SI	51	Allocator	
400'7C	\$75,060 \$354,392 \$0	\$3,123,911	\$155,402	\$576,055 \$217,099 \$2,175,355	400,084,009	crittette	\$7.811.444	3610,148	a00,/14	50	\$35,663 \$31,774	\$254,651	\$229,427	025'85 (core)		\$5,068,055	SO	S1,050,099	50	\$2,521,656	\$73,041	\$230,749	\$1,053,694 \$293,653	يوريد والمعايد	C) 073 149	(SI30,389) \$1,753	\$233,328	\$141,829	\$3,700	\$716,320	\$447,371	\$1,033,082	50	S0 S1,033,082	Total System	
98515	\$59,413 \$280,514	\$2,472,686	900,EZ1\$	\$455,968 \$171,842 \$1,721,871	316,720,705	94,001,449	54,124,449 54 851 AAD	\$437,141	SZ1,469	50	\$41,221 \$0	\$141,806	\$111,064	(3108) \$4,124	101601	\$3,687,307		\$602.624	20	3	\$40,674		\$766,624 \$142,155	000'171C) (\$49,033) \$659	\$87,743		\$3,272		\$168,234	\$388,491	50		Residential Rate RS	
5210	\$7,870 \$37,157	\$327,533	30 \$16,293	\$60,398 \$22,762 \$228,080	54 ,98 2, 118	3936,874	\$691,279	\$103,271	\$4,572	5	\$8,888 50	320,900 \$32,104	\$30,021	(334) \$1,115		\$588,009	an charte	50 ULS	202 211,012	50 50	802,976) (0142,1246)	530,194	\$122,252 \$38,425	3243,393		(\$16,564)	30 529,641	\$18,018	\$1,105	Sec. 065	556 811	\$131,240	SO	5131 240	Gen, Service GSS	ar of delayed official (freport)
S 4	\$153 \$722	\$6,367	50 5317	\$1,174 \$442 \$4,433	\$853,676	589,778	\$44,150	S11,929	\$379	5	8 8	34,292	\$4,800	8178 20	3	\$32,221	100,010	OS CERUIS	05 705'tec	8	(S1,880) 51,231	\$4,828	\$6,699 \$6,144	545,628	1	(\$2,077)	502,507	\$3,347	\$12,139 \$205	\$16,906	¢10.440	\$24,383	50	CD/ 197	Rate PS Primary	
S [39	\$5,206 \$24,581	\$216,676	S 0,779	\$39,956 \$15,058 \$150,884	\$7,792,253	\$898,829	\$485,277	\$ 112,915	\$4,063	88	\$4,004	\$37,523	\$41,424	(S12) S1,538		\$372,361	412,011e	S0	OS ZGE ^r EGE	8	(320,107)	\$41,663	\$77,417 \$53,020	\$413,552	4012	(\$27,892)	549,912	5 30,339	SI 10,025	5153,232	R\$4 700	\$220,992	S 0		Rate PS Secondary	
\$2	571 5337	\$2,971	S 0 S 148	\$\$48 \$2,069	\$1,013,817	\$99,421	\$45,299	\$13,702	\$432	88 10	\$ \$ \$	52,614 54,928	\$5,522	\$205		\$31,597	312,367	50	\$782 \$0	8	(52,136) \$1,414	\$5,554	\$6,569 \$7.068	\$54,122		(\$3,650)	\$6,532	\$3,971	\$14,399 \$244	520,054		\$28,922	0 S 272'076	3	Rate CTOD Primary	
8	\$286 \$1,348	\$11,884	165 \$	\$2,191 \$826 \$8,276	\$1,173,466	5119,113	\$56,084	\$16,086	\$572	50 50	\$579	5 3,473	\$5,921	52) (52)		666'62\$	510,361	8	50,127 50	\$8	(SZ, 865)	\$5,955	\$8 ,316	563,028	5	(\$4,251)	\$7,607	54,624	\$16,769	523,354		\$33,681	0\$ 196'555		Rate CTOD Secondary	
54	\$153 \$722	\$6,367	\$ 317	\$1,174 \$442 \$4,433	\$4,638,575	\$443,507		\$57,143	\$1,806	50 20	50	\$10,898\$44 \$20 550\$44	\$23,031 \$ 73	1		980,0215	\$51,669	8	\$8,952 \$0	50	(286'85) (686'85)	\$23,164\$73	\$28,917	\$247,278	\$124	(\$16,678)	\$0 \$29,844\$8	\$18,141\$5	\$65,788	591,623		\$132,139	05 217575		Rate ITOD	
52	\$58 \$273	\$2,405	\$120	\$444 \$167 \$1,675	\$134,818 \$1,231,694	\$17,794		\$2,021		2 0		5 10		3.3		\$8,798	\$2,135	8	81,329 81	50	(3365)	10 7	\$1,829	\$6,975	8	(\$470)	8	2] 10	\$1,856	\$1,614 \$2,584		\$3,727	33,727 30		Rate ITOD F	
S 0	\$17 \$80	\$707	53 S	\$130 \$49 \$493		\$69,276		S	2	8 8	8	3 8	5	8		\$1,264	\$18	8	59E	5	3 I	S 0	\$263	\$68,012 -	\$ 62	(\$4,587)	S0	\$4,990	\$18,095	S15,739 S25,200	14	536,344	536,344 50	1141113364	lata RTS Sp	
\$ 0	\$3 \$16	S]41	2 2	\$10 \$10	\$676,081	\$66,566	\$29,939	\$9,180	\$289	88	\$ 0	\$1,751	33,701	0 S		\$20.758	\$8,279	S	\$202	05 1466	(\$1,444)	53,722	\$4,316	\$36,628	\$33	37,421 (3 2,470)	S 20	\$165 \$2,687	\$9,745	\$8,476 \$13,571		\$19,573	\$0 \$0		Contract S	
8	\$ 7 \$32	\$283	52 8	S20	\$171,\$21	\$16,640	\$7,501	\$2,130	\$67	8 8	300 50	\$406	\$85 1	8	40 JUL 8	55 171	\$1,928	S 0	\$479	S 0	(SEES)	5863	\$1,117	\$9,139	ŞR	(3 616)	50	\$41 \$670	\$2,432	\$2,115 \$3,386		S4 884	\$4,884 \$0	Nater CO.	p. Contract	
548	\$1, 805 \$ 8,521	\$75,112	2 20	\$13,851 \$3,220 \$57 764	\$462,800	\$190,935	\$175,832	\$44,258	6EE'ES	\$31,774	33,282 \$876	\$2,617	52 739 582	\$ 48		<111 c74	\$95,489	S 0	50	3941 \$4,830	(\$2,159)	\$2,866 \$2,252	\$27,356	\$15,103	\$14	(51,019)	50	\$1. Ins	\$4,018	\$3,495 \$3.596		\$8.071	\$3,071 \$0	RUSALS	Rate CTOD Rate ITOD Rate ITOD Rate RTS Sp. Contract Sp. Contract St. Lighting St. Lighting St. Lighting St. Lighting	1
S 0	\$ 2	585	2 50 5	\$16	\$12,509	\$2,221	\$1,650	£113	51) 40	8	\$ 70	\$45	20	(30)	31,437		\$327	ន ខ	\$656	S 20	(\$37)	5 76	\$299	\$571	5	(S29)	8	5 2	\$152	S132	1	2012	S 00	ĥ	Lighting	
S 0	\$17 \$79	5693 Frt	2 8 ž	\$128 \$48	\$19 ₁ 675	\$9,050	\$8,431	\$159	រដ្ឋ	3 5	8 2	ររូ រ	3 12	(S0)	38,271		\$1,090	23	\$5,396	51 2	(\$27)	a e	\$1,720	5 619	SI	(S 42)	8	18	S165	214J		3	1ECS	đ	Traffic SL	

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Louisville Gas & Electric Electric Cost of Service Study (Labor)

978 REGULAVORY OLIVATIONS SURVITION 929 DUPLICATE CHARGES CA 930 MISCELLANEOUS GENERAL EXPENSES 931 RENTS AND LEASES 933 MAINTENANCE OF GENERAL FLANT Total Administrative and General Expenses Total Operation and Maintenance Expenses Operation and Maintenance Expenses Less Purchase Power	Administrative and General Expense 920 ADMIN & GEN. SALARIES- 921 OPECE SUPPLIES AND EXCENSES 922 ADMIN EXCENSES TRANSFERRED - CREDIT 922 OUTSIDE SERVICES EMPLOYED 924 PROPERTY INSURANCE 924 PROPERTY INSURANCE 925 EMPLOYEE BENEFITS	911 DEMONSTRATION AND SELLING EAP 912 DEMONSTRATION AND SELLING EAP 913 WATER HEATER - HEAT FUMP PROGRAM 915 MDSE-JOBBING-CONTRACT 916 MISC SALES EXPENSE Total Castumet Service Labor Expense Sab-Tetal Labor Exp	Acca No. Account Description 999 INFORM AND INSTRUC -LOAD MGMT 910 MISCELLANEOUS CUSTOMER SERVICE	
2 <i>2</i>	56 56 58		Allocator	
50 50 52,758,776 512,424,197 512,424,197 556,166,592 556,166,592	\$10,964,129 \$0 (\$1,341,699) \$0 \$42,291 \$0 \$12 \$10 \$10 \$10	50 50 50 5734,475 \$43,742,395	Total System \$103,019 \$10	
50 50 50 50 51,755,776 51,175,465 512,424,197 53,544,940 536,166,592 525,319,695 536,166,592 525,319,695	29 54,956,903 50 599) (3606,546) 50 50 50 50 50 519,119 51 519,119 50 519,119 50 519,119 50 519,119 50 519,119 50 519,119 50 519,119 50 519,119 50 54,956,903 50 55 50 50 50 55 50 55 50 50 55 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 5	50 50 50 5734,475 5581,363 \$43,742,395 \$19,774,754	Residential Rate RS \$139,850	Electric Cos
0 50 3 5348,714 10 51,538,962 35 56,925,620 35 56,925,620	\$1,350,264 \$0 \$165,224 \$0 \$0 \$20 \$0 \$20 \$0 \$20 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$77,008 \$77,008	G85 531,771	Electric Cost or Service analy (Labor)
	\$215,961 (\$26,426) \$10 \$12 \$13 \$13 \$13 \$10	\$1,497 \$861,540	Primary \$618	Pato PS
\$518,1 \$2,209,1 \$10,358, \$10,358,	961 \$2,020,354 \$0 \$0 \$0 \$10 \$2,020,354 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$7,792 \$0 \$1 \$0 \$10\$ \$0 \$1 \$0 \$10\$ \$0 \$10\$ \$0\$ \$0 \$10\$ \$0\$ \$0 \$10\$ \$0\$ \$0\$ \$0\$ \$0\$ \$0\$ \$0\$ \$0\$ \$0\$ \$0\$	\$1,497 \$30,944 \$861,540 \$1,059,873	10	Rate PS
			Primary \$2	Rata CTOD
50 50 565,917 578,066 5290,743 5340,601 51,308,229 51,528,745 51,308,229 51,528,745	\$1 (136, \$1 (136,	5699 52,794 \$1,497 51,017,416 \$1,188,144 \$4,546,439	, Secondary \$288 \$1,153	Rate CTO
50 578,066 5: 5340,601 51; 51,528,745 55, 51,528,745 55,	-	1994 S	ry Primary 53 \$61	D Rute 17
\$0 \$297,956 \$1,324,644 \$5,971,082 \$3,971,082		\$1,497 \$46,439 \$	Sells	OD Rute
50, 53,855 539,301 539,77,089 5177,089		565 5166 517,789 81,72,567	5233	TTOD R.
50 50 50 5227,936 58,855 572,520 51,324,644 539,301 5344,871 55,971,082 51,77,089 51,577,438 53,971,082 51,777,089 51,577,438	\$308,966 (\$37,806) \$0 \$1,192 \$0 \$0	\$166 ,232,567	Secretary (Latastilitation, E.C. Numo, 2013) 214	ta RTS Sp
\$44,550 \$193,977 \$870,233 \$870,233	\$169,516 \$0 (\$20,743) \$0 \$65,4 \$0 \$0 \$0	\$33 \$676,256	514	.Contract Sp.
\$11,025 \$49,068 \$221,229 \$221,239	543,158 (55,281) 5166 50	\$67 \$172,171	\$27	Sp. Conviract St. Lighting Water Co. RLS&LS
\$79,548 \$202,308 \$757,880 \$757,880	5139,764 (517,041) 5337 50 50	\$17,660 \$555,372	\$7,286	Lighting St.
\$826 \$3,614 \$16,227 \$16,227	\$0 \$12 \$12 \$12	\$20 \$12,613	8	Rate CTOD Rate ITOD Rate RTS Sp. Contract Sp. Contract St. Lighting St. Lighting Traffic SL
\$1,384 \$5,921 \$26,453 \$26,453	\$20 \$20 \$20 \$20 \$20	\$163 \$20,532	\$67	TLE

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												REVENUE	Acct. No.	
TOTAL REVENUE	Unbilled Revenue	Other Electric Revenue	Rent From Elactric Property	Misc Service Revenues	Forfeited Discounts	Settled Swap Expense	Settled Swap Revenue	Brokened Purchases	Off-System Sales .	Intercompany Sales	Sales to Uthate Consumers		Account Description	
	74	63	69	80	78		-	**	83	, ~~	74		Allocator	
\$958,491,752	\$2,871,000	\$4,020,871	\$2,613,870	\$983,922	\$5,040,755	(\$3,269,501)	\$13,437,949	(\$3,239)	\$59,391,514	\$110,077,528	\$783,347,083		Total System	
\$382,037,590	t –								\$21,946,554	\$39,710,695	\$307,974,525		Residential Rate RS	
\$137,184,375								(\$404)		\$13,727,658			Gen. Servica GSS	(R Louisvite
\$20,622,875	\$60,157	\$81,943	\$53,269	20	\$112,640	(\$78,975)	\$324,593	(\$78)	\$1,415,761	\$2,658,919.	\$15,994,645		Rate PS Primary	Louisville Gas & Electro (Revenues)
\$199,796,423								(10/2)		\$23,833,831			Rate PS Secondary	c
\$23,737,048	\$68,781	608'965	\$62,933	03	50	(\$95,840)	116'5655	(2003)	\$1,696,088	\$3,226,743	\$18,287,716		Rate CTOD Primary	
\$28,229,215			\$74,408		8	(\$103,868)	5447,459	(8015)	\$1,953,928	\$3,665,379	\$18,666,125		Rate CTOD Secondary	
\$102,334,431	\$290,605	\$438,017	S284,744	80	8	(\$442,399)	51,818,301	(3438)	\$7,784,229	\$14,894,693	\$77,266,680		Rate (TOD Primary	
	1								5216,927				Rate ITOD F	
\$26,722,567	\$74,300	5107,510	569,889	S	2	(222,222)	62F'60CS	(2123)	08E'851'25	\$4,172,194	000,007,615		Rate RTS Sj Transmission	
\$14,005,641	\$39,241	\$65,345	\$42,479	5	5 S	(\$62,431)	346'9675	(705)	\$1,129,011	\$2,101,931	\$10,435,529		Sp. Contract S FL Knox 1	
									\$187,972				Sp. Contract St. Lighting Water Co. RLS & LS	
\$16,551,683	\$55,139	\$112,260	\$72,977	2	8 8	(331,103)	\$127,535	(156)	\$207,079	51,047,170	\$14,050,335		Lughtleng St. S&LS	
	1					_			219,187				ng St. Lighting Trat	**
\$309,661	2165	166715	\$1,294	S	엄	(\$1,139)	34,083	(31)	\$19,737	\$38,362	\$243,818		Traffic SL TLE	

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	 Energy (Loss Adjustad) Every (Loss Adjustad) Subscripting (BillsY2) Average Customers (Lighting = 6 Lights per Cust) Average Schafmars (Dighting = 6 Lights per Cust) Average Schafmars (Lighting = 1 Lights per Cust) Yate End Customers Yate End Customers Yate End Customers Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Lights per Cust) Yate End Customers (Lighting = 1 Ligh	Alloc. No Allocator Description
	12,111,227,512 (14,43,225,452 (14,43,225,452 (14,43,225,452 (14,43,225,452 (14,1,517 (14,1,517 (14,1,517 (14,1,517) (15,152) (14,1,517 (15,152) (14,1,517 (15,152) (1	Total System
		1
	1,410,201,531 1,417,261,535 1,417,261,535 4,2,002 4,2,	4 6 6
	22,544,715 2,222,3 20,315,205 2,460,0 1,060 4 1,060 8 1,060 8 1,070 8	
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4
		0.7
		Rate frob Primary
Sp. Contrast Sp. Contrast<	12,445 4 12,445 4 12,147	2 8
Scontract St. Lighting St. Ligh		
Pedule GA Redule GA rs. Laming S.	State	Sp. Contra Water Co
·····································	11,145,687 11,145,687 11,145,687 11,145,687 11,145,687 11,145,687 11,145,687 11,145,687,187 11,145,618 11,145,	hedule GAW-4 ge 12 of 15 st. Upting st. Upting Terms at R35 LIS LIS THE THE

Alloc. No

89 88	85 Secondary List Lines 88 Ditt Transformers 87	83 Bir 84 Primary Dist Lines	81 Off-Bystem Sales Allocator 82 Rate Switching	Allon, Na	
	st Lings Nors	ines.	Sales Allocator g	Allocator Description	
	80,427,368 126,200,230	424,405,054	59,391,514 30,874	Total System	
	55,908,745 93,453,428	242,480,821	21,946,654 0	Residential Rate RS	
	14,534,631 20,149,813	52,810,849	7,485,938 0	Gen. Service 995	Louisville Gas & Electric Electric Cost of Service Stud (Allocator Amounts)
	0 0	6,852,257	1,415,781 1,929	Rate P2 Primary	B Electric Service Study Imounis)
	7,713,020 9,077,496	59,890,544	12,770,723 22,942	Rate PS . Secondary	
	.	7,862,905	1,696,088 2,498	Rate CTOD Primary	
	1,141,505 1,312,051	8,445,923	1,953,928 3,305	Rate CTOD Secondary	
	00	32,784,742	7,784,228218,927 0	Rate ITOD Primary	
	183,448	1,049,964	1,927 D	Rate ITOD Secridary	
	~ 0	0	2,158,380 0	Rate RTS Fransmission	
	00	5,298,655	1,128,011 0	Sp. Contract Ft. Knox	
		1,221,001	267,972 0	Rate RTS Sp. Contract Sp. Contract St. Lighting St. Lighting Traffic 61 Transmission FL Knox Wither Co. RLS & LS LE TLE	
	947,402 1,985,550	5,784,871	507,078 D	st, Lighting s RLSE LS	AT 10 12 280 1
	14,151 17,187	110,842	19,187 D	Le Le	
	11,301 21,240	73,621	18,737 0	Traffic SL TLE	- 14

MENO Cri-Syntam Sales Allocator Cri-Syntem Sales Less: Adjustment to Realboata Expenses	Costs elifected on Every's be neitherated on RBPPT Costs elifected on Every's be neitherated on RBPPT Costs elifected on Everyy nealbocated on RBPPT Net Adjustment	Off-System Sales Alocator
59,391,514	000,852,52 000,852,52 0	59,391,614
22,334,198	(2,141,096) 9,529,738 397,642	21,948,554
7,544,933	(3,160,001) 3,218,093 58,095	7,485,038
1,401,742	(612,083) (5,48 598,0445,420,404 (14,018) (5	1,416,781
12,704,762	(5,488,385) 0,404 (65,961)	12,770,723
1,862,694	(742,771) 709,378 (33,394)	1,698,088
1,838,292	(843,742) 826,108 (17,636)	1,953,928
7,596,643214,275	(3,428,644) 3,241,058 (187,588)	7,784,229218,927
	(94,071) 91,419 (2,852)	
	(960,407) 891,430 (68,977)	2,158,380
1,125,238	(483,848) 480,075 (3,773)	1,128,011
	(128,989) 119,789 (7,200)	287,972
483,984	(241,051) 197,858 (43,095)	507,078
17,857	(9,121) 7,490 (1,631)	19,187
19,022	(8,631) 8,110 (715)	18,737

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Louisville Gas & Electric Electric Cost of Service Study (Allocator Percentages)

Allocator Description Total Residential Gen. Service Rate PS Rate PS Rate CTOD Rate CTOD Rate ITOD Rate ITOD Rate RTS Sp. Contract Sp. Contract St. Lighting St. Lighting Traffic SL. System Rete RS -GSS --Primary Secondary Primary Secondary Primary Secondary Transmission FL Knox Water Co. RLS & LS LE TLE

53	5 5			58	5	56	33	54	53	52	51	1 8	5 49	4	41	5 6	. t	. 1	: 2	42	4	40	65	38	37	36	35	24	33	83	31	30	28 1	28	26	25	24	23	22	21	16	1B	17	16	55 3	13	5 13	. 11	10	9 0	R	10	сл 1	۵ ه	2	-	Alloc, No
Labor Accts 542-545 0 0	Labor Accts 536-540	Labor Acets 5(1-5)4 0 0	Gross General Fran O	Dist. Undergrou	Gross Total Plant in Service 0	Gross Intangable Plant 0	Dist. Overhead Lines Gross Plant 0	Total Prod., Ttrans., Distrib Plant 0 0	Gross Distribution Plant	Gross Transmission Plant 0	Gross Production Flant	ECK Kevenue for Kellen o					Ciperandi and Sant Back Date Channe	member and Maintenance Lease Fuel	enviced of the Drive John and the second		Customer Specific Assignment	Temperature Normatization Revenues	Distribution O&M (Lines, Transformers & Services Flant)	Production Summer Demand I ctal	Production Residual Summer Demand Allocator	Production Summer Demand Auocator	Production Residual Summer Demand Allocator	Production Winter Demand Allocator	Production Residual Winter Demand Allocator	Weighted Avg Summer Winter Peak	Winter Peak Period Demand Allocator	Summer Peak Period Demand Allocator	Sum of the Individual Customer Demands (Secondary)	Custonial Service - Progline Control	Customer Cost - Wighted met of Services	Revenue and Expense Adjust befors 31	Taxable (ncome	Total Utility Plant	Net Utility Plant	Total Transmission Plant	Maximum Class Non-Coincident Peak Demands	Year End Secondary Customers	Year End Customers (Lighting = 9 Lights per Cust)	Year End Customera	Street Lighting	Year End Customers () initian =9 Linhts per Custo Wainblad Year End Customers () initians (unput initians)	Contract of the second se	Average Primary Customers	Average Secondary Customers	Average Customers (Lighting = 8 Lights per Cust)	Average Customera	Weighted Average Customers (Lighting =9 Lights per Cust)	Average Customers (Lighting = Lights)	Customers (Monthly Bills) Average Customers (Bills/12)	Energy	Energy (Loss Adjusted)	Allocator Description
100,0000%	100.0000%	100.0000%	100,000,000	100,0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%			100 000000	100.0000%	100.0000%	100.0000	100.0000%	100.00007			100,00078	100.000076	100.0000%	100.0000%	100,000075	100.0000%	100.0000%	100,0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100,0000%	100,0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%-	100.0000%	100.0000%	100.0000%	100.0000%	100.0001%	100.0000%	100.0000%	100.0000%	100.0000%	100,0000%	100.0000%	100.0000%		*	System .
36.6773%	37,6050%	36.1277%	37 374744	40 8040475	42,5050%	42.6082%	60.9753%	42.6082%	57.3873%	37.6050%	37.0000%	37 ENENOL	33 6377%	30 85444	75 3409%	-0.0000%	45 7897%	39,3829%	43.0620%	43 5809%	74 07238	03.170378	03,033074	41.020070	47.5200%	470000	47.8268%	40.7548%	40.7549%	44.6323%	40.7549%	47.6268%	63.6724%	48.4092%	88,3841%	50,950276	40,8209%	42,4565%	42.5481%	37.8050%	47.0009%	88.2021%	86,2011%	71,0732%		79.2728%	71 0732%	86,1611%	86.1949%	88.1800%	71.1157%	0 000074	71.1157%	71.1157%	35.8581%	36.0752%	Rate RS
12.5625%	12,7037%	12.4789%	12 6387%	12 640.2%	12.0402%	12.6402%	13,7448%	12.6402%	12.4524%	12.7037%	12.103170	43 707794	38 18174	14 7594%	9 1393%	100.0000%	-31.2841%	12.3888%	14.1671%	14 0163%	8 502192	51000 E	10.1412.70	13.022070	10.022076	13.022076	13.0220%	14.1439%	14.7409%	13.7732%	14.7459%	13.0220%	20.7790%	13.0853%	10.5717%	44 000070	25,4326%	12.6421%	12.6409%	127037%	12.7046%	10.3131%	10.3128%	8.5031%	%00000	10.4324%	8 5031%	10.3754%	10.3795%	10.3753%	8,5637%	D 0000%	8.5637%	8.5637%	12.3958%	12.4709%	· GSS
2.3837%	2.3502%	2.4136%	2 3385%	2 0243%	+ 695m4	2,0243%	1.1773%	2.0243%	1,0320%	2.3602%	2.000.2	2 36034	1 PR550	2 0958%	0.9143%	-0.0000%	5 5928%	2 2501%	2 1776%	2 0745%	001844	0,700,00	1.0110.0	1.909079	1,0000/3	1,00001	1.90902	2402070	2.2821%	2.1060%	2.2827%	1.8696%	0.0000%	2.0922%	0.0000%	1.342370	1,7315%	2.0344%	20283%	2.3602%	2.0313%	0.0223%	0.00223%	0,0184%	0.0000%	0.2053%	0.0184%	0.02227%	0.0000%	0.0222%	0.0183%	0.0000%	0.0183%	0.0183%	2,4517%	2,4155%	··Primary:
21.5494%	21.3915%	21.6429%	21 4307%	18 7803%	10.104074	10,100375	12,5930%	18.7803%	11.0659%	21.3810%	A 1.001070	31 3045%	16 1622%	20.9768%	10.5887%	-0.0000%	27.0073%	20,4712%	20.8564%	19.9925%	0 6283%	0.0200.00		14 4875%	780350 81	10.00007	18.930075	21,0210.2	20120.62	20,1950%	21.8270%	18,9380%	12.6729%	18.0554%	0.7787%	3 7036%	24,3139%	18.8595%	16.8117%	21.3915%	17.5301%	0.7597%	0.7600%	0.8263%	0.0000%	6,9859%	0.6263%	0.7000%	0.7553%	0,7550%	0.6232%	0.0000%	0.6232%	0.6232%	21,5215%	21,6519%	Secondary
2.8795%	2,7995%	2.9268%	2.8194%	2.3894%	1 9353%	7.0000	1.3504%	2.3894%	1.1777%	2./99076	2.70052	2 7915%	1.5923%	2.4180%	1.8807%	-0.0000%	4.0335%	2.7077%	2,1848%	1.8714%	0.0043%		0 5202%	1 1985%	2 244084	0 0 1 1 0 1	2 2112%	2.1112.78	2.111270	2.194276	2.1712%	2.2119%	0.0000%	2,4068%	0.0000%	0.0310%	7.3520%	2.4018%	2.3943%	2,7995%	2.3368%	0.0052%	0.0000%	0,0043%	0.0000% -	0.0958%	0.0043%	0.0043%	0.0000%	0.0052%	0.0043%	%00000	0.0043%	0.0043%	2,9753%	2.9313%	Primary
3.3024%	-	3,3274%	3 2707%	2.8297%	2 00007	700123 6	7./844%	2.829/%	1.5580%	3.20UZ70	70000 C	3 2602%	1:8323%	2.9013%	2.1581%	-0.0000%	5,1825%	3,1007%	3.0179%	2,8198%	0.0172%		0 7P44%	1.6622%	2 7030%	o Thank	2 7930%	0-1010 m	7 1315%	748767 6 94004677	3.1316%	2.7930%	1.9076%	2.5807%	0.0214%	0.1240%	2.1993%	2.8428%	2.8349%	3.2602%	2.5057%	0.0208%	0.0208%	0,0172%	0.0000%	0.3832%	0.0172%	0.0172%	0,0207%	0.0207%	0.0171%	0.0000%	0.0171%	0.0171%	3.3098%	3.3298%	Secondary
13.2397%		_ .				10,00037			4.92047a		43 70094	12 7908%	5.6288%	10.2755%	0.0000%	-0.0000%	24,8975%	12,4579%	9,4582%	9,3081%	0.0092%		%0000.0	4.9973%	9 9 6 0 5 %	0 2605%	9.2605%	0.000110	0,558354	8,090478	726,19CO'R	9,2505%	0.0000%	10,0386%	0,0000%	0.3550%	9.4083%	4 4607%	10.8242%	12,7908%	9.7466%	0.0112%	0.0000%	0.0082%	0.0000%	0.1026%	0.0092%	0.0092%	0.0000%	0.0111%	0.0092%	0.0000%	0,0092%	0.0092%	13.7339%	13.5311%	T-INHAU Y
6 0.3671%	-	-	-			0.3210%			0.2000							-0.0000%		D.3497%	0.3110%		0,0035%		0.0000%	0.2127%	0.3161%	0.3161%	0.3161%	0.000110	0.3084%	20121210	0.34370	0.3161%	0.2656%	0.3203%	0,0114%	0.1320%	0.2927%	0.322276	0.3214%	0,3608%	0.3110%	0.0042%	0.0042%	0.0035%	0.0000%	0.0388%	0.0035%	0.0035%	0.0042%	0.0042%	0.0035%	0.0000%	0.0035%	0.0035%	0.3690%	0.3712%	Linningo
3.6831%		3,7809%		2.6287%		2 6293%	3 53878		2.00177			3.5180%	1.88549			-0,0000%			2,4680%		0.0010%		0.000%	%00000.0	1.8836%				2.7848%	2 7648%	2.104070	7,8830%	0,0000%	0.0000%	0.0000%	0.0390%	2.2028%	2.0001%	2.6394%	3,5180%	2.9091%	0.0000%	0,0000%	0.0010%	0.0000%	0.0228%	0.0010%	0.0010%	%0000.0	0.0012%	0.0010%	0.0000%	0.0010%	0.0010%	0 1010%	3.7902%	OCULUATION INTERNATION
6 1.9035%	•	6 1.9090%				1.6150%						1.8946%				-0,0000%		-	1.8831%		0,0002%		0.7733%	0.8028%	1.6987%	1.6988%	1.5987%	1 FORR	1.9913%	1 9913%	1 83834	7,00000	0.0000%	1.6131%	0.0000%	0,0080%	1.2542%	1.02.027	1,5182%	1.8945%	1,5662%	0.0002%	0.0000%	0.0002%	0.0000%	0.0046%	0.0002%	0.0002%	0.0002%	0.0002%	0.0002%	0.0000%	0.0002%	0.0002%	1,9381%	1,9095%	
% 0,4900%	£ 0.4727%	_	_	-			200050 V						-			,					0,0004%		-	-	-	0.2648%					0 3433%						0.3456%		0.4005%					0.0004%	0.0000%	0.0091%	0.0004%	0.0004%	0.000074	0.0005%	0.0004%	0.0000%	0.0004%	0.0004%	0.0004%	0.5012%	
% 0.8844%		•						A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1												-	6 19,5399%		•	•••	-	-				6 0.0000%				-	-			3 2262%	-				2.6344%	_		2.4217%	19,5399%	19,5389%	2.6173%	2.5172%	19.4412%	98.9705%	19.4412%	19.4412%	0.9456%	0.9513%	NLU G CU
% 0,0335%			•			% 0.0300%					% 0.0296%		% -0.0066%							-	% 0.0221%					%00000%				6 0.0000%			6 0.0227%		-	-	0.0287%		-	0.0296%	-		0.0030%		-	-			0.0030%		0.0220%	0.1119%	0.0027%	0.0220%		0.0360%	F
0,0337%	-			-	-											\$ -0,0000%		% 0.0383%			% 0.1812%					_							% 0.0105%			6 0.2140%							0.0243%						0.0242%								F

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Louisville Gas & Electric Electric Cost of Service Study (Allocator Percentages)

Alloc, No

Allocator Description Total System Residential Gen. Service Rate PS Rate PS Rate CTOD Rate CTOD Rate ITOD Rate ITOD Rate RTS Sp. Contract Sp. Contract St. Lighting St. Lighting Traffic SL. Rate RS GSS -Primary Secondary Primary Secondary Primary Secondary Transmission Pt. Knox Water Co. RLS & LE TLE

86 87 82	***	3333	75 74	2322	1988	8 93 88 92 8
Primary Dist Lines 0 0 Secondary Dist Lines 0 0 Dist Transformers 0 0	Misc Revenue 0 0 Off-System Sales Allocator 0 0 Rate Switching 0 0	Temperature Normalization Expenses 0 0 Call Expenses 0 0 Fondated Discounts 0 0	Rey 0 0 Distribution Poles, Lines, Transform & Services 0 0	Distribution O&M 0 0	Gross Transformer Plant 0 0 Stransformer Plant 0 0	Labor Accts 581-588 0 0 Labor Accts 591-598 0 0 Labor Accts 500-916 0 0 O&M lates Purchased Prover 0 0
100.0000% 100.0000% 100.0000%	100.0000% 100.0000% 100.0000%	100,0000% 100,0000%	100,0009%	100.0000% 100.0000% 100.0000%	100.0000%	100.0000% 100.0000% 100.0000% 100.0000%
57,1296% 69,5116% 74,0517%	84,5086% 36,9523% 0,0000%	78,4419% 39.0077% 78 40004	40.3453% 63.0938%	42.0040% 45.0796% 69.5982%	42,4031% 74.0517%	72.7558% 101.7987% 45.2073% 39.3829%
12.4456% 18.0716% 15.9685%	15,4914% 12,6044% 0,0000%	7.5201% 12.3847%	14,7437% 13,7412%	12.3305% 9,6885%	12,8303% 15,8665%	11.6023% 20.5378% 12.3145% 12.3686%
1.6146% 0.0000% 0.0000%	0.0000% 2.3838% 6.2887%	0,9990% 2.2692%	2.0953% 1.0445%	2.0048% 1.9723% 0.7637%	2.0380%	0.8358% -0.2117% 1.9686% 2.2501%
14.0645% 9,5900% 7.1929%	0.0000% 21,5028% 74,7930%	10.4788% 20.5096%	20.8177% 11.6875%	19,0957% 18,4432% 6,8463%	18.8846% 7.1929%	7.3472% 7.4272% 18.4258% 20.4712%
1.8527% 0.0000% 0.0000%	0,0000% 2.8558% 8.1437%	1.1032% 2.7326%	2.3957% 1.1985%	2,3292% 0,7342%	2.4077%	0.6235% -0.2509% 2.3261% 2.7077%
1.9901% 1.4193% 1.0387%	0.0000% 3.2899% 10,7748%	1.6351%	2.8820%	2.8817% 2.7218% 0.6241%	1.000176 2.8486% 1.0397%	0.7892% 1.0689% 2.7162% 3.1007%
7.7249% 0.0000% 0.0000%	0.0000% 13.1086% 0.0000%	0.0000%	10,1221% 4,9973%	11.0407% 10.6310% 3.2693%	10.8936% 0.0000%	2.7444% -1.0527% 10.6223% 12.4579%
0.2474% 0.1980% 0.1454%	0.0000% 0.3652% 0.0000%	0.0000% 0.3521%	0.3279%	0.3258% 0.3163% 0.1751%	0.3227% 0.1454%	0,1736% 0,1527% 0,3150% 0,3497%
0.0000% 0.0000%	0.0000% 3.6342% 0.0000%	0.0000%	2,5879% 0,0000%	2.7361% 2.8085% 0.0339%	0.0000%	0.0249% -0.0003% 2.8178% 3.4429%
1.2410% 0.0000% 0.0000%	0.0000% 1.9010% 0.0000%	1.8219%	1.3668% 0.8028%	1.5488% 1.5494% 0.4812%	1.0432% 1.6262% 0.0000%	0.4096% -0.1895% 1.5460% 1.7733%
0.2879% 0.0000% 0.0000%	0.0000% 0.4849% 0.0000%	0,4658%	0.3396% 0.1863%	0,4085% 0,3939% 0.1265%	0.4031% 0.0000%	0.1060% -0.0382% 0.3938% 0.4515%
1.3583% 1.1780% 1.6733%	0.0000% 0.8538% 0.0000%	0.0000%	1.9205% 1.3258%	2.6296% 1.3493% 7.4381%	1.3296% 2.7919% 1.5733%	2.5962% -29,2798% 1.2701% 1.1621%
0.0281% 0.0176% 0.0138%	0.0000% 0.0323% 0.0323%	0.0000%	0.0233%	0.0299% 0.0289% 0.0310%	0.0248% 0.0301% 0.0136%	0.0284% 0.0128% 0.0288% 0.0332%
0.0173% 0.0141% 0.0168%	0.0000% 0.0332% 0.0532%	0.0000%	0.0319% 0.0248%	0.0480% 0.0471% 0.2019%	0.0168% 0.0495% 0.0188%	0.1832% 0.0082% 0.0489% 0.0383%

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Rate of Return Pro-Forma	Unadjusted Net Cost Rate Base Depreciation Adjustment Cash Woking Capital Adjustment Net Cost Rate Base	Net Operating Income (Pro-Forma)	Income Taxes	Net Income Before Income Taxes	Total Expense Adjustments	Tax Basis depreciation reduction Adjmt.	Federal & State Income Tax Interest Adjmt.	Frideral & State Income Tax Adjmt.	t Edison Electric invol	Normalize 925 Injuries/Damages Adjmt. (See Func Assign)	2009 Winter Storm Adjint Interact Pate Swan Amerikation	Retired Mainframe Adjmt.	Cinimiate Adventsing Expenses Rate Case Expenses	Liability Insurance Adjmt.	Property Insurance Adjmt.	Pensions/Post Retirement Benefits Adjmt.	Lepreciation Expenses	Year-End Customer Adjustment	Pro-Forma Adjustments to Expenses Eliminate DSM Expenses	Total Operating Expenses		Other Expenses (ITC amortization Reg. Credits Accretion)	Administrative & General Expenses	Customer Accounting Expenses	Expenses Operation and Maintenance Expenses	Total Adjusted Revenues	Operating Revenues Total Revenue Adjustments	Account Description Alc	
	38		23			43 f	38	\$ t	\$ &	£ 2	3 6	43	မ္က မ္က	3 &	4 3 i	42 1	42	44	47								:	Allocator	
5.06%	\$491,799,638 (\$385,987) (\$94,673) \$491,318,978	\$24,862,206	\$6,084,288	\$30,946,494	\$2,336,546	\$13,472	(\$97,159)	(\$29, 44 0) \$3,014,150	(\$62,735)	\$38,531	\$33,538	(\$352,000)	(\$149,390) \$107,664	\$128,741	\$88,922	\$78,706	\$385,987	\$541,722	(\$1,898,813)	\$85,891,586	\$5,819,250	520,001,022	\$17,863,027	\$13,152,228	\$29,143,381	\$119,174,626	\$418,890,260 (\$299,715,634)	Total	Louisville (Natural Gas Co (Su
4,53%	\$340,882,709 (\$285,257) (\$62,430) \$340,535,023	\$15,410,066	\$3,418,876	\$18,828,941	\$697,365	\$9,338 \$9,338	(\$68,047)	(\$20,405) \$1,936,024	(\$43,484)	\$26,707	\$20,494	(\$243,983)	(210,501¢)	\$89,235	\$61,635	\$140,013	\$285,257	\$79,790	(\$1,806,959)	\$62,506,182	\$4,128,282	\$14,040,012 /\$117 875)	\$12,588,135	\$11,849,305	\$19,217,822	\$82,032,489	\$273,733,062 (\$191 700 564)	Residential (RGS)	Louisville Gas & Electric Natural Gas Cost of Service Study (Summary)
7.61%	\$110,881,594 (\$72,723) (\$23,527) \$110,785,344	\$8,435,914	\$2,617,820	\$11,053,734	\$1,446,740	\$3,037 \$3,037	(\$20,673) \$52 335	(\$6,638) \$964,531	(\$14,144)	\$8,687	\$8,245	(\$79,362)	(\$33,700) \$26.755	\$29,026	\$20,048	\$14,829	\$12,123	\$432,103	(\$85,362)	\$17,286,094	\$1,234,060	30,100,441	\$3,913,146	\$1,148,514	\$7,242,224	\$29,786,568 \$1,905		Commercial (CGS)	IV
4.28%	\$8,483,064 (\$5,084) (\$1,879) \$8,476,102	\$362,390	\$82,503	\$444,893	\$125,317	\$4 ,004 \$232	(\$1,554)	(3508) \$85,054	(\$1,082)	4910 \$665	\$691	(\$6,072)	(\$2,136	\$2,221	\$1,534	\$1.037	\$5,084	\$29,829	\$0	\$1,335,629	\$97,949	4204,431	\$308,900		\$578,282	\$1,905,838	\$10,424,199 /\$8.518.361\	Industrial (IGS)	
3.27%	\$1,011,024 (\$778) (\$214) \$1,010,032	\$33,027	\$3,929	\$36,956	\$26,925	**// \$28	(\$221)	(\$61) \$26,221	(\$129)	97\$	\$117		(\$204) \$243		\$183	\$159	\$778	\$0	(\$736)	\$153,036	\$11,705	340,492 (\$374)	\$34,272	\$6,127	\$65,813	\$221,917	\$2,836,844 (\$2 614 927)	As Available Gas Service (AAGS)	
2.32%	\$22,361,054 (\$16,260) (\$4,731) \$22,340,062	\$518,766	(\$1,529)	\$517,237	\$28,124	\$613 \$613	(\$4,882)	(\$1,339) \$2,154	(\$2,852)	\$4,752	\$2,918	(\$16,005)	(\$5,380) \$5,380	\$5,854	\$4,043	\$3.316	\$16,260\$5,884 \$6,000	\$0	(\$5,756)	\$3,339,847	\$250,813	\$8 163)	\$737,758	\$57,189\$2,451	\$1,456,298	\$3,885,208	\$4,119,691 (\$234 483)	Firm Transportation Service (FT)	Pag
1.25%	\$8,180,194 (\$5,884) (\$1,894) \$8,172,416	\$102,043	(\$37,311)	\$64,732	\$12,074	3,861 \$224	÷	(\$490) \$166	(\$1,043)	4002 \$641	\$1,073	(\$5,855)	(\$1,933) \$2.154	\$2,141	\$1,479	\$3, 1 1∠ \$1,200		\$0	\$0	\$1,265,799	\$96,440	\$306,129 (\$2 979)	\$280,815	2,451	\$582,942	\$1,342,605	\$1,368,778 (\$26.172)	Special Contracts (SP)	Page 1 of 18

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Total Residential (RGS) Commercial (RGS) Industrial (RGS) As Available (RGS) Firm (RGS) Special (RGS) \$82,263,253 \$40,973,701 \$20,197,065 \$1,667,466 \$10				Louisville Natural Gas C (Ra	Louisville Gas & Electric Natural Gas Cost of Service Study (Rate Base)	Y			Page 2 of 18	18
Service Service Service State Felle Character 2 \$\$2,252,252 \$40,973,701 \$20,197,085 \$\$1,967,466 \$0 \$0 Transmission 2 \$52,262,262 \$43,305,166 \$0 \$0 \$0 Clastorer 2 \$52,262,262 \$41,313,414 \$20,197,085 \$1,967,466 \$0 \$0 Clastorer 2 \$52,262,262 \$41,313,414 \$20,197,085 \$1,987,424 \$13,282 \$0 \$0 Clastorer 2 \$52,262,223 \$41,303,414 \$20,197,085 \$1,987,424 \$13,282 \$0 \$0 \$0 Clastorer 3 \$13,265,204 \$13,056,205 \$1,003,965 \$10,27,17 \$10,997,406 \$10 <th>Aect. No.</th> <th>Account Description</th> <th>Aliocator</th> <th>Total</th> <th>Residential (RGS)</th> <th>Commercial (CGS)</th> <th>Industrial (IGS)</th> <th>As Available Gas Service (AAGS)</th> <th>Firm Transportation Service (FT)</th> <th>Special Contracts (SP)</th>	Aect. No.	Account Description	Aliocator	Total	Residential (RGS)	Commercial (CGS)	Industrial (IGS)	As Available Gas Service (AAGS)	Firm Transportation Service (FT)	Special Contracts (SP)
Undergrand Scruege Part 2 S28/2012 S33,257 S31,255 S33 S35	Vant-in-Service	nd Starana Blant								
Sub-Colar Statistics Statisti		io j	N N	\$62,838,253 \$520.992	\$40,973,701 \$339,713	\$20,197,085 \$167,454	\$1,667,466 \$13,825		0\$ 0\$	0\$ 0\$
Transmission Demand 3 \$13,656,204 \$8,905,585 \$4,339,936 \$32,422 \$50	Sub-total			\$63,359,245	\$41,313,414	\$20,364,539	\$1,681,291		\$0	\$0
Demand 3 \$13,656,274 \$50,656 \$4,389,056 \$32,322 \$50 \$50 Sub-oral 513,656,274 \$50,905,856 \$4,389,056 \$322,422 \$50 \$50 Distribution Plant 1 \$13,656,274 \$50,660 \$53,573 \$2,878 \$50 <td></td> <td>ion Plant on</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		ion Plant on								
Sub-Jobal Stig.568,204 Stig.568,204 Stig.568,204 Stig.568,204 Stig.536 Stig.537 Stig.538 Stig.532 Stig.538 Stig.532 Stig.532 Stig.532 Stig.532 Stig.532 Stig.532 Stig				\$13,658,204 \$0	\$8,905,836 \$0	\$4,389,936 \$0	\$362,432 \$0	88	08 08	80 89
Distribution Plant Land and Land Rights 9 \$133,743 \$576,600 \$353,733 \$2,878 \$5712 \$39,773 \$52,376 \$ \$5701,947 \$402,031 \$167,540 \$51,513 \$3,737 \$52,376 \$ \$5701,947 \$402,031 \$167,540 \$51,513 \$3,737 \$52,376 \$ \$5701,947 \$402,031 \$167,540 \$51,03 \$3,737 \$52,376 \$ \$ \$50,005 \$ \$51,0221,575 \$ \$51,005 \$51,03 \$ \$3,737 \$ \$52,376 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Sub-total			\$13,658,204	\$8,905,836	\$4,389,936	\$362,432	\$0	\$0	0\$
Land and Land Rights 9 \$173,743 \$5701,947 \$402,031 \$187,546 \$15,103 \$2,375 \$2,376 \$3,374 \$3,773 \$2,2376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,374 \$402,031 \$187,546 \$15,103 \$3,737 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$2,376 \$3,373 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332 \$3,332	Distributio	n Plant								
Mains LM Presure 49 \$211,603,955 \$120,221,575 \$57,990,023 \$5,078,514 \$785,066 \$220,508,128 \$7/7 LM Pressure 13 \$36,809,325 \$33,655,165 \$3,124,581 \$260,006 \$231 \$33,352 \$33,353 \$33,352 \$33,353 \$33,353 \$33,353 \$33,353 \$33,555 \$33,193,555 \$31,130,355 \$35,133,555		and Rights and Improvements	D D	\$133,743 \$701.947	\$76,600 \$402.031	\$35,733 \$187.546	\$2,878 \$15.103		\$52.376	\$7,841 \$41.154
Demand 49 \$211,603,955 \$120,221,575 \$57,990,023 \$5,078,514 \$775,095 \$220,508,128 \$7,14 H Pressure 13 \$36,609,225 \$33,655,165 \$31,124,891 \$26,006 \$231 \$33,952 Demand 48 \$33,075,872 \$17,384,411 \$8,484,997 \$744,004 \$201,888 \$4,193,580 \$2,197,179 \$2,246,449 \$10,216 \$1,193,580 \$2,11 \$2,39,106 \$2,10,216 \$1,178 \$2,1314 \$2,82,003,923 \$2,293,196 \$1,003,167 \$80,146 \$21,314 \$2,93,855 \$53,891,554 \$53,891,554 \$53,891,556 \$53,91,355 \$51,33,555 \$52,92,916 \$51,003,395 \$53,831 \$51,554 \$53,891,554 \$53,891,556 \$53,891,556 \$53,891,556 \$53,891,556 \$53,891,556 \$53,893 \$51,990,923 \$52,990,923 \$52,990,923 \$52,990,923 \$52,990,923 \$51,990,923 \$52,990,923 \$51,990,923 \$52,990,923 \$52,990,923 \$52,990,923 \$52,990,923 \$51,990,923 \$52,990,923 \$51,990,923 \$51,990,923 \$51,990,923		sure								
Customer 13 \$26,809,325 \$33,952,155 \$31,124,561 \$25,006 \$221 \$33,352 Demand 2 \$23,075,872 \$17,384,411 \$84,8,997 \$744,004 \$201,888 \$4,193,580 \$21 \$33,552 \$17,384,411 \$8,484,997 \$744,004 \$201,888 \$4,193,580 \$21 \$33,552 \$17,384,411 \$8,484,997 \$744,004 \$201,888 \$4,193,580 \$21 \$33,552 \$17,384 \$11 \$8,246,997 \$744,004 \$201,888 \$41,93,580 \$21 \$35,264,499 \$2,246,149 \$2,247,149 \$2,246,149 \$2,247,146 \$17,788 \$41,72 \$85,544 \$50 \$61,777 \$86,146 \$21,314 \$29,897,55 \$53 \$51 \$15 \$13,852,282 \$10,939,951 \$2,681,730 \$15,715 \$10,339 \$33,831 \$81,554 \$51 \$51 \$51 \$51 \$51 \$51,554 \$51 \$51 \$51 \$51,554 \$51 \$51 \$51 \$51,564 \$51,730 \$51,730 \$51,51,303 \$51,51,303 \$51,	Dema	Ind	49	\$211,603,955	\$120,221,575	\$57,990,023	\$5,078,514	\$78	\$20,508,128	\$7,020,6
Demand 48 \$33,075,872 \$17,384,411 \$8,484,997 \$744,004 \$201,888 \$4,193,580 \$2,1 Meas. & Reg. Station Equip Gen. 9 \$3,105,872 \$17,384,411 \$8,44997 \$744,004 \$201,888 \$4,193,580 \$2,1 Meas. & Reg. Station Equip City Gate 9 \$4,103,923 \$2,226,090 \$2,210,216 \$1,788 \$417 \$2,84,004 \$2,417,449 \$197,088 \$44,762 \$863,502 \$2,84,049 \$2,14,744 \$197,088 \$44,762 \$863,502 \$2,84,976 \$2,84,767 \$864,144 \$2,94,744 \$197,088 \$44,762 \$863,502 \$2,84,449 \$177,475 \$100,389 \$23,831 \$821,544 \$23,831 \$817,52 \$863,527 \$113,515 \$1,30,352 \$1 \$1,54 \$23,831 \$817,565 \$33,857 \$13,852,567 \$113,516 \$1,30,352 \$1 \$1,54 \$23,641 \$23,647,911 \$6,759,765 \$396,597 \$113,515 \$1,30,352 \$1 \$1,54 \$20,837 \$16 \$1,30,352 \$1 \$10,395 \$33,154	Cusic H Press	une .	IS	\$30,808,525	\$33,000,100	\$3,124,581	ann'az¢		\$3,332	
Customer 12 \$2,476,779 \$2,264,090 \$210,216 \$1,788 \$117 \$544 Meas. & Reg. Station Equip City Gate 9 \$4,003,023 \$2,264,090 \$210,216 \$1,788 \$117 \$54 Meas. & Reg. Station Equip City Gate 9 \$4,003,023 \$2,264,090 \$2,477,449 \$17,008 \$49,722 \$683,565 \$5 Services 14 \$138,086,721 \$127,087,686 \$10,077,475 \$100,389 \$33,831 \$281,554 \$5 Meter Installations 15 \$34,911,864 \$26,447,911 \$6,758,765 \$396,597 \$113,515 \$1,30,352 \$1 Meter Equipations Installations 15 \$13,852,262 \$10,493,951 \$2,861,730 \$50 \$0<	Dema	IDd.	48	\$33,075,872	\$17,384,411	\$8,484,997	\$744,004	\$201,888	\$4,193,580	\$2,066,992
Meas. & Reg. Station Equip Gen. 9 94(6),306 \$52,247,449 \$197,088 \$44,762 \$683,502 \$58 Meas. & Reg. Station Equip City Gate 14 \$138,080,323 \$52,293,196 \$1,069,765 \$10,77,475 \$100,389 \$533,831 \$281,554 \$284,011,864 \$22,47,449 \$197,088 \$44,762 \$583,502 \$58 Meter Installations 15 \$34,911,864 \$22,7087,686 \$10,777,475 \$100,389 \$533,831 \$281,554 \$50<			12	\$2,476,779	\$2,264,090	\$210,216	\$1,788	•	\$544	\$23
Milless of Ney, Statuti Equip Ory Gate 9		eg. Station Equip Gen.	5 (0	\$9,160,306	\$5,246,449	\$2,44/,449			\$683,502	\$537,056
Meter Stations Stations <t< td=""><td></td><td>g. Station Equip City Gate</td><td>14 14</td><td>\$138 086 721</td><td>4107 NR7 686</td><td>\$10 777 475</td><td></td><td></td><td>381 554</td><td>45 785</td></t<>		g. Station Equip City Gate	14 14	\$138 086 721	4107 NR7 686	\$10 777 475			381 554	45 785
Meter Installations 15 \$0 <td></td> <td></td> <td>ថ</td> <td>\$34,911,864</td> <td>\$26,447,911</td> <td>\$6,758,765</td> <td></td> <td></td> <td>\$1,130,352</td> <td>\$64,724</td>			ថ	\$34,911,864	\$26,447,911	\$6,758,765			\$1,130,352	\$64,724
House Regulators 15 \$13,852,262 \$10,493,951 \$2,661,730 \$157,361 \$45,040 \$448,499 \$25,6 House Regulators Installations 15 \$15 \$10 \$15 \$10,493,951 \$2,661,730 \$157,361 \$45,040 \$448,499 \$25,60 Indust. Meas. & Reg. Station Equip. 15 \$155,769 \$118,005 \$30,156 \$1,770 \$50		llations	15	\$0	0\$	\$3			0\$	\$0
House Regulators Installations 15 \$0		ulators	15	\$13,852,262	\$10,493,951	\$2,681,730		\$45,0	\$448,499	\$25,681
Indust wees. or reg. statuti requip. 13 4 iso, ros		ulators Installations	1 - Ci	\$155 760 \$0	\$110 005	0\$			C\$	0\$ 0
Asset Retire Obligations Gas Plant - City Gate 9 \$364 \$208 \$97 \$8 \$2 \$27 \$ Asset Retire Obligations Gas Plant - Mains 49 \$22,657 \$12,872 \$6,209 \$544 \$2,196 \$7 \$ Demand 49 \$22,657 \$12,872 \$6,209 \$544 \$84 \$2,196 \$7 H Pressure 13 \$3,941 \$3,603 \$335 \$33 \$0 \$0 \$0 Demand 48 \$3,542 \$1,862 \$909 \$80 \$22 \$449 \$2 Customer 12 \$265 \$242 \$22 \$0 \$0 \$0 \$0		oment	5 8	\$51.112	\$38.721	\$9.895			\$1.655	395
Asset Retire Obligations Gas Plant - Mains LVM Pressure Demand 13 \$22,657 13 \$3,941 13 \$3,941 13 \$3,941 13 \$3,941 13 \$3,941 13 \$3,941 14 \$3,563 15 \$3 16 \$3,542 17 \$2,55 18 \$3,542 19 \$22,55 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$265 12 \$22 12 \$22 12 \$22 12 \$22 12 \$22 12 \$22 12		e Obligations Gas Plant - City Gate	9	\$364	\$208	76\$		\$2	\$27	\$21
49 \$22,657 \$12,872 \$6,209 \$544 \$84 \$2,196 \$7 13 \$3,941 \$3,603 \$335 \$3 \$0 \$0 \$0 12 \$265 \$242 \$20 \$80 \$22 \$449 \$2		e Obligations Gas Plant - Mains								:
r 13 \$3,941 \$3,603 \$335 \$3 \$0 \$0 12 \$265 \$242 \$1,862 \$909 \$80 \$22 \$449 \$2 12 \$265 \$242 \$22 \$0 \$0 \$0	Dema	ind	49	\$22,657	\$12.872	\$6.209	\$544		\$2.196	\$752
r 12 \$265 \$242 \$909 \$80 \$22 \$449 \$2	Custo	mer	13	\$3,941	\$3,603	\$335	ដី		0\$	0\$
48 \$3,542 \$1,862 \$909 \$80 \$22 \$449 \$2 12 \$265 \$242 \$22 \$0 \$0 \$0 \$0	H Press	ure								-
12 \$265 \$242 \$22 \$0 \$0 \$0	Dema	ind	48	\$3,542	\$1,862	606\$			\$449	\$221
	Custo	Imer	12	\$265	\$242	\$22			\$0	\$0

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Construction Work In Progress 389-399 General Plant 301-303 Intangible Plant Other Depreciation Reserve LESS TOTAL PLANT-IN-SERVICE TOTAL Acct. 117 **Rate Base Items** Gas Stored Underground/Non-Curren Common Sub-total Common Sub-total Sub-total GAS PLANT AT ORIGINAL COST Common Utility Plant Asset Retirement Obligation - Net Assets FAS 109 Deferred Income Taxes Accum. Deferred Income Taxes Customer Advances for Construction General and Intangible Distribution General Other Distribution **Distribution Mains** Transmission Underground Storage Asset Retirement Obligation - Regulatory Assets Asset Retirement Obligation - Liabilities Underground Storage **Fransmission** H Pressure L/M Pressure Demand Customer Customer Demand Account Description Allocator ~ 2 2 2 v 37 37 36 37 37 36 343587 34 35 12 48 13 49 $\infty \sim$ \$631,497,739 \$174,352,614 \$58,087,778 \$69,425,943 \$251,930,196 \$726,844,568 \$18,893,204 \$48,874,215 \$12,204,475 \$32,445,945 \$95,346,829 \$42,241,284 \$20,992,014 \$4,053,496 \$131,229 \$0 \$0 \$26,723,610 \$4,142,848 \$1,250,818 \$2,139,990 \$1,187 \$9,196,988 Total \$6,203,552 \$3,281,267 \$3,651,642 \$7,485,292 \$648,045 \$245,707 (Rate Base) \$21,490,087 \$8,083,452 \$124,279,201 \$4,370,273 Residential \$5,331,504 \$2,855,603 \$92,224 \$92,224 \$0 \$509,255,392 \$444,786,754 \$177,049,236 \$13,467,147 \$11,926,493 \$40,921,624 \$64,468,638 \$2,743,953 \$828,461 \$48,818,936 \$1,417,390 \$836 \$18,826,224 \$29,758,101 \$6,479,086 (RGS) \$1,724,607 \$3,338,735 \$456,534 \$224,607 Commercial \$154,742,873 \$133,432,368 \$1,429,252 \$10,310,132 \$10,125,841 \$3,808,814 \$33,722,094 \$1,308,654 \$5,637,409 \$54,602,813 \$14,861,987 \$12,253,755 \$21,310,505 \$1,292,914 \$390,360 (CGS) \$1,940,126 \$3,654,195 \$5,752,857 \$8,910,899 \$667,855 \$250 \$855,095 \$28,442 \$0 \$0 \$841,748 \$20,854 \$136,707 \$309,972 \$11,626,142 Industrial \$1,659,067 \$9,967,075 \$1,114,492 \$4,108,268 \$2,447,442 \$265,210 \$10,207 \$665,297 \$105,980 \$31,998 \$105,538 \$769,765 (IGS) \$144,852 \$420,895 \$312,209 \$830,017 \$503,810 \$914,878 \$63,842 \$2,140 \$0 \$97,705 \$73,808 \$177 \$54,744 \$19 \$2,580 **Gas Service** As Available \$1,405,262 \$1,647,859 (AAGS) \$0 \$20,535 \$129,701 \$18,111 \$109,129 \$9,051 \$0 \$451;117 \$13,852 \$59,670 \$524,639 \$150,239 \$242,597 \$48,884 \$1,447 \$94,318 \$20,028 \$77,885 \$273 \$12 \$23 88 88 Transportation Service (FT) \$11,462,418 \$30,702,456 \$36,313,689 \$2,833,742 \$3,282,464 \$439,611 \$2,384,269 \$197,745 \$0 \$9,856,107 \$302,633 \$1,068,028 \$31,614 Firm \$1,303,679 \$5,611,233 \$2,034,494 \$2,060,690 \$416,021 \$448,664 \$5,971 \$333 \$54 \$58 \$0 88 88 \$11,203,824 \$13,258,612 \$163,725 \$1,034,078 \$1,197,824 \$0 \$3,596,653 \$110,436 Contracts \$475,734 \$4,182,822 \$2,054,788 Special \$870,059 \$72,160 \$2,179 \$389,741 \$11,536 \$696,475 \$0 \$205,054 \$2 \$161,276 (SP) \$751,979 \$<u>₹</u> 88 88

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Louisville Gas & Electric Natural Gas Cost of Service Study (Rate Base)

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Louisville Gas & Electric Natural Gas Cost of Service Study (Rate Base)

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NET COST RATE BASE	Depreciation Adjustment	Customer Advances for Construction	Regulatory	Unamortized Debt	ADJUSTMENTS	Sub-total	Cash Working Capital	Gas Stored Underground	Prepayments	Materials and Supplies	PLUS	Accum Depr. Reclassification		Asset Retirement Obli
	ent	or Construction						Ind				incation	Asset Neurenienit Obliganori - Neguratory Liabinues	anting Descriptions I inclining
	ŀ	1	I	ſ										
÷	ŝ	\$	€	€9			38	7	34	34		34	37	
\$491,799,638	ł	1	1	1		\$75,076,022	\$7,908,386	\$66,447,790	\$659,791	\$60,055	φου, του, του	932 UGF 834	(\$2,353,476)	
\$340,882,709						\$49,732,791	\$5,214,973	\$44,010,701	\$464,809	\$42,307		0\$	(\$1,653,955)	
\$110,881,594						\$22,854,366	\$1,965,259	\$20,737,254	\$139,184	\$12,669		\$0 \$0	(\$510,087)	
\$8,483,064 \$1,011,024						\$1,868,097	\$156,923	\$1,699,836	\$10,392	\$946		0\$	(\$38,379)	
\$1,011,024						\$19,466	\$17,859	\$0	\$1,473	\$134		0\$	(\$4,901)	
\$22,361,054 \$8,180,194						\$430,300	\$395,183	\$0	\$32,187	\$2,930		0\$	(\$107,079)	
\$8,180,194						\$171.003	\$158,188	0\$	\$11,746	\$1,069		\$0	(\$39,075)	

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		Louisville Natural Gas Cc (Ex	Louisville Gas & Electric Natural Gas Cost of Service Study (Expenses)	Jdy			Schedule G <i>t</i> Page 5 of 18	Schedule GAW-5 Page 5 of 18
Acct. No. Account Description	Allocator	Total	Residential (RGS)	Commercial (CGS)	Industrial (IGS)	As Available Gas Service (AAGS)	Firm Transportation Service (FT)	Special Contracts
O & M Expenses							()	
807-813 Procurement Expenses								
Demand	- 0	689,63\$	\$39,913	\$18,619	\$1,499	\$371	\$5,200	\$4,086
Sub-Intal	-	\$523,911	\$250,663	\$128,821	\$12,297	\$3,607	\$93,758	\$34,765
		\$593,600	\$290,577	\$147,440	\$13,797	\$3,978	\$98,958	\$38,851
Storage Operating Expenses 814 Operations Supervision and Engineer								·
Demand	7	\$115,402	\$76,435	\$36,015	\$2,952	30	\$0	\$
	N	\$351,353	\$229,100	\$112,930	\$9,323	\$0	\$0	的
816 Wall Evnences	, 1	(**** 0\$	0\$ 0	0\$	\$0	\$0	\$0	\$
	-1 -	(427, 1200)	(\$10,000) \$351 485	4165 615 (220,04)	923 013 (6694)	, 4	, 4	\$* 0
_	2	\$1,549,437	\$1,010,311	\$498.011	\$41.116	39 6	\$° \$	38
	2	\$1,064,778	\$694,289	\$342,234	\$28,255	\$0	30 50	3
α20 measurement and Regulator Station 821 Purification of Natural Gas	' ა	41 808 FF1	41 107 E11	0\$ 0	CC\$	8	\$0	\$0
	•	0\$ 1 2012 2011 4	05	0% DCe'rtrob		4 5 5	*°	
	2	\$14,187	\$9,251	\$4,560	\$376	30 80	3	2
825 Storage Well Royalities	7 7	\$42,906	\$28,418	\$13,390	\$1,098	\$0	\$0	\$
		\$5,383,154	\$3,517,336	\$1,723,644	\$142,174	88	80	80
Storage Maintenance Expenses 830 Maintenance Super and Eng.								
	7	\$116,564	\$77.204	\$36.378	\$2,982	\$ 0	A D	ĉ
	N	\$208,386	\$135,878	\$66,978	\$5,530	80 80	08 0	55
	1	\$0	\$0	\$0	\$0	\$0	0\$	0 8
833 Maintenance of Lines	7	\$580,151	\$384,254	\$181,056	\$14,841	8	\$0	\$ 0
	· ·	\$977 nn3	4004 A52	620,000 000,000	41410	* *	8	\$0
	7	\$52.410	\$34,713	\$18 358	81 341	8 6	3°	88
	Ŋ	\$464.091	\$302.611	\$149.165	\$12 315	36	8	84
837 Main of Other Equipment	7	\$52,201	\$34,575	\$16,291	\$1,335	\$0	88	35
Sub-total		\$2,573,414	\$1,688,012	\$818,044	\$67,358	\$	85	\$0
ov-ov/ iransmission expense Sub-total	8	\$1,040,622	\$689,240	\$324,761	\$26,621	0\$	\$3	\$0
		31,040,622	\$689,240	\$324,761	\$26,621	\$0 0	0\$	30

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Customer Customer 888 Maintenance Comp. Station Equip. 889 Maintenance Meas and Reg. General 890 Maintenance Meas and Reg - Industrial 891 Maintenance Meas and RegCity Gate 892 Maintenance Services	Demand Customer H Pressure	Distribution Maintenance Expenses 885 Maintenance Supr and Engr 886 Maintenance Structures 887 Maintenance Mains	880 Other Expenses 881 Rents Sub-total		Acct. No. Account Description
12 ອີກັດ ກີສີ	49 13	G	35 35	ມີ ມ	Allocator
\$985,218 \$73,775 \$0 \$71,202 \$208,249 \$280,673 \$1,207,872	\$6,302,964 \$1,096,425	\$0 \$592,928	\$406,005 \$3,029,079 \$9,718 \$8,379,485	\$3,368,434 \$3,368,434 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Total
\$517,823 \$67,440 \$0 \$40,780 \$157,762 \$160,752 \$1,111,661	\$3,580,993 \$1,002,473	\$0 \$339,592	\$307,574 \$2,159,139 \$6,927 \$5,801,192	\$0 \$179,250 \$0 \$2,399,214 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$202,185 \$0 \$0 \$202,185 \$0 \$202,185	Residential (RGS)
\$252,739 \$6,262 \$19,024 \$40,316 \$74,990 \$94,273	\$1,727,326 \$93,071	\$0 \$158,418	\$78,601 \$585,864 \$1,693,487	\$92,120 \$92,120 \$643,173 \$0 \$0 \$0 \$0 \$0 \$0 \$172,303 \$51,680 \$49,772 \$107	Commercial (CGS)
\$22,161 \$53 \$1,532 \$2,366 \$6,039 \$878	\$151,272 \$775	\$0 \$12,757	\$4,612 \$42,520 \$125,533	\$47,493 \$8,794 \$0 \$13,875 \$0 \$20 \$20 \$20 \$20 \$20 \$20 \$20 \$20 \$20	Industrial (IGS)
\$6,014 \$3 \$0 \$379 \$677 \$1,494 \$296	\$23,385 \$7	\$3,156	\$1,320 \$7,837 \$25	x x x x z z z z z z z z z z z z z z z z	As Available Gas Service (AAGS)
\$124,913 \$16 \$5,313 \$6,743 \$20,943 \$713	\$610,868 \$100	\$44,242	\$13,145 \$171,233 \$549	\$67,047 \$67,047 \$0 \$197,828 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Firm Transportation Service (FT)
\$61,569 \$1 \$4,174 \$386 \$386 \$51	\$209,120 \$0	\$0 \$34,763	\$753 \$62,486 \$200	\$10,922 \$10,922 \$12,575 \$10,922 \$10,922	Special Contracts (SP)

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 920 Admin and General Salaries 921 Office Supplies and Expense 922 Admin. Expenses Transferred 923 Outside Services Employed 924 Property Insurance 925 Injuries and Damages 926 Employee Pensions and Benefits 927 Franchise Requirement 928 Regulatory Commission Fee 929 Duplicate Charges -Credit 930.1 General Advertising Expense 930.2 Misc. General Expense 931 Rents 935 Maintenance of General Plant 	Sales Expenses 911-916 Sales Expenses Sub-total Total Customer Accounting Expenses Administrative & General Expenses	Customer Accounts Expense 901 Supervision 902 Meter Reading 903 Customer Records and Collection 904 Uncollectible Accounts 905 Misc. Cust Accounts Expense Sub-total Sub-total 907-910 Customer Service & Information Expenses 907-910 Sub-total	893 Maintenance Meters and House Reg. 894 <u>Maintenance Other Equipment</u> Sub-total Total O&M Expense	Acct. No. Account Description
3 4 3 9 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ið	17 17 18 18	35	Allocator
\$3,325,921 \$1,061,057 \$1,214,328 \$147,521 \$467,992 \$524,749 \$524,749 \$55,329 \$524,749 \$55,329 \$524,749 \$25,329 \$127,090 \$2127,090 \$2127,091 \$215,931 \$350,181	\$22,308 \$22,308 \$13,152,228	\$655,292 \$1,729,593 \$4,346,793 \$1,517,462 \$270,177 \$8,519,317 \$4,610,603 \$4,610,603	\$0 \$353,800 \$11,173,106 \$29,143,381	Total
\$2,345,155 \$748,128 (\$289,772) \$856,240 \$103,319 \$329,988 \$6,563,193 \$367,519 \$367,5	\$20,098 \$20,098 \$11,849,305	\$590,376 \$1,558,251 \$3,916,179 \$1,367,135 \$243,412 \$7,675,352 \$4,153,854	\$0 \$252,190 \$7,231,465 \$19,217,822	Residential (RGS)
\$735,282 \$234,562 (\$90,853) \$268,459 \$2,057,774 \$111,652 \$111,773 (\$240,175) \$27,041 \$47,737 \$74,509 \$540,533	\$1,948 \$1,948 \$1,148,514	\$57,223 \$151,036 \$379,582 \$132,512 \$23,593 \$743,946 \$402,619 \$402,619	\$0 \$68,430 \$2,534,848 \$7,242,22 4	Commercial (CGS)
\$58,817 \$18,763 \$21,268) \$2,359 \$8,276 \$164,607 \$88,390 \$88,390 \$88,390 \$8,390 \$8,391 \$2,032 \$3,819 \$5,599 \$40,357	\$150 \$150 \$88,643	\$4,416 \$11,657 \$29,296 \$10,227 \$1,821 \$57,418 \$31,074 \$31,074	\$0 \$4,966 \$202,799 \$578,282	Industrial (IGS)
\$6,089 \$1,942 (\$752) \$2,223 \$336 \$47,041 \$1,195 \$126 (\$1,989) \$290 \$395 \$798 \$5,721	\$10 \$10 \$6,127	\$305 \$806 \$2,025 \$707 \$126 \$3,969 \$2,148 \$2,148	\$0 \$915 \$36,327 \$65,813	As Available Gas Service (AAGS)
\$130,297 \$41,566 (\$16,100) \$47,573 \$7,412 \$26,365 \$2,780 (\$42,561) \$6,385 \$8,459 \$17,594 \$125,001	\$97 \$97 \$67,189	\$2,849 \$7,521 \$18,901 \$6,598 \$1,175 \$37,044 \$20,048	\$0 \$20,000 \$833,849 \$1,456,298	Firm Transportation Service (FT)
\$50,280 \$16,040 (\$6,213) \$18,358 \$7,075 \$140,715 \$1,015 \$2,332 \$3,264 \$45,615	\$2,451 \$2,451	\$122 \$322 \$810 \$283 \$50 \$1,588 \$859 \$859	\$0 \$7,298 \$333,817 \$582,942	Special Contracts (SP)

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	r 13 \$41 \$37	49 \$235 \$134 \$64 \$6	L/M Pressure	yations Gas Plant - City Gate 9 \$5 \$3 \$1	\$1,636 \$1,239 \$317 \$19	Indust. Meas. & Reg. Station Equip. 15 \$3,086 \$2,338 \$597 \$35	House Regulators Installations 15 \$0 \$0 \$0 \$0			Meters 15 \$1 003 030 \$200 014 \$232 707	Services 14 \$5 770 372 \$5 310 744 \$450 369 \$4 195	Meas. & Reg. Station Equip City Gate 9 \$100,315 \$57,454 \$26,802 \$2,158	tation Equip Gen. 9 \$238,761 \$136,747 \$63,792 \$5,137	\$49,603 \$45,343 \$4,210 \$36		r 13 \$737,189 \$674,020 \$62,577 \$521			Subscription of the second se	Structures and Improvements 9 \$41.317 \$23.661 \$1	hts 9 \$568 \$325 \$152 \$12	Distribution Plant	\$91,870 \$60,849 \$28,671 \$2,350	sion 8 \$91,870 \$60,849 \$28,671 \$2,350	Transmission Plant	Sub-total \$1,099,447 \$728,202 \$343,119 \$28,126 \$0	is Plant. 7 \$13,193 \$8,738 \$4,117	7 \$1,086,254 \$719,464 \$339,002 \$27,788	Depreciation Expense Underground Storage Plant	Total Administrative & General \$17,863,027 \$12,588,135 \$3,913,146 \$308,900 \$34,272	Sub-total \$17,863,027 \$12,588,135 \$3,913,146 \$308,900 \$34,272		Total (RGS) (CGS) (IGS) (AAGS)	
\$10	\$37	\$134												•		-															-			
÷																																		
6															\$4,043				4740	1000	ដ							0\$		\$34,272	\$34,272	(00,00)	As Available Gas Service (AAGS)	
А Л	0\$	\$23		0 \$	\$53	\$100	\$0	\$9,613	616'0C¢	010 853	\$3 4DB	\$7,485	\$17,815	\$11	\$83,986	\$67	\$410,721		401'CA	EBU ES	\$42		0 \$0	\$0		\$0	\$	\$0		\$737,758	\$737,758		Firm Transportation Service (FT)	
3	\$0	8 8		0\$	S S	8 6	\$0	(CC\$	077 ¹ 7¢	000 CA	\$242	\$5,881	\$13,998	\$0	\$41,396	\$0	\$140,604		<i>عحا</i> ، بحر	43 A33	\$33		\$0	\$		0\$	\$0	\$		\$280,815	\$280,815	(or)	Special Contracts /SP/	T T

	Commission Fee 40 \$0 \$0 \$0	rance 41 \$0 \$0 \$0	702'07' The more than the more the more than		40 \$0 \$0 \$0	i	Taxes Other Than Income		(\$117 875)	on or income Lax Credits 34 (\$153,809) (\$108,355) (\$32,446)	34 \$464,021 \$326,893 \$97,886	y creatins 34 (\$477,534) (\$336,413) (\$100,737)	cretion	TOTAL DEPRECIATION EXPENSE \$20,081,022 \$14,840,512 \$3,783,447 \$264,491	ຈວ,ວ47,300 \$3,907,899		13 A50 7AA \$1 005 807	2000 34 \$352,364 \$248,233 \$74,332	ant	117 Gas Stored Underground/Non-Current	\$10,143,462	\$3 \$0		(CGS)			(Expenses)	Natural Gas Cost of Service Study	Louisville Gas & Electric
		\$0	⊅1,∠34,060					(400,201)	1935 207	(\$32.446)	\$97,886	(\$100,737)		\$3,783,447	\$1,170,229	\$1,000,001	\$1 NOS 807	\$74,332			\$2,241,428	8	()	(CGS)	Commercial		enses)	t of Service Study	as & Electric
÷ (080	\$11,705	the second se				(\$374)	(0.00)	(276)	\$1 036			 \$40,492	\$12,386	000,11\$		\$5,550 \$787 \$1			\$28,105	0\$ 0\$		14400	istrial Gas Service Transnotation				Pag
90 90				\$0 \$0				(\$8,163) (\$2,979)						\$845.951 \$306 430		\$253,432 \$92,481					\$575,330 \$207,375	\$0 \$0	FI) (SP)	Ş		•		41	Page 9 of 18

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Total Expenses

Interest Expense

40

\$10,397,327

\$7,281,979

\$2,212,270

\$166,246

\$23,685

\$522,401

\$190,746

\$85,891,586

\$62,506,182

\$17,286,094 \$1,335,629

\$158,036

\$3,339,847

\$1,265,799

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•		Louisville	Louisville Gas & Electric	-			Page 10 of 18	of 18
		Natural Gas C	Natural Gas Cost of Service Study (Labor)	nuay				
Acct. No Account Description	Allocator	Total	Residential (RGS)	Commercial (CGS)	Industrial (IGS)	As Available Gas Service (AAGS)	Firm Transportation Service (FT)	Special Contracts (SP)
Labor Expenses								
807-813 Procurement Expenses								
Demand	6	\$56,002	\$32,074	\$14,963	\$1,205	\$298	\$4.179	\$3.283
Commodity	-	\$421,015	\$201,433	\$103,520	\$9,882	\$2,898	\$75,344	\$27,937
Sub-total		\$477,017	\$233,508	\$118,483	\$11,087\$3,197		\$79,523	\$31,220
Storage Expenses								
814 Operations Supervision and Engineer								
Demand	7	\$82,102	\$54,379	\$25,623	\$2,100	\$0	30	\$0
	2	\$249,967	\$162,991	\$80,343	\$6,633	\$0	80	\$0 0
	•	\$0	\$0	\$0	\$0	0 \$	0 \$	\$0
o to vivell expenses 817 Lines Exnenses	7 7	\$77,775	\$11,773 \$17,773	\$5,547	\$455	88	\$0	\$0
	در	\$337 303	\$219 007	6778 445	40,400 070	36		ŝ
-	Ţ	0\$	0\$::::::::::::::::::::::::::::::::::::	0\$	0\$ 000'0¢	\$0 6	30	\$
	•	\$0	0\$	0\$	\$0	\$0	\$0 0	\$0
	2	\$490,234	\$319,657	\$157,568	\$13,009	\$0	0\$	\$0
	1	\$	\$0	\$0	\$0	\$0	\$0	0\$
825 Storage Mall Royalities	ı	****	\$0 \$0	\$0	\$0	\$0	\$0	\$0
1	3 1	\$0 6	\$0 \$	\$0 \$0	s s	80 40 80 40	30 28 0	*0 \$0
Total Storage Operation Labor		\$1,431,530	\$937,070	\$456,811	\$37,649	\$0	\$0 0	86
Storage Expense								
830 Maintenance Super and Eng.								
Demand	7	\$83,326	\$55,190	\$26,005	\$2.132	08	30	\$
	2	\$148,966	\$97,133	\$47,880	\$3,953	\$0 (S0	30
	ı	0\$	0\$	0\$	\$ 0	0\$	\$0	\$0 0
	I ~	\$17,940	\$117,856	\$55,532	\$4,552	\$0	\$0	\$0
834 Main of Compressor Station Emiliament	ა ~	\$01,424 \$495 344	\$40,683	\$19,169	\$1,571	\$0	\$0	\$0
	7	\$36.483	\$24 164	211 386 020,001 0	2003 200'i i ¢	4 4	; €	8
836 Main of Purification Equip	2	\$113,675	\$74,122	\$36,537	\$3,016	\$0 \$0	08 0	80 40
						1	40	÷

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Total Total Total Acct. Total Operation Distribution 850-867 Transmission 874.04 Locate Main per Request 874.05 Check Stop Box Access 874.03 874.09 Locate and Inspect Valve Boxes 874.06 Patrolling Mains 874.08 Opr. Odor Equipment 874.07 874.02 Leak Survey-Mains 874.01 874.1 Cut Grass - Right of Way **Operations Transmission and Distribution Labor** Storage Labor Maintenance Labor 837 878 Meter and House Reg. Expense 879 Customer Installation Expense 875 Meas and Reg Station Exp.- General
876 Meas and Reg Station Exp.- Industrial
877 Meas and Reg Station Exp. - City Gate 873 Compr. Station Fuel and Power 870 Operation Supr and Engi 881 880 872 Compr. Station Labor and Exp. No **Operations Distribution Labor** Other Mains/Serv. Expenses Main of Other Equipment Rents **Dist Load Dispatching** Check/Grease Valves Leak Survey - Service Other Expenses **Transmission Expenses** Expenses Account Description Allocator 35500 36 00 ~ Total \$2,519,937 \$1,088,407 \$3,371,354 \$1,277,222 \$2,923,145 \$0 \$294,287 \$0 \$553,484 \$0 \$224,982 \$448,209 \$177,634 \$366,738 \$31,252 \$21,164 \$7,634 8 8 ***** (Labor) Residential \$1,650,781 \$1,978,392 \$2,275,256 (RGS) \$910,409 \$170,438 \$296,865 \$713,712 \$134,569 \$210,045 \$12,121 \$20,699 \$5,783 영 Commercial \$105,683 \$00,568 \$00,568 \$00,568 (CGS) \$247,032 \$0 \$802,997 \$346,186 \$748,015 \$139,879 \$608,137 \$97,985 \$34,389 \$0 \$72,360 \$43,555 \$1,478 \$9,753 \$5,655 영 8 Industrial \$17,929\$3,305 \$0 \$11,466 \$28,509 \$57,112 \$45,646 \$66,158 (IGS) \$2,556 \$7,891 \$2,018 \$799 \$455 \$87 As Avallable Gas Service (AAGS) \$10,069 \$10,069 \$1,952 \$578 \$113 \$732 \$25 8 영 88 8 Transportation Service (FT) Firm \$199,598 \$199,598 \$52,665 \$0 \$0 \$32,506 \$506 \$506 \$506 \$506 \$506 \$506 \$27,364 \$72,20 \$5,751 \$1,579 \$7,284 \$247 g g 88 8 Contracts Special \$19,528 \$0 \$0 \$11,925 \$81,303 \$21,501 (SP) \$81,303 \$26,347 \$329 \$1,241 \$14 \$417 ģ ***** g \$ 88 8

Louisville Gas & Electric Natural Gas Cost of Service Study

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		Louisville Natural Gas C	Louisville Gas & Electric Natural Gas Cost of Service Study (Labor)	tudy			Page 12 of 18	f 18
Acct. No Account Description	Allocator	Total	Residential (RGS)	Commercial (CGS)	Industrial (IGS)	As Available Gas Service (AAGS)	Firm Transportation Service (FT)	Special Contracts (SP)
MaIntenance Expense Distribution								
	9	\$0 \$25,478	\$0 \$14,592	\$0\$,807	\$0 \$548	\$0 \$136	\$0 \$1;901	\$0 \$1,494
887 Maintenance Mains							-	
Demand	49	\$2,218,586	\$1,260,477	\$608,003	\$53,246\$8,231	8,231	\$215.020	\$73,608
Customer	13	\$385,932	\$352,862	\$32,760		\$2	\$35	0\$ 55515 14
Demand	48	\$346.788	\$182 269	290 88\$	\$7 801	417 C\$	620 CV2	CC0 100
Customer	12	\$25,968	\$23,738	\$2,204		4 <u>1</u>	9\$ 600'61.0	US 710'1 -
888 Maintenance Comp. Station Equip.	, D	64 80	\$0\$	50°		* \$0 \$0	\$0 \$0	\$0
	15	\$150,451	\$113,976	\$29,127	\$1.709	\$489	\$4 871	42,101
	9	\$143,956	\$82,449	\$38,462		\$766	\$10.741	\$8,440
892 Maintenance Services		\$574,417	\$528,663	\$44,832		\$141	\$339	\$24
894 Maintenance Other Equipment	35	چې \$154,778	مو \$110,326	0¢ 30(\$2\$	\$2,173	\$400	\$8,750	\$U \$3,193
Total Maintenance Labor		\$4,063,211	\$2,690,461	\$890,941	\$70,076	\$12,480	\$288,381	\$110,871
Total Transmission & Distribution Labor		\$7,434,565	\$4,965,718	\$1,638,956	\$127,188	\$22,549	\$487,980	\$192,174
Customer Accounts Expense								
901 Supervision 902 Meter Reading	17 17	\$471,318 \$177 697	\$424,627 \$160 030	\$41,158	\$3,177	\$220	\$2,049	88\$
	17	\$1,779,757	\$1,603,446	\$155,417	~~	\$829	\$7,739	\$332
904 Uncollectible Accounts 905 Misc. Cust Account Expenses	- 17	\$0 \$126,229	\$0 \$113,724	\$0 \$11,023	\$0 \$851	\$0 \$59	\$0 \$549	\$0 \$24
Total Customer Accounts Labor		\$2,554,931	\$2,301,827	\$223,108	\$17,220\$1,190	1,190	\$11,109	\$476
Customer Service Expenses 907-910 Customer Service	18	\$395,379	\$356,211	\$34,526	\$2,665	\$184	\$1,719	\$74
Sales Expenses								

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LouisvIlle Gas & Electric Natural Gas Cost of Service Study (Labor)

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Act.NAcount DescriptionAllocatorTotalResidential (RGS)Commercial (RGS)Industrial (GSS)Savilable (RGS)Fin (RGS)Special (RGS)911-916Sales Expenses505050505050505050921<0frite 922Admin and General S22-39\$2,577,542\$1,817,462\$569,833\$46,58354,7195100,978\$39,67922Othice Supples and Expense 922-39\$2,577,542\$1,817,462\$569,233\$46,58354,7195100,978\$39,67923Outside Services Employed 925-39\$2,527,542\$1,817,462\$569,233\$46,58354,719\$100,978\$39,67924Administrative and Benefits 925-39\$2,527,542\$1,817,462\$569,235\$46,58354,719\$100,978\$39,67925Injuries and Benefits 926-39\$52,277\$13,244\$111\$11\$11\$24926Employee Fensions and Benefits 927-39\$50,261\$1,344\$113,45\$11,344\$11\$24\$29921Upticate Charges Credit 93039\$50,261\$1,344\$11\$11\$24\$39\$50\$5	\$276,125	\$718,121	\$33,514	\$280,444	\$3,533,323	\$11,819,972	\$16,661,499		Total Labor Expense
No Account Description Allocator Total Residential (RGS) Commercial (CGS) Industrial (AGS) Gas Service (AGS) Firm (AGS) Solution (AGS) Gas Service (AGS) Firm (AGS) Solution (AGS)	\$52,181	\$137,790	394	\$56,126\$6,	\$715,252	\$2,311,927	\$3,279,670		
NoAccount DescriptionAllocatorTotalResidential (RGS)Commercial (CGS)Industrial (GS)As Available (AGS)Firm Sales ExpensesSales Expenses-As Available (AGS)Firm (CGS)So <td>\$17,242</td> <td>\$47,250</td> <td>-</td> <td>\$15,255\$2,</td> <td>\$204,319</td> <td>\$682,328</td> <td>\$968,557</td> <td>34</td> <td></td>	\$17,242	\$47,250	-	\$15,255\$2,	\$204,319	\$682,328	\$968,557	34	
No Account Description Allocator Total Residential (RGS) Commercial (RGS) Industrial (GGS) As Available (AAGS) Firm Savice (FT) Savialable Gas Service Firm Gas Service Savialable Fransportation Firm Gas Service Savialable Service (FT) Commercial Addition 20 Admin and General Selaries 39 \$2,577,542 \$1,817,462 \$569,833 \$45,5833,719 \$10,978 \$0<	0\$	\$0 8		\$0	\$0	\$0	0\$0		
NoAccount DescriptionAllocatorTotalResidential (RGS)Commercial (RGS)Industrial (GS)Gas Service (GS)Firm (GS)SSales Expenses-505050505050505050505020 Admin and General Salaries-39 $$2,577,542$ $$1,817,462$ $$569,833$ $$45,583$4,719$ $$100,978$ 5050505050505020 Admin Expenses Transferred-39 $$2,577,542$ $$1,817,462$ $$569,833$ $$45,583$4,719$ $$100,978$ 5020 Outside Services Employed-39 $$62,261$ $$4,415$ $$1,384$ $$111$ $$11$ $$22,577,542$ $$1,92,276$ $$60,285$ $$4,822$ $$62,93$ $$60,978$ 20 Outside Services Employed-39 $$62,261$ $$4,415$ $$1,384$ $$111$ $$11$ $$22,577,542$ $$1,384$ $$111$ $$11$ $$22,577,542$ 21 Property Insurance-39 $$62,261$ $$4,415$ $$1,384$ $$111$ $$11$ $$22,577,542$ $$1,384$ $$111$ $$11$ $$22,577,542$ 25 Injuries and Damages39 $$62,261$ $$4,415$ $$1,384$ $$111$ $$11$ $$22,577,542$ $$100,978$ $$20$ <t< td=""><td>\$0</td><td>0\$</td><td>0\$</td><td>\$0</td><td>\$0</td><td>\$0</td><td>\$0</td><td>•</td><td></td></t<>	\$0	0\$	0\$	\$0	\$0	\$0	\$0	•	
No Account Description Allocator Total Residential (RGS) Commercial (GGS) Industrial (GGS) As Available (GGS) Firm (GS) Sales Service (FT) Firm Canaportation Commercial Sales Service (GS) Firm (GS) Sales Service (FT) Firm Canaportation Commercial Sales Service (GS) Firm (GS) Sales Service (FT) Firm Canaportation Sales Service (FT) Sales Service (FT) Firm (GS) Sales Service (GS) Firm (GS) Sales Service (FT) Firm (GS	\$0	0\$	\$0	\$0	\$0	\$0	\$0	1	
No Account Description Allocator Total Residential (RGS) Commercial (CGS) Industrial (IGS) As Available (AGS) Firm Sales Expense S Available Firm (AGS) Firm Sales Expense S Available (AGS) Firm Sales Expense S Available (AGS) Firm Service (FT) S Sales Expenses - \$0	0\$	\$0	0\$	\$0	\$0	\$0	\$0	ı	
No Account Description Allocator Total Residential (RGS) Commercial (CGS) Industrial (IGS) Savilable (AAGS) Firm service (FT) Savilable crasportation Service (FT) Firm cc Savilable (IGS) Firm (IGS) Savilable (IGS) Firm (IGS) Savilable (IGS) Firm (IGS) Savilable (IGS) Firm Service (FT) Savilable crasportation Service (FT) Firm Cc Savilable (IGS) Firm (IGS) Savilable (IGS) Firm Service (FT) Savilable CGS) Firm (IGS) Savilable (IGS) Firm Service (FT) Savilable CGS) Firm Savite Service (FT) Savilable Savite Service (FT) Firm Savite Service (FT) Savite Savite (IGS) Muscle (IGS) Savite Savite (IGS) Savite (IGS) Savite (IGS) Savite (IGS) Savite (IGS) Savite (IT)	0\$	0\$ [']	0\$	\$0	\$0	0\$	\$0	,	
No Account Description Allocator Total Residential (RGS) Commercial (CGS) Industrial (IGS) Gas Service (AGS) Firm (GS) Sales Expenses Sales Expenses - \$0	0 8	0\$	0\$	\$0	\$0	\$0	\$0	,	
No Account Description Allocator Total Residential (RGS) Commercial (CGS) Industrial (IGS) Gas Service (AGS) Firm Sales Expenses Sa Available Firm (AGS) Firm Sales Expenses Sales Expenses - \$0	\$0	0\$	\$0	\$0	\$0	0\$	\$0	ı	
NoAccount DescriptionAllocatorTotalResidential (RGS)Commercial (CGS)Industrial (GS)Gas Service (GS)Firm (GS)SSales Expenses-\$0\$0\$0\$0\$0\$0\$0\$0Sales Expenses-\$0\$0\$0\$0\$0\$0\$0\$0\$0trative & General 20 Admin and General Salaries-39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,97821 Office Supplies and Expense-39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,97822 Admin. Expenses Transferred-39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,97823 Outside Services Employed\$0\$0\$0\$0\$0\$024 Property Insurance\$0\$0\$0\$0\$0\$024 Property Insurance\$0\$0\$0\$0\$0\$0	\$95	\$245	\$11	\$111	\$1,384	\$4,415	\$6,261	39	
NoAccount DescriptionAllocatorTotalResidential (RGS)Commercial (GS)Industrial (GS)As Available (GS)Firm (GS)SSales Expenses-\$0\$0\$0\$0\$0\$0\$0\$0\$0trative& General 20Admin and General Salaries39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,978\$021Office Supplies and Expense-39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,97822Admin. Expenses Transferred-39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,97823Outside Services Employed-39\$2,577,542\$1,817,462\$569,833\$45,583\$4,719\$100,97823Outside Services Employed-39\$2,577,542\$1,817,462\$569,285\$49,822)\$499\$10,97823Outside Services Employed-39\$2,727,690\$0\$0\$0\$0\$023Outside Services Employed-39\$272,690\$0\$0\$0\$0\$0	0\$	0\$	\$0	0\$	0\$	\$0	\$0	t	
No Account Description Allocator Total Residential (RGS) Commercial (GS) Industrial (IGS) As Available (GS) Firm (GS) Sales Expenses Sales Expenses - \$0	3	\$0	\$0	0\$	\$0	\$0	\$0		
No As Available Firm Sales Expenses As Available Firm Sales Expenses As Available Firm Sales Expenses Sales Expense	(\$4,122)	(\$10,683)	(\$499)	(\$4,822)	(\$60,285)	(\$192,278)	(\$272,690)	Ч. Ч	
No As Available Firm Special Account Description Allocator Total Residential Commercial Industrial Gas Service Transportation Contraction Sales Expenses - \$0	0 \$	\$0	\$0	\$0	\$0	\$0	0\$	• •	
No As Available Firm Special Account Description Allocator Total (RGS) (CGS) (IGS) (AGS) Service Transportation Contraction Contraction Contraction Contraction Contraction Contraction Special Sales Expenses - \$0 <t< td=""><td>\$38,967</td><td>\$100,978</td><td></td><td>\$45,583\$4,</td><td>\$569,833</td><td>\$1,817,462</td><td>\$2,577,542</td><td>39</td><td>920 Admin and General Salaries</td></t<>	\$38,967	\$100,978		\$45,583\$4,	\$569,833	\$1,817,462	\$2,577,542	39	920 Admin and General Salaries
No As Available Firm Special Account Description Allocator Total (RGS) (CGS) (IGS) (AGS) Service Fransportation Contract Sales Expenses - \$0 <									Administrative & General
No As Available Firm Account Description Allocator Total (RGS) (CGS) (IGS) (AAGS) Service (FT)	0\$	\$0	\$0	\$0	\$0	0\$	\$0	I	
	Special Contracts (SP)	Firm Transportation Service (FT)	s Available las Service (AAGS)		Commercial (CGS)	Residential (RGS)	Total	Allocator	No

Louisville Gas & Electric Natural Gas Cost of Service Study (Revenues)
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Total Adjusted Revenue	Pro-Forma Adjustments to Revenues VDT Amortization and Surcredit Adjust Base Rates to reflect full year of FAC Roll-in Elimination of ECR, MSR, DSM, FAC, and GSC accruals Temperature Normalization Year-End Customer Adjustment Rate Switching Adjustment to eliminate gas supply cost recoveries Adjustment to eliminate unbilled revenues Removal of DSM Revenues Total Revenue Adjustments	Total Operating Revenues	Operating Revenues Sales and Transportation Interdepartmental Sales Forfeited Discounts Miscellaneous Revenue	Acct. No. Account Description
			Dir	Allocator
	28 33 28 23 30 28 33		28 28	ator
\$119,174,626	(\$323) \$9,941,202 \$2,228,479 (\$248,948) \$1,760,940 \$1,760,940 \$22,476,565) \$11,377,000 (\$223,476,565) \$11,377,000 (\$2,319,554) (\$299,715,634)	\$418,890,260	\$408,703,213 \$6,531,020 \$3,212,301 \$443,726	Total
\$82,032,489	(\$224) \$7,856,572 \$1,454,935 (\$190,208) \$259,367 \$0 (\$206,301,504) \$7,427,846 (\$2,207,347) (\$191,700,564)	\$273,733,052	\$266,835,228 \$4,263,990 \$2,605,350 \$28,485	Residential (RGS)
\$29,786,568	(\$77) \$1,939,946 \$673,637 (\$16,121) \$1,404,610 (\$103,957,947) \$3,439,102 (\$104,277) (\$96,621,128)	\$126;407,695	\$123,545,049 \$1,974,233 \$655,512 \$332,902	Commercial (CGS)
\$1,905,838	(\$5) \$78,152 \$55,739 (\$18,867) \$96,963 (\$22,236) (\$8,992,672) \$284,565 \$0 (\$8,518,361)	\$10,424,199	\$10,222,598 \$163,356 \$38,246 \$0	Industrial (IGS)
\$221,917	(\$1) \$6,208 \$15,221 (\$1,739) \$0 (\$2,711,423) \$77,706 (\$899) (\$2,614,927)	\$2,836,844	\$2,791,492 \$44,608 \$0 \$744	As Available Gas Service (AAGS)
\$3,885,208 \$1,342,605	(\$12) \$54,562 \$21,601 (\$13,063) \$0 \$44,371 (\$445,190) \$110,278 (\$7,031) (\$234,483)	\$4,119,691	\$3,961,597 \$63,306 \$13,193 \$81,595	Firm Transportation Service (FT)
\$1,342,605	(\$4) \$5,762 \$7,346 (\$8,950) \$0 \$0 (\$67,829) \$37,503 \$0 \$37,503	\$1,368,778	\$1,347,249 \$21,529 \$0 \$0	Special Contracts (SP)

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 Page 1	Schedule	:
 [5 of]	dule GAW-5	

Louisville Gas and Electric Natural Gas Class Cost of Service Study (Allocation Amounts)

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I otal Labor	PTD Plant + CWIP	abor Excl. A&G	O&M Expense	Depreciation Reserve	Mains + Services				CIVE Dase Rates for Full Yea			ande			Number of Customers									ß	(afañ)		ŭ	Pres. Distrib Mains (yr-end cust.)	High Pressure Distrib Mains (yr-end cust.)					Storage	ment Expenses			JI		nent Expenses		Account Description	
								REVGSC	REVADJ1	REVMISC			REVO1			·	טוטואו	I XINC	TYPIO	INI	NIBII			CUSI04		CUSTO3	CUST02	CUST01a	CUST01	DEM05a	DEM05	DEM04	DEM03	DEM02	DEM01		COM04	COMUS	COM02	COM01		Allocator	
18 661 100	657,418,625	14,813,359	29,143,381	251,930,196	422,052,652	485,054,347	562,071,796	318,976,614	9,941,202	544,576	2,356,128	102,114,452	421,091,066	1.00	318,528	1.000000	19,552,591	20,549,167		10,397,327	30,946,494	3,212,302	321,971	321,971	315,940	45,693,971	154,617,164	318,464	318,528	449,611	516,420	516,420	12,289,964	12,289,964	516,420	42,977,597	42,412,266	23,642,092	23,642,092	42,412,266		Total	
11 819 972	460,436,456	10,445,114	19,217,822	177.049.236	300,612,917	345,748,568	395,967,818	204,062,442	7,856,572	34,959	2,242,152	70,860,600	274,923,042	0.92	291,175	0.772847	13,032,657	11,546,963	0	7,281,979	18,828,941	2,605,350	290,075	290,075	290,075	34,616,028	142,301,428	291,175	291,175	295,773	295,773	295,773	8.140.074	8,140,074	295,773	20,304,230	20,292,002	15,415,833	15,415,833	20,292,002		RGS)	
-				54 602 813	80,587.292	93,815,905	118,570,381	102,829,655	1,939,946	408,564	105,921	24,460,062	127,289,717	0.08	27,035	0.180153	4,228,335	8,841,465	0	2,212,270	11,053,734	555,513	28,116	28,116	25,560	8,846,128	12,067,653	27,033	27,035	135,880	137,977	137,977	3 835 494	3,835,494	137,977	11,007,576	10,428,447	7,598,896	7,598,896	10,428,447		Commercial (CGS)	
	10.511.650	2010,100	578 282	4 108 268	5.950.703	6.808.859	8,852,583	8,895,071	78,152	0	0	1,637,375	10,532,446	0.00	230	0.010163	328,332	278,647	0	166,246	444,893	38,246	2,170	2,170	217	519,081	112,407	225	230	11,028	14.141	11 111	314 306	314 306	11.111	1,043,051	995,514	627,363	627,363	995,514	1	Industrial (IGS)	
	27,120 1 497 619	37 4 30	65 843	504 500	1 021 162	1 255 022	1.255.022	2,681,995	6,208	913	913	194,108	2,876,103	0.00	15	0.003431	61,835	13,271	0	23,685	36,956	0	150	150	15	148,573	37,881	2	15	241	2749	2 7 A D	5 6		2 749	288.669	291,983	0	0	291,983	(court)	Gas Service	As Available
077'1 00'00	300 750 55	1,400,290	11,402,418	24, 101, 100	21,413,333 21,787 152	27 440 002	27 419 993	440.358	54.562	100.140	7.142	3,641,316	4.081.674	0.00	70	0.031572	1.357.340	(5.164)	0	522,401	517,237	13,193	1,400	1,400	70	1.479,448	91.317	20	0,000 200,70	686 A	287 387 201222	00 m 00			555 85 	7 559 624	7.590.002	0		7.590.002		Transportation	Firm
12,000,788	1223,944	582,942	4,182,822	a,uao,421			10 00 000	500 24	5 7 6 0	5 0		1.320.991	1.388.084	000		~		(126.014)	.	190,746	64.732	5	60	60 c	ہ ج	84 713	6 478	5 0	ູ້	117'nc	30,211		• c	30,217	20 077	2774 447	2 814 318	5 0	0	2.814.318	(97)	Contracts	Special

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Acc No.

Louisville Gas and Electric Natural Gas Class Cost of Service Study (Allocation Amounts)
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49 48	47 46	5 4 t	2	Acct. No.	
48 Peak & Avg High Pressure 49 Peak & Avg Low Pressure	46 Pro Forma Adjustments	Year-End Customer Adjustment		Account Description	
	PROFO	rbt Revadj2		Allocator	
2,319,554 100.00% 100.00%	283,965,931 (300,541,676)	491,799,638 1,760,940		Total	
2,207,347 52.56% 56.81%	173,525,231 (193,041,406)	340,882,709 259,367	(noo)	Residential	
25.65% 27.40%	69,809,816 (96,173,618)	110,881,594 1,404,610	(000)	Commercial	
2.25% 2.40%	5,850,314	8,483,064 96 963	(IGS)	a	-
(2,014,506) 899 0.61% 0.37%	987,331	1,011,024	(AAGS)	As Available Gas Service	
(214,798) 7,031 12.68% 9.69%	0 24,705,604	22,361,054	Service (FT)	Firm Transportation	
(16,567) 0 6.25% 3.32%	0 9,087,635	8,180,194	(SP)	Special Contracts	

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Acct. No.

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Account Description Allocator T ant Expenses COM01 42 oliveries COM02 23 an COM02 23 on Scom02 COM03 ant Expenses DEM01 42 oin Scom02 DEM02 12 ant Expenses DEM02 12 ion Scom02 DEM03 23 n Structures DEM03 12 sure Distribution Mains DEM03 12 aure Distribution Mains DEM03 12 Services DEM03 12 Services CUST01 CUST03 Services REVFD 3 Ocount (Average) CUST04 CUST03 Count (Average) CUST04 CUST05 Services REVFD 3 Ocounts CUST05 REVFD Service DISTRT 10 Customers NIBIT 30 Service DISTRT 10 Customers REVO1 10 Customers REVO1 10 Customers REVADJ4 20 Services REVADJ4 21 Provides 216 </th <th>cet.</th> <th></th> <th></th> <th></th> <th>Decidential</th> <th></th> <th></th> <th>As Available</th> <th>1</th> <th>Firm</th>	cet.				Decidential			As Available	1	Firm
ant Expenses COM01 com02 com02 com03 n Structures DEM03 sure Distribution Mains DEM03 n Structures Distribution Mains DEM03 sure Distribution Mains (yr-end cust.) CUST01 pres. Distrib Mains (yr-end cust.) CUST01 aure Distrib Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 Service Custor Service Revenue Allocation Tax NIBIT djustment come Expense Tax NIBIT renue Revenue Allocation REVIC Revenue Allocation REVADJ4 cous Revenue Allocation REVADJ4 prvices Son Reserve .A&G + CWIP		Account Description	Allocator	Total	(RGS)	(CGS)	(IGS)			
ion COM02 COM02 COM03 and Expenses DEM01 DEM03 n Structures Distribution Mains DEM03 n Structures Distribution Mains DEM05 sure Distribution Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 COURT (Average) Accounts CUST02 CUST05 Discounts Revenue Tax NIBIT e Before Income Tax NIBIT pense CUST05 CUST05 Discounts CUST06 CUST06 CUST07 Customers Castomers Cost Revenue Allocation REVIC Revenue Allocation REVADJ1 ruue Revenue Rates for Full Yei REVADJ1 ruue Revenue Rev	 TT	Procurement Expenses	COM01	42,412,266	20,292,002	10,428,447	995,	514	514 291,983	
ion COM03 n COM03 n Structures DEM01 n Structures Distribution Mains DEM02 sure Distribution Mains (yr-end cust.) CUST01 pres. Distrib Mains (yr-end cust.) CUST01 Accounts CUST02 Count (Average) Accounts Before Income Tax INT e Before Income Tax INT gense CUST05 Service Settion Expense DISTRT f Gustomers Set Customers Set	N	Storage	COM02	23,642,092	15,415,833	7,598,896	627	363		0
Deliveries DEM01 Deliveries DEM01 Sarrie Distribution Mains (yr-end cust.) CUST01 DEM02 Sure Distribution Mains (yr-end cust.) CUST01 DEM05a sure Distrib Mains (yr-end cust.) CUST01 CUST02 Count (Average) CUST04 Accounts CUST05 Service REVFD Distribution Expense NIBIT opense NISTRT djustment TXINC count (Average) REVFD Count (Average) NIBIT counts REVFD e Before Income Tax NIBIT rous Revenue Allocation REVO1 REVO1 Revenue REVADJ4 cous Revenue Allocation REVGSC ous Revenue Revenue A&G REVGSC on Reserve Revenue	ь и П –	l ransmission Distribution	COMUS	23,642,092	15,415,833 20 202 002	7,598,896	2 8	627,363		0
ant Expenses DEM01 DEM02 DEM02 DEM02 DEM03 DEM03 DEM03 DEM04 DEM03 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 DEM05 COUST01 Pres. Distrib Mains (yr-end cust.) CUST01 CUST03 COUST03 COUST04 CUST04 CUST04 CUST04 CUST05 REVFD e Before Income Tax NIBIT pense Discounts Service CUST04 CUST04 CUST05 REVFD e Before Income Tax NIBIT pense DISTRT t fution Expense Customers Sost Customers Sost Customers Sost renue Revenue Allocation REV01 REVADJ4 ous Revenue Allocation REVADJ4 ous Revenue Allocation REVADJ4 Prices on Reserve A&G + CWIP	сл Ъ	Adjusted Deliveries	00000	42.977.597	20,304.230	11.007.576	1 04	3051	3,051 288,660	3 051 288 660
ion Structures DEM02 aure Distribution Mains DEM03 m Pressure Distribution Mains DEM05 aure Distrib Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 Count (Average) Count (Average) Coun	6 F	Procurement Expenses	DEM01	516,420	295,773	137.977		1.111		ţ
ion Structures DEM03 Sure Distribution Mains DEM04 Sure Distribution Mains DEM05 aure Distribution Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 Count (Average) CUST03 Count (Average) CUST04 Service CUST05 Service Revenue Tax NIBIT pense INT djustment CUST05 CUST05 REVFD CUST04 CUST03 CUST04 CUST05 REVFD CUST05 REVFD INT djustment CUST05 REV01 Revenue Allocation REV01. Revenue Allocation REVADJ4 ous Revenue Allocation REVADJ4 Allocation REVENUE REVENU	75	Storage	DEM02	12,289,964	8,140,074	3,835,494	31	4.396		0
n Structures DEM04 sure Distribution Mains DEM05 m Pressure Distribution Mains DEM05 sure Distrib Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 COUNT (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) COUST02 CUST03 COUST03 COUST03 CUST04 CUST04 CUST05 REVFD e Before Income Tax NIBIT pense INT djustment cous Revenue Allocation Revonue Allocation Revenue Revenue Allocation Revenue Revenue Allocation Revenue Allocation Revenue Allocation Revenue Allocation Revenue Allocation Revenue Allocation Revenue Allocation Revenue Allocation Revenue Revenue Allocation Revenue Allocation Revenue Revenue Allocation Revenue Revenue Allocation Revenue Reven	8 T	Transmission	DEM03	12,289,964	8,140,074	3,835,494	ω	314.396	14.396 0	14.396 0 0
sure Distribution Mains DEM05 Im Pressure Distribution Mains DEM05 sure Distrib Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 COUST02 COUST03 Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) Coustor Before Income Tax NIBIT Pense Revenue Tax NIBIT djustment come Tax NIBIT Pense Revenue Allocation REV01. Revenue Allocation REVADJ4 ous Revenue Allocation REVADJ4 ous Revenue Allocation REVADJ1 rinue Revenue Allocation REVADJ1 Prices on Reserve Inse A&G + CWIP	9 C	Distribution Structures	DEM04	516,420	295,773	137,977				
im Pressure Distribution Mains DEM05a sure Distrib Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 COUNT (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) Count (Average) COUST02 CUST03 COUST03 COUST03 COUST03 COUST04 CUST04 CUST05 REVFD e Before Income Tax NIBIT pense INT djustment cous Revenue Tax NIBIT f Customers Sast Sast Sast Sast Sast Sast Sast Sas	10 F	High Pressure Distribution Mains	DEMOS	516,420	295,773	137,977		11,111	11,111 2,749	2,749
sure Distrib Mains (yr-end cust.) CUST01 Pres. Distrib Mains (yr-end cust.) CUST01 CUST02 CUST03 Count (Average) Accounts Service Before Income Tax e Before Income Tax e Before Income Tax int come count (Average) e Before Income Tax e Before Income Tax e Before Income Tax int count (Average) CUST05 REVFD e Before Income Tax INT djustment count (Average) CUST05 REVFD e Before Income Tax INT djustment count (Average) CUST05 REVFD e Before Income Tax INT djustment count (Average) CUST05 REVFD DIST03 CUST05 REVFD DIST03 CUST05 REVFD EVIT CUST05 REVO1 REV01 REV01 REV01 REVADJ1 revenue Allocation REVADJ1 revenue Base Rates for Full Ye: REVADJ1 revenue AsG ASG + CWIP	11 -	ow/Medium Pressure Distribution Mains	DEM05a	449,611	295,773	135.880		11.028		241
Pres. Distrib Mains (yr-end cust.) CUST01a CUST01a Count (Average) CUST02 Service CUST03 Service REVFD Before Income Tax NIBIT opense INT djustment TXINC come DISTRT f Gustomers Sost REV01 Customers REVUC Sost REVADJ4 cous Revenue Allocation REVADJ4 cous Revenue Allocation REVGSC rivices REVGSC on Reserve REVGSC ation REVGSC <t< td=""><td>12 T</td><td>igh Pressure Distrib Mains (yr-end cust.</td><td>CUST01</td><td>318,528</td><td>291.175</td><td>27.035</td><td></td><td>230</td><td></td><td>15 0,0</td></t<>	12 T	igh Pressure Distrib Mains (yr-end cust.	CUST01	318,528	291.175	27.035		230		15 0,0
Count (Average) Accounts Service Before Income Tax UISTO5 Discounts e Before Income Tax pense Customers Customers Caustomers Caustomers Caustomers Caustomers Coust Revenue Allocation Revenue Allocation RevADJ4 ReVADJ1 RevADJ1 RevADJ1 RevADJ1 ReVADJ1 RAC		ow/Med Pres, Distrib Mains (vr-end cust	.) CUSTO1a	318.464	291.175	27 033		205	205 200	
Count (Average) Accounts Service Before Income Tax UISTO5 Discounts Before Income Tax CUST05 CUST06 REVFD CUST06 REVFD CUST06 REVFD CUST06 INT djustment CUST07 INT djustment CUST06 TXINC DISTRT CUSTOF CUSTOF REVO1 REVO1 REVO1 REVUC REVADJ1 REVADJ		Services	CUST02	154.617.164	142.301.428	12.067.653		112 407		27 RR1
Count (Average) Accounts Service CUST04 Accounts CUST05 Service REVFD e Before Income Tax NIBIT pense INT djustment TXINC come Tax NIBIT oustomers Customers Customers Customers Customers Castomers Customers Customers Castomers Customers Customers Castomers Customers Customers Customers Castomers Customers		Meters	CUST03	45,693,971	34.616.028	8.846 128		519 081	519 081 148 573	148 573
Accounts CUST04 Service CUST05 Service REVFD E Before Income Tax NIBIT pense IINT djustment TXINC come Customers Customers Castomers Cost Revenue Allocation REVIC Revenue Allocation REVIC renue Revenue Allocation REVADJ4 ous Revenue Allocation REVADJ4 ous Revenue Allocation REVADJ4 on Reserve Retes for Full Ye: REVADJ1 reflective Base Rates for Full Ye: REVADJ1 renue Revenue Allocation REVADJ1 renue Revenue		Customer Count (Average)		315,940	290.075	25.560		217		15
Service CUST05 321 Discounts REVFD 3,212 e Before Income Tax NIBIT 30,946 r pense INT 10,397 djustment TXINC 20,548 come DISTRT 19,552 t TXINC 20,548 pense DISTRT 19,552 t TXINC 20,548 come REV01 421,091 renue REVUC 102,114 renue REVUL 102,114 renue REVADJ4 2,366 ous Revenue Allocation REVGSC 318,976 rue REVGSC 318,976 on Reserve 29,143 485,054 on Reserve 29,143 422,052 on Expenses 14,813 421,091	17 0	Customer Accounts	CUST04	321.971	290.075	28.116		2 170	2 170 150	150
Discounts REVFD 3,212 e Before Income Tax NIBIT 30,946 opense INT 10,397 djustment TXINC 20,548 come DISTRT 19,552 t DISTRT 19,552 t REV01 421,091 Clustomers REVUC 102,114 Sost REVADJ4 2,366 ous Revenue Allocation REVADJ4 2,366 ous Revenue Allocation REVGSC 318,976 rue REVGSC 318,976 ons Reserve 29,143 251,930 n Reserve 29,143 422,052 n Reserve 29,143 14,813 r CMIP 16,661 16,661	18 C	Customer Service	CUST05	321,971	290,075	28,116		2,170		
e Before Income Tax NIBIT 30,946 opense INT 10,397 djustment TXINC 20,548 come DISTRT 19,552 t DISTRT 10,397 Cost REV01 421,091 Cost REVUC 102,114 Yenue REVUC 102,114 Revenue Allocation REVUC 102,114 Revenue Revenue REVADJ4 2,366 ous Revenue Allocation REVGSC 318 Cost REVGSC 318,976 319,976 ous Revenue Allocation REVGSC 318,976 ous Reserve 319,976 319,372 on Reserve 29,143 321,930 319,374 Prices 318 319,374 319,374 Prices 319,374 319,374 319,374 Prices 319,374 319,374 319,374 Prices 319,374 319,374 319,374	19 F	Forfeited Discounts	REVFD	3,212,302	2,605,350	555.513		38.246		0
INT 10,397 djustment TXINC 20,549 come DISTRT 19,552 ibution Expense DISTRT 19,552 CLustomers REV01 421,091 Sost REVUC 102,114 Intervenue REVUL 102,114 Revenue Allocation REVUL 102,114 Revenue Revenue Revenue 102,114 ation REVADJ4 2,356 2,356 cours Revenue Allocation REVADJ1 9,941 Reflective Base Rates for Full Ye: REVGSC 318,976 562,071 Inue REVGSC 318,976 562,071 Inue REVGSC 318,976 562,071 Inue Reserve 29,143 422,052 21,433 A&G 14,813 557,418 557,418 Protect 70,084 70,084 70,084		Net Income Before Income Tax	NIBIT	30,946,494	18,828,941	11,053,734		444,893		
come TXINC 20,542 come DISTRT 19,552 fullion Expense DISTRT 1,052 fullion Expense DISTRT 19,552 fullion Expense DISTRT 1,052 fullion Expense REV01 421,091 fullion REVUC 102,114 renue REVADJ4 2,356 fullion REVADJ1 9,941 reserve S62,071 9,941 inue REVGSC 318,976 inue REVGSC 318,976 inue S62,071 485,054 inue 251,930 251,930 inse 251,930 251,930 inse 251,930 357,418 r 16,661 16,661		Interest Expense	INT	10,397,327	7,281,979	2,212,270		166,246	166,246 23,685	23,685
topology TXINC 20,548 ibution Expense DISTRT 19,552 CLustomers 318 318 Venue REV01 421,091 renue REVUC 102,114 Revenue Allocation REVUC ation REVMISC 544 cous Revenue Allocation REVADJ4 2,356 veflective Base Rates for Full Yei REVGSC 318,976 inue REVGSC 562,071 ation REVGSC 318,976 inue S62,071 485,054 anvices 251,930 251,930 on Reserve 29,143 251,433 -A&G 14,813 45,7418 r 16,661 30,084		Interest Adjustment		0	0	0		0		0
Ibuttion Expense DISTRT 19,552 CLustomers 318 Sost REV01. 421,091 renue REV01. 421,091 Revenue REVUC. 102,111 ation REVMISC 544 couss Revenue Allocation REVMISC 544 Reflective Base Rates for Full Ye: REVGSC 318,976 Inue REVGSC 562,071 Inue REVGSC 562,071 Inue REVGSC 318,976 Inue S62,071 485,054 Inue S62,071 485,054 Inue REVGSC 251,930 In Reserve 29,143 251,930 A&G 14,813 45,7418 r 16,661 30,084		Taxable Income	TXINC	20,549,167	11,546,963	8,841,465		278,647		13,271
t 1.00 CLustomers 318 Jost REV01 421,091 Revenue REVUC 102,114 Revenue REVUC 102,114 ation REVADJ4 2,356 cous Revenue Allocation REVADJ1 9,941 cous Reserve 562,071 485,054 nue REVGSC 562,071 485,054 nne Reserve 29,143 485,054 nnse 29,143 422,052 14,813 r A&G 14,813 45,7418 r 16,661 70,084 20,084		otal Distribution Expense	DISTRT	19,552,591	13,032,657	4,228,335		328,332		
Occurstomers 318 Vost REV01. 421,091 renue REVUC. 102,114 Revenue REVADJ4 22,326 ation REVADJ4 2,346 cous Revenue Allocation REVMISC 544 cous Revenue Allocation REVGSC 562,071 cole REVGSC 562,071 485,054 nue REVGSC 251,930 562,071 on Reserve 29,143 485,054 422,052 on Expenses 14,813 14,813 14,813		Meter Cost		1.000000	0.772847	0.180153	_	0.010163	0	0.003431
venue REV01. 421,091 Revenue REVUC 102,114 ation REVADJ4 2,356 ous Revenue Allocation REVMISC 544 cellective Base Rates for Full Yei REVGSC 318,976 562,071 inue REVGSC 562,071 485,054 prvices 251,930 422,052 514,830 on Reserve 29,143 251,930 14,813 - A&G 14,813 14,813 14,813 r 16,661 70,084 20,084		aniper of Customers		318,528	291,175	27,035		230		15
Revenue REVUC ation REVADJ4 ous Revenue Allocation REVADJ4 cous Revenue Allocation REVADJ1 Reflective Base Rates for Full Ye: REVADJ1 inue REVADJ1 inue REVGSC internet Revenue internet RevGSC in Reserve internet RevGSC in Reserve	2 20	civices Cusi		00.1°	26.0	0.08		0,00		0.00
ation REVADJ4 ous Revenue Allocation REVADJ4 teflective Base Rates for Full Ye: REVADJ1 nue REVADJ1 nue REVGSC on Reserve on Reserve nse - A&G + CWIP r		ctual Net Revenue	REVUC	402 114 452	214,923,042	121,209,111	<u>_</u>	10,032,446	N	2,876,103
ous Revenue Aliocation REVMISC Reflective Base Rates for Full Ye: REVADJ1 Inue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC Innue REVGSC		DSM Allocation	REVADJ4	2.356.128	2.242.152	105.921		,, . ,,		013 013
Reflective Base Rates for Full Ye: REVADJ1	31 N	Miscellaneous Revenue Allocation	REVMISC	544,576	34,959	408.564		0 0	0 913	- •
nue REVGSC Prvices on Reserve . A&G . A&G + CWIP r CMIP		ev. Adj. Reflective Base Rates for Full Y	¥ REVADJ1	9,941,202	7,856,572	1,939,946		78.152	თ	
prvices on Reserve A&G + CWIP r CWIP	1	GSC Revenue	REVGSC	318,976,614	204,062,442	102,829,655		8,895,071	2,68	2,681,995
n Reserve na Reserve A&G A&G - CWIP	22 G 7 T	PID Plant		562,071,796	395,967,818	118,570,381	1	8,852,583		1,255,022 27,
n Reserve he A&G - CWIP		Ust Mant		485,054,347	345,748,568	93,815,905		6,808,859	6,808,859 1,255,022	1,255,022
n Reserve 18e A&G - CWIP	38	Mains + Services		422,052,652	300,612,917	80,587,292		5,950,703		1,021,162
A&G - CWIP		Depreciation Reserve		251,930,196	177,049,236	54,602,813		4,108,268		524,639
- CWIP		Uokini Expense		29,143,381	19,217,822	7,242,224		578,282		
C vvii	An a D C	DTD Diant + CMID		14,813,359	10,445,114	3,274,883		261,967		27,120
n Expenses		Total Labor		18 661 400	460,436,455	388,088,651	10	10,511,650	.	
		Depreciation Expenses		20 081 022	14 840 512	2 782 747		280,444		33,514
RBT		Rate Base	RBT	491,799,638	340,882,709	110.881.594	8	8,483,064	483.064 1.011.024	1

Louisville Gas and Electric Natural Gas Class Cost of Service Study (Allocation Amounts)

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Acct

Louisville Gas and Electric Natural Gas Class Cost of Service Study (Allocation Amounts)
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46 Pro F 47 DSM 48 Peak 49 Peak	44 Year-E 45 Mains	Acct. No.
6 Pro Forma Adjustments 7 DSM Revenue 8 Peak & Avg High Pressure 9 Peak & Avg Low Pressure	Year-End Customer Adjustment Mains	Account Description
PROFO	REVADJ2	Allocator
200,541,676) 2,319,554 100,00% 100,00%	1,760,940	Total
173,525,231 (193,041,406) 2,207,347 52.56% 56.81%	259,367	Residential (RGS)
69,809,816 (96,173,618) 104,277 25.65% 27.40%	1,404,610	Commercial (CGS)
5,850,314 (8,480,781) 0 2.25% 2.40%	96,963	Industrial (IGS)
987,331 (2,614,506) 899 0.61% 0.37%	0	As Available Gas Service (AAGS)
24,705,604 (214,798) 7,031 12.68% 9.69%		Firm Transportation Service (FT)
9,087,635 (16,567) 6.25% 3.32%		Special Contracts (SP)

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Schedule GAW-6

Value Line Natural Gas Utilities Rates of Return on Common Equity (1999-2009)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2000	2
11.5%	12.3%	14.5%	14.0%	11.0%	12.9%	13.0%	10 7%	10 60/	11 70	All Tear
%C &	767 0	10 /0/	200	1			14.170	12.0%	14.5%	
0.270	2,070	10.4%	9.3%	7.6%	8.5%	9.8%	8.7%	8.8%	8.3%	
9.1%	10.5%	7.8%	11.6%	10.1%	10.9%	12 5%	11 6%	11 00/		
14.6%	14 9%	15 7%		10 36				11.070	12.4%	
			10.070	13.370	71.U%	12.6%	10.1%	15.7%	14.6%	
%7.6T	18./%	17.5%	12.3%	13.1%	12.5%	14.7%	14.3%	12 3%	12 10	
10.0%	10.2%	8.5%	9.0%	8.0%	0 0%	10 00/	17 62	40.000		
10 10/					0.070	10.070	12.J%	10.9%	11.1%	
12.170	11./%	10.6%	11.8%	11.1%	11.5%	11.0%	11.9%	12.4%	13 2%	
14.8%	12.8%	12.5%	11.6%	12.5%	12.4%	16 2%	10 00/	10,		
7 2%	5 50	212				-0.070	14.070	13.170	13.1%	
1.2.70	0.070	0.0%	b.1%	8.3%	6.4%	8.9%	8.5%	5.9%	7.9%	
17.6%	22.5%	23.8%	17.6%	14.1%	18.2%	16.0%	1/ 5%	1 300		
11 7%	11 70/	1			10.2.0	10,0%	14.5%	15.2%	16.2%	
11.1 /0	11.270	1.2%	14.0%	11.7%	12.0%	10.3%	10.4%	11.6%	11.6%	
12.4%	12.8%	12.3%	12.1%	11.2%	10 0%	17 7%	11 60			
					16.0/0	12.470	11.0%	11.8%	12.4%	12.0%
	2000 11.5% 8.2% 9.1% 14.6% 19.2% 10.0% 12.1% 14.8% 7.2% 11.7%			2001 2002 12.3% 14.5% 9.6% 10.4% 14.9% 15.7% 14.9% 15.7% 11.7% 17.5% 12.3% 14.9% 14.9% 15.7% 18.7% 17.5% 10.2% 8.5% 11.7% 10.6% 12.8% 12.5% 12.8% 12.5% 1.1.7% 10.6% 1.1.7% 12.8% 1.1.7% 12.5% 1.1.7% 12.5% 1.1.7% 12.5% 1.1.7% 12.5%	2001 2002 2003 200 12.3% 14.5% 14.0% 11.05 9.6% 10.4% 9.3% 7.65 10.5% 7.8% 11.6% 10.15 14.9% 15.7% 15.6% 15.3% 14.9% 15.7% 15.6% 15.3% 11.7% 10.6% 11.18% 11.19 11.7% 10.6% 11.8% 11.19 12.8% 12.5% 11.6% 12.5% 6.6% 6.5% 6.1% 8.39 11.7% 10.6% 11.4% 12.4% 12.8% 12.5% 11.6% 12.5% 12.8% 12.5% 11.6% 12.5% 11.7% 10.5% 11.6% 12.5% 12.8% 12.5% 11.6% 12.5% 11.7% 10.5% 11.4% 8.39	2001 2002 2003 2004 12.3% 14.5% 14.0% 11.0% 9.6% 10.4% 9.3% 7.6% 10.5% 7.8% 11.6% 10.1% 14.9% 15.7% 15.6% 10.1% 11.9% 17.5% 12.3% 13.1% 10.2% 8.5% 9.0% 8.9% 11.7% 10.6% 11.8% 11.1% 12.8% 12.5% 11.6% 12.5% 6.6% 6.5% 6.1% 8.3% 22.5% 23.8% 17.6% 14.1% 11.7% 10.5% 11.4% 12.5%	2001 2002 2003 2004 12.3% 14.5% 14.0% 11.0% 9.6% 10.4% 9.3% 7.6% 10.5% 7.8% 11.6% 10.1% 14.9% 15.7% 15.6% 10.1% 11.9% 17.5% 12.3% 13.1% 10.2% 8.5% 9.0% 8.9% 11.7% 10.6% 11.8% 11.1% 12.8% 12.5% 11.6% 12.5% 6.6% 6.5% 6.1% 8.3% 22.5% 23.8% 17.6% 14.1% 11.7% 10.5% 11.4% 12.5%	2001 2002 2003 2004 2005 12.3% 14.5% 14.0% 11.0% 12.9% 9.6% 10.4% 9.3% 7.6% 8.5% 10.5% 7.8% 11.6% 10.1% 10.9% 14.9% 15.7% 15.6% 10.1% 10.9% 14.9% 15.7% 15.6% 15.3% 17.0% 11.7% 17.5% 12.3% 13.1% 12.5% 10.2% 8.5% 9.0% 8.9% 9.9% 11.7% 10.6% 11.8% 11.1% 11.5% 12.8% 12.5% 11.6% 12.5% 12.4% 6.6% 6.5% 6.1% 8.3% 6.4% 22.5% 23.8% 17.6% 14.1% 18.2% 11.7% 7.7% 14.0% 14.7% 15.7%	2001 2002 2003 2004 2005 2006 12.3% 14.5% 14.0% 11.0% 12.9% 13.2% 9.6% 10.4% 9.3% 7.6% 8.5% 9.8% 10.5% 7.8% 11.6% 10.1% 10.9% 12.5% 14.9% 15.7% 15.6% 15.3% 17.0% 12.6% 11.7% 17.5% 12.3% 13.1% 12.5% 14.7% 10.2% 8.5% 9.0% 8.9% 9.9% 10.9% 12.6% 11.7% 10.6% 11.8% 11.1% 11.5% 11.0% 12.8% 12.5% 11.6% 12.5% 14.0% 13.3% 6.6% 6.5% 11.6% 12.5% 14.0% 13.9% 12.8% 12.5% 11.6% 12.4% 16.3% 6.6% 6.5% 6.1% 8.3% 6.4% 8.9% 22.5% 23.8% 17.6% 14.1% 18.2% 16.0% 11.7%<	V 2001 2002 2003 2004 2005 2006 2007 12.3% 14.5% 14.0% 11.0% 12.9% 13.2% 12.7% 9.6% 10.4% 9.3% 7.6% 8.5% 9.8% 8.7% 10.5% 7.8% 11.6% 10.1% 10.9% 12.5% 11.6% 14.9% 15.7% 15.6% 10.1% 10.9% 12.5% 11.6% 14.9% 15.7% 15.6% 15.3% 17.0% 12.6% 10.1% 10.2% 8.5% 9.0% 8.9% 9.9% 10.1% 12.5% 14.3% 10.2% 8.5% 9.0% 8.9% 9.9% 10.9% 12.5% 11.7% 10.6% 11.8% 11.1% 11.5% 11.0% 11.9% 12.8% 12.5% 11.6% 12.5% 12.5% 12.5% 12.5% 11.7% 10.6% 11.6% 12.5% 12.5% 12.5% 12.5% 12.5% 12.5%

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Schedule GAW-7

Comparison of Value Line Electric Rates of Return, 2000-2009

							Contraction of the Party of the	ate of Retu						
Company	Location	Own Gen?	Pct Elec Rev 1/	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
Allegheny Energy	East	NO	100%	13.4%	16.6%	-26.3%	-22.1%	5.0%	8.8%	15.3%	16.3%	13.9%	12.6%	5.3%
Cen. Vermont Pub. Serv.	East	YES	100%	6.9%	5.8%	9.3%	8.1%	6.8%	0.5%	10.1%	8.2%	7.3%	7.5%	7.1%
CH Energy Group	East	YES	58%	10.6%	10.2%	7.1%	9.1%	8.6%	8.8%	7.9%	8.1%	6.7%	8.1%	8.5%
Consol, Edison	East	NO	64%	10.7%	12.0%	11.3%	9.8%	7.8%	9.7%	9.2%	10.4%	9.5%	8.5%	9.9%
Constellation Energy	East	YES	18%	11.0%	9.2%	9.3%	11.1%	11.7%	12.3%	14.8%	14.7%	2.7%	3.0%	10.0%
Dominion Resources	East	YES	43%	8.0%	9.0%	13.3%	11.8%	12.3%	9.9%	13.1%	14.9%	17.5%	15.5%	12.5%
Duke Energy	East	YES	79%							4.1%	7.2%	6.1%	6.7%	6.0%
Exelon Corp.	East	YES	55%	7.8%	17.2%	20.1%	18.8%	19.5%	23.6%	23.7%	26.9%	24.6%	22.5%	20.5%
FirstEnergy Corp.	East	YES	100%	12.9%	8.9%	10.5%	5.4%	10.6%	10.2%	13.9%	14.6%	16.2%	11.9%	11,5%
FPL Group	East	YES	100%	12.6%	13.0%	10.9%	12.5%	11.8%	10.6%	12.9%	12.2%	14.0%	12.4%	12,3%
Northeast Utilities	East	NO	80%	-1.3%	8.5%	6.3%	6,9%	5.1%	5.1%	4.3%	8.4%	9.6%	9.0%	6.2%
VSTAR	East	NO	84%	13.0%	13.7%	13.8%	13.7%	13,1%	12.8%	13.1%	13.0%	13.3%	13.0%	19.3%
Pepco Holdings	East	YES	51%	9,8%	12.6%	9,2%	7.7%	7.7%	7.7%	7.0%	7.4%	9.5%	5,0%	8.4%
PPL Corp.	East	YES	100%	23.6%	28.2%	21.1%	19.6%	16.3%	16.7%	17.3%	18.2%	18.2%	8.1%	18.7%
Progress Energy	East	YES	100%	6.7%	11.5%	12,1%	10.9%	9.9%	9.0%	6.1%	8.2%	8,9%	9.0%	9.2%
Public Serv. Enterprise	East	NO	66%	19.1%	18.5%	19,7%	15.4%	12.6%	14.2%	13.8%	18.1%	19.0%	18.0%	16.9%
SCANA Corp.	East	YES	51%	10.9%	10.2%	11.6%	12.1%	12.2%	11.8%	10.5%	10.8%	11.4%	10.2%	10.5%
Southern Co.	East	YES	100%	12.3%	14.0%	15.1%	14.8%	14.9%	14.9%	13.8%	14.0%	13.1%	10.2%	13.9%
TECO Energy	East	YES	65%	16.7%	14.0%	9.9%	-0.9%	14.5%	14.3%	13.8%	13.2%	8.1%	12.5%	13.5%
UIL Holdings	East	NO	100%	12.5%	11.9%	9.1%	6.0%	6.7%	5.8%	9.9%	10.1%	10.1%	9.5%	
Allete	Central	YES	91%	44. <i>7/</i> 7	11.370	3.170	4.478	6.1%	11.3%	9.5% 11.6%	10.1%	10.1%	9.5% 6.6%	9.2% 9.6%
Allant Energy		YES	72%	9,6%	9.8%	5.8%	6.7%	8.2%	13.1%	9.1%	11.8%	9.3%		
Amer, Electric Power	Central	NO	100%	3.7%	12.8%	5.8% 13.7%	12.4%	12.2%	11.3%	12.0%			6.8%	9.0%
	Central								9.7%		11.4%	11.3%	10.4%	11.1%
Ameren Corp.	Central	YES	83%	14.3%	14.0%	9,9%	11.6%	9.1%		8.1%	9.2%	8.7%	7.8%	10.2%
CenterPoint Energy	Central	NO	21%	4.4.557	6.6%	27.2%	23.8%	18.5%	17.4%	27.8%	22.0%	21.9%	14.1%	19.9%
Cleco Corp.	Central	YES	100%	14.9%	14.6%	13.1%	12.5%	11.9%	10.7%	8.3%	7.8%	9.6%	9.5%	11.3%
DMS Energy Corp.	Central	YES	55%	12.1%	8.8%	-38.0%	-2.9%	6.2%	9.9%	6.4%	7.2%	11.7%	8.5%	3.0%
OPL Inc.	Central	NO	100%	22.9%	27.8%	10.8%	14.6%	20.7%	11.9%	17.5%	24.2%	25.0%	20.7%	19.6%
DTE Energy	Central	YES	59%	11.7%	7.2%	13.8%	9.1%	8.0%	10.0%	7.5%	7.7%	7.4%	8.4%	9.1%
Empire Dist. Elec.	Central	YES	87%	9.8%	3.9%	7.8%	7.8%	5.8%	6.0%	8.5%	6.2%	7.5%	6.9%	7.0%
Intergy Corp.	Central	YES	73%	9.7%	9.3%	10.9%	9.8%	11.0%	11.9%	13.8%	14.4%	15.3%	14.3%	12.0%
Sreat Plains Energy	Central	YES	100%	13.8%	12.6%	13.6%	16.4%	15.5%	13.5%	9.4%	10.1%	4.6%	4.8%	11.4%
Integrys Energy	Central	YES	17%	11.9%	10.8%	11.7%	9.1%	14.0%	11.8%	9.7%	5.5%	3.9%	6.1%	9.5%
TC Holdings	Central	NO	100%					1.3%	13.2%	6.2%	13.0%	11.8%	12.9%	9.7%
MGE Energy	Central	YES	62%	13.7%	12.6%	12.8%	11.6%	10.0%	9.3%	11.3%	11.4%	11.0%	10.2%	11.4%
ViSource Inc.	Central	YES	18%	5.5%	6.8%	9.7%	9.4%	9.0%	6.0%	6.3%	6.1%	7.8%	5.0%	7.2%
DGE Energy	Central	YES	100%	13.8%	9.7%	11.4%	11.8%	12.3%	12.1%	14.1%	14.5%	12.2%	12.7%	12.5%
Otter Trail Corp	Central	NO	100%	14.8%	14.9%	14.5%	11.7%	9.1%	11.2%	10.2%	10.2%	5.1%	3.8%	10.6%
Vectren Corp.	Central	NO	25%	9.7%	8.5%	13.1%	10.4%	9,9%	12.0%	9.3%	11.6%	9.5%	10.5%	10.5%
Westar Energy	Central	YES	100%	3.2%	2.2%	7.3%	10.3%	7.1%	9.5%	10.7%	9.2%	6.2%	6.2%	6.7%
Nisconsin Energy	Central	YES	66%	6.5%	10.6%	12.6%	11.4%	8.8%	11.3%	10.8%	10.9%	10.7%	10.6%	10.4%
Avista	West	YES	56%	11.1%	7.9%	4.5%	6.6%	4.7%	5.9%	8.0%	4.2%	7.4%	8.0%	6.8%
Black Hillis	West	YES	41%	19.0%	17.2%	11.9%	8.1%	7.8%	9.5%	9.4%	10.3%	0.7%	6.5%	10.0%
Edison International	West	YES	100%		13.6%	11.9%	13.6%	3.5%	16.7%	14.0%	13.0%	12.8%	10.5%	12.2%
El Paso Electric	West	YES	100%	14.6%	14.6%	6.3%	6.3%	6.3%	6.6%	10.6%	11.2%	11.2%	9.0%	9.7%
lawilan Electric	West	YES	100%	9.8%	11.6%	11.3%	10.8%	8.9%	9.7%	9.9%	7.2%	6.5%	6.0%	9.2%
DACORP	West	YES	100%	16.0%	14.4%	7.0%	4.2%	7.2%	6.2%	8.9%	6.8%	7.6%	8.0%	8.6%
ADU Resources	West	NO	5%	12.4%	13.3%	10.1%	12.6%	12.6%	14.5%	14.7%	12.8%	13.7%	10.1%	12.7%
IV Energy Inc.	West	YES	94%	-3.6%	1.8%	-23.1%	-9.4%	4.8%	4.0%	9.0%	6.6%	6.7%	6.0%	0.3%
G&E Corp	West	YES	77%		22.9%	-24.9%	18,5%	10.3%	12.3%	12.7%	11.8%	12.6%	11.5%	9.7%
Pinnacie West Capital	West	YES	100%	11.9%	12.5%	8.0%	8.1%	8.0%	6.5%	9.2%	8.5%	6.2%	7.5%	8.6%
NM Resources	West	YES	100%	10.0%	15.4%	6.5%	6.3%	8.0%	8.2%	7.2%	3.5%	0.5%	4.5%	7.0%
ortland General	West	YES	100%					7.2%	5.3%	5.8%	11.0%	6.4%	6.5%	7.0%
uget Energy Inc.	West	YES	100%	13.0%	7.7%	7.2%	7.0%	8.1%	7.2%	7.9%	7.3%			8.2%
iempra Energy	West	NO	60%	17.2%	19.4%	20.4%	16.6%	18.9%	14.4%	14.B%	13.5%	14.0%	13.5%	16.3%
IniSource Energy	West	YES	84%	7.1%	14.9%	7.6%	8.4%	7.9%	7.5%	10,6%	8.5%	2.1%	12.5%	8.7%
(cel Energy Inc.	West	YES	80%	9.7%	12.6%	3.7%	9.8%	10.0%	9.2%	9.7%	9.1%	9.2%	9.5%	9.3%
Average			76%	11.3%	12.2%	8.4%	9.5%	9.9%	10.4%	11.0%	11.2%	10.3%	9.6%	10.3%

Source: Value Line investment Analyzer, April 12, 2010 except where otherwise noted. 1/ Source: February 2010 AUS Monthly Utility Reports

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Competitive Fixed Period Electric Residential Rates in Texas 1/

	Customer			verage its/kWh
Company ·	Charge		C	harge
1 Amigo Energy	\$6.95	2a/		10.58
2 Texas Power	\$10.00		,	10.28
3 Champion Energy Services	\$4.95			10.07
4 Gexa Energy	\$4.79			10.43
5 Cirro Energy	\$9.89			10.43
6 Kinetic Energy	\$7.54			10.32
7 Simple Power	\$0.00			10.30
8 Ambit Energy	\$9.99	2b/		10.75
9 StarTex Power	\$4.99	2a/		10.47
10 YEP	\$7.95	2b/		10.25
11 Brilliant Energy	\$2.15			10.70
12 Southwest Power & Light	\$7.95	2b/		10.28
13 Dynowatt	\$6.95	2b/		10.18
14 APNA Energy	\$6.95			10.95
15 Gateway Power Services	\$11.69			11.47
16 MX Energy	\$9.90			11.77
17' Mega Energy	\$0.00			9.85
18 Stream Energy	\$0.00			11.27
19 Texpo Energy	\$7. 9 5	2b/		12.97
20 Spark Energy	\$0.00			10.22
21 TXU Energy	\$5.95			12.02
22 Reliant Energy	\$5.00			10.70
23 CPL Retail Energy	\$4.95			12.90
24 WTU Energy	\$4.95			10.40
25 Direct Energy	\$5.00			11.33
26 Potentia	\$4.88			10.05
27 Tara	\$6.95	2a/		10.98
28 Abacus Resources	\$5.95	2a/		10.30
29 Bounce	\$4.95	2a/		10.40
30 Fronțier	\$4.95			11.75
Customer Charges:				
No Customer Charge	4			
Waivable Customer Charge	11			
Traditional Customer Charge	15			
Total	30			
Avg. Non-Waivable Customer Charge:			\$6.24	

1/ "Fixed Period" means customer enters a contract to not switch

provider for at least a predetermined time period, in this case 12 months.

2a/ Customer charge is waived with a minimum usage of 500kWh.

2b/ Customer charge is waived with a minimum usage of 1000 kWh.

Weighted

Cost 2.13%

<u>5.39%</u>

7.51%

Residential Electric Customer Costs Residential Amount Rate Base: **Gross Plant** Services 1 22,105,235 Meters 30.569.462 Total 52,674,697 Depreciation Reserve Services (17,148,245) Meters (20.236.781) Total (37,385,026) Net Rate Base 15,289,671 **Operation & Maintenance Expenses** Meter Operations 5,058,958 Meter Maint. 0 Meter Reading 1,673,264 **Records & Collections** 4,206,469 Misc. Customer Accts. 300,266 Total 11,238,958 **Depreciation Expense** Services 977,051 Meters 1,158,583 Total 2,135,634 **Revenue Requirement:** Pct Cost Interest 325,220 LT-Debt 46.14% 0.0461 Equity Return 823,502 Equity <u>53.86%</u> 10.00% Income Tax @ effective rate 487,628 Total 100.00% Revenue for Return 1,636,349 Total Customer Revenue Requirement 15,010,940 Number of Bills 4,194,552

Monthly Cost

Louisville Gas & Electric

\$3.58

Welghted Cost

2.13% 5.39% 7.51%

I

Pct

46.14% 53.86% 100.00%

Cost

0.0461 10.00%

Louisville Gas & Electric Residential Gas Customer Charge

	Residential Amount	
Rate Base:		
Gross Plant		
Services	127,087,686	
Meters	26,447,911	
House Regulators	<u>10.493.951</u>	
Total	164,029,548	
Depreciation Reserve		
Services	(58,409,592)	
Meters	(3,413,716)	
House Regulators	(1,231,021)	
Total	(63,054,328)	
Net Rate Base	100,975,219	
Operation & Maintenance Expenses		
Meter & House Regulators Expense	70,853	
Customer Installations	307,574	
Maint, Services	1,111,661	
Maint. Meters & House Regulators	0	
Meter Reading	1,558,251	
Cust. Records & Collections	3,916,179	
Misc. Cust Accounts	243,412	
Total	7,207,930	
	1,201,000	
Depreciation Expense		
Services	4,575,157	
Meters	1,055,272	
House Regulators	232,966	
Total	5,863,394	
Revenue Requirement		
Interest	2,147,797	LT- Debt
Equity Return	5,438,525	Equirty
Income Tax @ effective rate	3,220,365	Total
Revenue for Return	10,806,688	
Total Customer Revenue Requirement	23,878,012	
Number of Bills	3,480,900	
Monthly Cost	\$6.86	