

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF KENTUCKY UTILITIES)	
COMPANY FOR AN ADJUSTMENT)	CASE NO.
OF ITS ELECTRIC RATES)	2018-00294

AND

APPLICATION OF LOUISVILLE GAS AND)	
ELECTRIC COMPANY FOR AN ADJUSTMENT)	CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES)	2018-00295

DIRECT TESTIMONY
AND EXHIBITS
OF
STEPHEN J. BARON

ON BEHALF OF
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

January 2019

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DIRECT TESTIMONY OF STEPHEN J. BARON

I. QUALIFICATIONS AND SUMMARY

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Q. Please state your name and business address.

A. My name is Stephen J. Baron. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. What is your occupation and by who are you employed?

A. I am the President and a Principal of Kennedy and Associates, a firm of utility rate, planning, and economic consultants in Atlanta, Georgia.

1 **Q. Please describe briefly the nature of the consulting services provided by Kennedy**
2 **and Associates.**

3 A. Kennedy and Associates provides consulting services in the electric and gas utility
4 industries. Our clients include state agencies and industrial electricity consumers. The
5 firm provides expertise in system planning, load forecasting, financial analysis, cost-
6 of-service, and rate design. Current clients include the Georgia and Louisiana Public
7 Service Commissions, and industrial consumer groups throughout the United States.

8

9 **Q. Please state your educational background and experience.**

10 A. I graduated from the University of Florida in 1972 with a B.A. degree with high honors
11 in Political Science and significant coursework in Mathematics and Computer
12 Science. In 1974, I received a Master of Arts Degree in Economics, also from the
13 University of Florida.

14

15 I have more than forty years of experience in the electric utility industry in the areas
16 of cost and rate analysis, forecasting, planning, and economic analysis.

17

18 I have presented testimony as an expert witness in Arizona, Arkansas, Colorado,
19 Connecticut, Florida, Georgia, Indiana, Kentucky, Louisiana, Maine, Michigan,
20 Minnesota, Maryland, Missouri, Montana, New Jersey, New Mexico, New York,
21 North Carolina, Ohio, Pennsylvania, Texas, Utah, Virginia, West Virginia,

1 Wisconsin, Wyoming, the Federal Energy Regulatory Commission and in United
2 States Bankruptcy Court.

3

4 A complete copy of my resume and my testimony appearances is contained in Baron
5 Exhibit __ (SJB-1).

6

7 **Q. On whose behalf are you testifying in this proceeding?**

8 A. I am testifying on behalf of the Kentucky Industrial Utility Customers (“KIUC”), a
9 group of large industrial customers taking service on the LG&E and KU systems. The
10 KIUC members who take service from the Companies are: AAK, USA K2, LLC,
11 Air Liquide Industrial U.S. LP, Alliance Coal, LLC, Carbide Industries LLC,
12 Cemex, Corning Incorporated, Dow Corning Corporation, Ford Motor Company,
13 Ingevity, North American Stainless, The Chemours Company and Toyota Motor
14 Manufacturing, Kentucky, Inc.

15

16 **Q. Have you previously testified in KU and LG&E rate proceedings before the**
17 **Kentucky Public Service Commission?**

18 A. Yes. I have testified in 17 KU and LG&E cases since 1981, a period of 38 years.

19

20 **Q. How have you organized your testimony with regard to LG&E and KU issues?**

1 A. For many of the issues that I will discuss, I present common testimony that is
2 applicable to both LG&E and KU. This would include discussions of basic principles
3 associated with cost allocation and rate design. However, since the revenue
4 requirement requests and the specific cost of service study results for LG&E and KU
5 rate classes are different, I will be presenting separate analyses and discussions of
6 these results.

7
8 For the purposes of organizing my testimony, when I am discussing an issue that is
9 common to both LG&E and KU, I will refer to these companies as (“the Company”
10 or the “Companies”). For a specific LG&E and KU issues I will refer to each
11 Company by name (LG&E or KU).

12

13 **Q. What is the purpose of your testimony?**

14 A. I am presenting testimony on class of cost of service and the allocation of the
15 authorized revenue increase to rate classes. I also address issues associated with the
16 Companies’ test year sales forecast.

17

18 The first issue that I address concerns the Companies’ filed cost of service studies
19 using the Loss of Load Probability (“LOLP”) method. In their prior case, the
20 Companies proposed the use of an LOLP class cost of service study for the first time.
21 In those cases, the Companies also filed class cost of service studies using their Base,

1 Intermediate and Peak (“BIP”) methodology that has been used by LG&E (and then
2 KU after the merger) for many, many years. In their 2016 base rate cases, I identified
3 a number of problems with the LOLP methodology, most notably problems with the
4 8,760 hour projected test year class load data. As I will discuss, I continue to have
5 concerns with the LOLP methodology and, as a result, have developed an alternative
6 class cost of service study for each Company using a traditional 12 coincident peak
7 method (“12 CP”).

8
9 I will also discuss the Companies’ proposal to use a TIER approach for the purpose
10 of allocating the approved revenue increase to rate classes. As I will discuss, I have
11 reviewed the Companies’ proposal and agree that it is a reasonable approach in this
12 case, if it is modified to reflect the full increases that LG&E’s and KU’s customers
13 will face with the implementation of new base rates in these cases. Specifically, with
14 the effective date of new base rates, the current Tax Cuts and Jobs Act (“TCJA”)
15 surcredits will be eliminated. To fully reflect the impact of the new base rates in these
16 cases, it is necessary and appropriate to include the loss of the TCJA surcredits by rate
17 class in the revenue increase allocation analysis. I will present a revised allocation of
18 the overall LG&E and KU revenue increases to rate classes that reflects the loss of the
19 TCJA surcredits.

20

1 Finally, I will address the Companies' projected test year sales forecast. As I will
2 discuss, I have identified an issue associated with the projected test year level of kVa
3 demand assumed by the Companies for their Rate RTS test year revenue projection.
4 A comparison of the test year billing demands for Rate RTS, for both Companies,
5 indicates that they are significantly lower than the most recent actual data. I have
6 made an adjustment to reflect a higher level of KU and LG&E RTS demand revenues
7 that relies on actual data for the 2018 base year, rather than the Companies'
8 projections.

9
10 **Q. On January 11, 2019, three business days before your testimony was due to be**
11 **filed, the Companies' filed a number of revenue requirement changes to their**
12 **originally filed case. How does this new information impact your testimony?**

13 A. The revenue requirement changes made by the Companies' on January 11, 2019 do
14 not impact the underlying recommendations that I am making in my testimony. As I
15 discuss, my testimony recommends a number of changes to the Companies' allocation
16 of the overall increase to rate classes, and an adjustment to the Companies' projected
17 test year revenue forecast. Neither of these issues are impacted by the KU reduction
18 in its requested revenue increase of \$3,672,887 and LG&E's reduction in its requested
19 electric revenue increase of \$869,959. The principles that I have relied on to revise
20 the Companies' revenue allocation are not impacted by the small changes in the
21 overall requested revenue increase for each Company. Rather, the KU and LG&E

1 revenue reductions (\$3.67 million and \$0.87 million) should be considered along with
2 other revenue requirement adjustments recommended by KIUC and other parties in
3 this case. Moreover, the Companies have not filed revised class cost of service studies
4 or rate class revenue allocations. Based on the relatively small changes made by the
5 Companies in their January 11, 2019 revisions, I do not expect that there would be
6 any material changes to the class cost of service results.

7
8 **Q. Would you please summarize your testimony?**

9 **A. Yes. I recommend and conclude the following:**

- 10 • **The Companies' LOLP cost of service methodology has not been**
11 **adopted by any other regulator. It relies on projection of 8,760 hours**
12 **of load data for each of the 13 KU rate classes and 12 LG&E rate**
13 **classes. It is overly data intensive, especially for use in a projected test**
14 **year. This raises reliability issues with the study results.**
- 15 • **The Commission should rely on a more traditional class cost of service**
16 **methodology, such as the 12 CP cost of service studies that KIUC has**
17 **presented for LG&E and KU. The 12 CP method is widely accepted by**
18 **other commissions, is used by KU for jurisdictional allocation purposes**
19 **and is used by Kentucky Power Company.**
- 20 • **Notwithstanding the concerns with the LOLP cost of service studies**
21 **presented by the Companies, the results of those studies are relatively**
22 **consistent with the results of the KIUC 12 CP study. As such, the**
23 **Companies' proposed TIER based revenue allocation approach, which**
24 **relies in part on the cost of service study results, is reasonable.**
25 **However, the TIER methodology should be modified to reflect the full**
26 **revenue increases that each rate class will receive when new base rates**
27 **are implemented and the Tax Cuts and Jobs Act ("TCJA") surcredits**
28 **are eliminated. In particular, the TIER III increases that large**
29 **industrial manufacturing customers will face when both new base rates**
30 **and the TCJA surcredits are eliminated will be substantial, unless the**
31 **Companies methodology is modified as proposed by KIUC.**
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- **The Companies’ projected test year level of Rate RTS billing demand is significantly lower than the most recently available actual data for these rate classes. Using the actual 2018 base year billing demand data increases test year revenues in this case by \$1.475 million for KU and \$1.789 million for LG&E. This additional revenue should be included in the calculation of the overall revenue deficiency in these cases.**

10
11

II. CLASS COST OF SERVICE STUDIES

12 **Q. What is the purpose and use of a class cost of service study in electric utility**
13 **ratemaking?**

14 A. As discussed in the National Association of Regulatory Utility Commissioners
15 (“NARUC”) Electric Utility Cost Allocation Manual (“NARUC Manual”), the
16 purpose of a class cost of service study is to “aid in the design of rates.” Specifically,
17 the NARUC Manual states that “Regulators design rates, the price charged to
18 customer classes, using the costs incurred by each class as a major determinant.”¹
19 While this is a relatively straightforward, logical statement, it is important to recognize
20 that there are multiple methodologies that can be used to allocate costs to customer
21 classes. The NARUC Manual itself identifies more than 10 methodologies, some of
22 which include multiple variants.² The results of a class cost of service study can vary

¹ NARUC Electric Utility Cost Allocation Manual at page 13.

² Among these are: 1 coincident peak (CP), summer/winter CP, 12 CP, multiple CPs, Average and Excess, Equivalent Peaker, Base and Peak, Peak and Average, LOLP, Probability of Dispatch and BIP.

1 significantly, depending on the methodology used to determine rate class
2 responsibility for each type of costs.

3

4 **Q. Should the Commission consider alternative methods from those that the**
5 **Companies have filed in this case?**

6 A. Yes. The Companies have used a very different class cost of service study
7 methodology in this case (the LOLP method), compared to their traditional BIP
8 method that has been used for many years and accepted by the Commission in many
9 LG&E and KU base rate cases. In their 2016 base rate cases (Case Nos. 2016-00370
10 and 00371), the Companies filed both BIP and LOLP studies, but stated that their
11 preference was to switch to the LOLP method. The LOLP is only 1 of the more than
12 10 methods discussed in the NARUC Manual, and has not been used by the
13 Companies' cost of service witness, Mr. Seelye, or other members of his firm in any
14 other utility rate cases, except the 2016 LG&E and KU cases [see response to KIUC
15 1-16 attached as Baron Exhibit __ (SJB-2)]. In fact, the Companies are not aware of
16 any utility that uses the LOLP methodology for ratemaking [see response to KIUC 1-
17 15 attached as Baron Exhibit __ (SJB-3)].

18

19 It is important for the Commission to consider alternative class cost of service
20 methodologies. As I have done in prior LG&E and KU rate cases, I will present an

1 alternative class cost of service study for each of the Companies using the 12 CP
2 method.

3
4 **Q. Are cost of service results the only factors to consider in allocating the approved**
5 **overall revenue increase to rate classes?**

6 A. No. As the NARUC Manual discusses, the main purpose of a class cost of service
7 study is its use in the development of rate class rates. In most regulatory jurisdictions,
8 cost of service results are one input into the ratemaking process. Other factors include
9 gradualism, avoidance of rate shocks, competitiveness issues and the impact on
10 economic development, as well as other factors that regulators may rely on in a
11 particular state. I will discuss these issues in Section III of my testimony where I
12 address the allocation of the overall revenue increase to rate classes.

13
14 **Q. Would you briefly discuss some of your concerns with the LOLP class cost of**
15 **service methodology?**

16 A. The LOLP methodology, as used by the Companies in this case, allocates fixed,
17 production demand related costs to rate classes based on each rate class's contribution
18 to 8,760 hourly peaks of the Companies (these peaks are the coincident peaks of the
19 combined loads of LG&E and KU), weighted each hour by the loss of load probability
20 calculated by the Companies for the hour. LOLP is the probability that the
21 Companies' generation resources will not be sufficient, after forced outages, to meet

1 the load in the hour. It is essentially the probability that the Companies will be
2 required to rely on its tie line capacity with other utility systems in order to meet load.
3 LOLP weighted loads of each class are summed over all 8,760 hours to produce an
4 allocation factor that is used in the cost of service study. The hourly LOLP values are
5 calculated in a production cost analysis that evaluates the system load in the hour, the
6 generating capacity and firm purchases available to meet the load, and the expected
7 availability of these resources to operate in the hour.
8

9 **Q. How do the Companies determine the hourly loads of each rate class (12 LG&E**
10 **cost of service rate classes and 13 KU rate classes) for the 8,760 hours during the**
11 **projected test year ending April 30, 2020?**

12 A. The Companies have a relatively complex set of excel spreadsheets to essentially
13 allocate the combined LG&E and KU system hourly load forecast to rate classes. To
14 the extent that actual hourly load data for an historic period exists (for example, RTS
15 customers that have hourly load metering) this information is used. For most rate
16 classes, sample load research data is used. However, this means that the hourly load
17 shapes for 8,760 hours, for each rate class is based on an adjustment of historic actual
18 and sample data to a projected period using a variety of adjustment protocols.
19

1 As I discussed in my testimony in the Companies' 2016 rate case, there were
2 significant methodological errors in the Companies originally filed load in that case,
3 which the Companies acknowledged.
4

5 **Q. Have you reviewed the test year rate class hourly load data for the projected test**
6 **year in this case?**

7 A. Yes. While I have not discovered any methodological errors, as in the 2016 case, the
8 entire process of projecting hourly loads for 8,760 hours for each of the 25 LG&E/KU
9 rate classes for a period that does not even begin until May 2019 is inherently
10 inaccurate. When all of the process steps, such as the system load forecast of demand
11 and energy, the translation of this forecast into hourly system loads and then the
12 development of compatible rate class hourly loads are considered, the underlying
13 results cannot be afforded a high degree of reliability. Because the LOLP method
14 needs rate class loads for each of 8,760 hours, the reliability of the LOLP method must
15 be lower than a more traditional cost of service method, such as the 12 CP
16 methodology, that only requires rate class loads at the single hour of the monthly
17 system peak.
18

19 **Q. Are these hourly loads the primary factor in determining the dollar amount of**
20 **costs that are assigned to each rate class?**

1 A. Yes. The test year hourly loads (8,760) are the basis for all of the demand allocation
2 factors used to allocate costs in LOLP cost studies – these allocation factors thus
3 determine the results of the cost allocation study.

4
5 **Q. Would you discuss the alternative 12 CP class cost of service study that you have**
6 **developed?**

7 A. Yes. The study relies on the 12 CP method, which is a widely recognized cost of
8 service approach used by many electric utilities, including Kentucky Power Company
9 and other AEP Operating Companies (e.g., Appalachian Power Company), Entergy
10 Operating Companies (Entergy New Orleans, LLC, Entergy Louisiana, LLC), and
11 Southern Company Operating Companies (Georgia Power Company, Gulf Power
12 Company). AEP also uses the 12 CP allocation methodology to assign PJM LSE
13 OATT costs among its AEP East Operating Companies [see filing of Kentucky Power
14 Company in KPSC Case No. 2017-00179 attached as Baron Exhibit __ (SJB-4)].

15
16 The 12 CP methodology is also the method used by KU to jurisdictionally allocate
17 production demand costs between KU’s Kentucky retail jurisdiction and its Virginia
18 retail jurisdiction. The 12 CP method allocates production demand related costs like
19 production plant in service, production fixed O&M expense and other costs based on
20 each rate class’s demand at the time of the monthly LG&E/KU system peak. A
21 summary of my LG&E and KU 12 CP cost of service analyses is shown in Baron

1 Exhibits__ (SJB-5) and (SJB-6). Tables 1 and 2 below summarize the rates of return,
2 relative rates of return and present rate subsidies for each rate class using the 12 CP
3 method for LG&E and KU, and also include the Companies' LOLP results for
4 comparison.

5

		Table 1			
		Louisville Gas & Electric Company			
		12 CP vs. LOLP Cost of Service Results			
		12 CP		LOLP	
		<u>Rate of</u>	<u>ROR</u>	<u>Rate of</u>	<u>ROR</u>
		<u>Return</u>	<u>Index</u>	<u>Return</u>	<u>Index</u>
Tier I	Residential	3.37%	0.50	2.69%	0.40
Tier II	GS,PS,AES,LS,RLS,OSL,SC	11.38%	1.69	12.29%	1.83
Tier III	TODS,TODP,RTS,FLS	8.72%	1.30	10.06%	1.50
Tier IV	LE,TE	12.73%	1.89	17.60%	2.62

6

1

		12 CP		LOLP	
		<u>Rate of</u>	<u>ROR</u>	<u>Rate of</u>	<u>ROR</u>
		<u>Return</u>	<u>Index</u>	<u>Return</u>	<u>Index</u>
Tier I	Residential	2.96%	0.53	3.03%	0.54
Tier II	GS,PS,AES,LS,RLS,OSL	11.44%	2.05	11.14%	2.00
Tier III	TODS,TODP,RTS,FLS	5.12%	0.92	5.17%	0.93
Tier IV	LE,TE	14.77%	2.65	17.84%	3.20

2

3

4

Q. What conclusions can you draw from your 12 CP cost study?

5

A. Comparing the results of the two cost of service methodologies in Tables 1 and 2 indicates that the LOLP and the 12 CP cost studies are reporting relatively similar results, especially with regard to whether the rate class is earning a rate of return above or below the retail average. The Companies relied exclusively on the LOLP cost studies in developing their proposed TIER based allocation of the revenue increase in this case. It appears that similar conclusions would be drawn from the 12 CP studies as well.

6

7

8

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10

11

12

13

Q. Have you identified any other issues that would impact the cost of service study results for KU?

14

1 A. Yes. In the Company's 2016 base rate case, I raised an issue associated with the
2 treatment of Rate FLS in KU's class cost of service study.³ This issue concerns the
3 cost of service effect of the 5 minute notice curtailment provision in the tariff. This
4 provision permits the Company to interrupt 95% of a customer's FLS load upon 5
5 minutes notice for a period of not more than 10 minutes. This interruptible provision
6 of Rate FLS is not connected with the Company's CRS 1 and CRS 2 interruptible
7 riders, which are completely separate. The specific Rate FLS provision that permits
8 these 5 minute notice interruptions is as follows:

9 **SYSTEM CONTINGENCIES AND INDUSTRY SYSTEM**
10 **PERFORMANCE CRITERIA**

11 *Company reserves the right to interrupt up to 95% of Customer's load to*
12 *facilitate Company compliance with system contingencies and with industry*
13 *performance criteria. Customer will permit Company to install electronic*
14 *equipment and associated real-time metering to permit Company*
15 *interruption of Customer's load. Such equipment will immediately notify*
16 *Customer five (5) minutes before an electronically initiated interruption*
17 *that will begin immediately thereafter and last no longer than ten (10)*
18 *minutes nor shall the interruptions exceed twenty (20) per month. Such*
19 *interruptions will not be accumulated nor credited against annual hours, if*
20 *any, under either Rider CSR-1 or CSR-2. Company's right to interrupt*
21 *under this provision is restricted to responses to unplanned outage or de-*
22 *rates of LG&E and KU Energy LLC System (LKE System) owned or*
23 *purchased generation or when Automatic Reserve Sharing is invoked. LKE*
24 *System, as used herein, shall consist of KU and LG&E. At Customer's*
25 *request, Company shall provide documentation of the need for interruption*
26 *under this provision within sixty (60) days of the end of the applicable*
27 *billing period.*
28

³ LG&E has no customers taking service on Rate FLS.

1 **Q. How does the KU class cost of service study reflect this interruptible**
2 **provision?**

3 A. The Company does not include any adjustments to reflect this interruptible
4 provision in the class cost of service study.

5

6 **Q. How often does KU interrupt its FLS customer under this provision?**

7 A. During the past 3 years, KU has interrupted its sole FLS customer, North American
8 Stainless (“NAS”), 114 times under this provision. Baron Exhibit__ (SJB-7)
9 contains a copy of the Company’s response detailing these interruptions. On many
10 of the interruption events, the FLS load exceeded 100 mW, prior to interruption.
11 This means that the Company obtained in excess of 100 mW of capacity upon 5
12 minute notice in order to meet unplanned system outages. During the 10 minute
13 duration interruption period that is permitted under the FLS tariff provision, the
14 Company indicated it was able to ramp-up its capacity using spinning reserve and
15 Fast Start CT capacity. Given the number of times that KU has invoked this
16 interruptible provision and obtained 5 minute notice capacity, there is a system
17 benefit provided by Rate FLS that is not recognized in the cost of service analysis.
18 Moreover, given the frequency of interruptions under this FLS tariff provision,
19 NAS would clearly experience costs in the form of lost production and/or lost heat
20 energy that had been utilized in a partial arc furnace melt.

21

1 **Q. What is the implication of this benefit with regard to interpreting the Rate**
2 **FLS reported rate of return in the cost of service study?**

3 A. All else being equal, to the extent that there is an interruptible benefit that is not
4 accounted for in the cost allocation study, the resulting rate of return shown for
5 Rate FLS would be understated.

6

7 **Q. Have you made any adjustments to either the Company's LOLP cost study or**
8 **your 12 CP cost study to account for the 5 minute notice interruptible provision?**

9 A. No. While I did not make any adjustment to the cost studies, I believe that there is an
10 unaccounted for impact on the reported Rate FLS rates of return in both the LOLP
11 and 12 CP cost of service studies. This impact has the effect of understating the
12 reported rate of return. In other words, the reported rates of return for KU's FLS rate
13 class is likely higher than shown for both the LOLP and 12 CP cost of service studies
14 because the benefits to the system from the 5 minute notice interruptible provision is
15 not included in either cost study.

16

17 **III. APPORTIONMENT OF THE REVENUE INCREASE TO RATE CLASSES**

18

19 **Q. How are the Companies proposing to apportion the overall revenue increase to**
20 **rate classes in this case?**

1 A. As discussed by Companies' witness Robert Conroy and Steven Seelye, the
2 Companies are proposing a TIER based methodology to allocate the overall revenue
3 increase to rate classes. For each Company, individual rate schedules are grouped into
4 a TIER that generally reflects cost of service and customer characteristics. TIER I
5 includes the residential class, TIER II includes general service rate schedules and
6 various other schedules, TIER III includes large general service and large power
7 industrial customers and TIER IV includes lighting and traffic signal rate schedules.
8 The Companies are proposing that TIER I, residential customers, receive a revenue
9 increase set at 1% higher than the retail average; and that TIER III customers, which
10 includes the Companies largest industrial manufacturing customers, receive an
11 increase set at 1% below the retail average. No increase is proposed for lighting and
12 traffic signal schedules in TIER IV. The residual increase is assigned to TIER II.

13

14 **Q. What is the Companies rationale for its proposed TIER increases?**

15 A. For the residential class, TIER I, the Companies appeared to have focused on the
16 results of the class cost of service analysis. However, the 1% higher increase assigned
17 to this TIER also reflects significant mitigation from what otherwise would be a full
18 cost of service increase. The residential rate class (TIER I) will continue to receive
19 significant subsidies, even after the 1% higher than average increase in this case.

20

1 For the Companies' largest customers in TIER III, the Companies considered both
2 cost of service and the impact of the proposed electric power increases on the
3 economic viability of the LG&E and KU service areas.

4
5 **Q. Do you agree with the Companies' focus on considering the impact on economic**
6 **development in Kentucky in its consideration of the TIER III rate increase?**

7 A. Yes. Both Mr. Conroy and Mr. Seelye testified that economic development and the
8 retention and expansion of Kentucky's manufacturing base were important
9 considerations in their recommendation to assess the TIER III rate schedules an
10 increase that is one percent below the system average. I agree with both witness on
11 this issue.

12
13 Mr. Conroy testified that *"the Companies recognize the importance of economic*
14 *development and of manufacturing to the economic health of the Commonwealth.*
15 *The Companies took those considerations into account when formulating their*
16 *proposed revenue allocations in these proceedings, recognizing that utility rates*
17 *are important to both economic development and the ongoing vitality of*
18 *manufacturers already located in the Companies' service territories."* Likewise,
19 Mr. Seelye testified that *"Large businesses, such as manufacturers (e.g., North*
20 *American Stainless, Ford Motor Company, and Toyota), shipping companies (e.g.,*
21 *United Parcel Service) and internet-based suppliers (e.g., Amazon), will often have*

1 *options for where they locate their operations and will decide on a location based*
2 *on an array of factors, including the prices of electric energy and natural gas. In*
3 *many cases, the price of electricity is one of the more important considerations in*
4 *determining the location of a large new business facility or where a business will*
5 *choose to expand its existing operations.”*

6
7 **Q. Is the position of Mr. Conroy and Mr. Seelye consistent with the efforts of the**
8 **Kentucky Cabinet for Economic Development?**

9 A. Yes. The Kentucky Cabinet for Economic Development uses low electric rates as
10 a major recruitment tool for new and expanding industry, stating: “*Kentucky has*
11 *long enjoyed a competitive advantage in the provision of energy, natural gas and*
12 *water....Utility providers, with oversight by the Kentucky Public service*
13 *Commission (PSC), ensure competitive rates.”* Among the top ten reasons for
14 locating and expanding in Kentucky, the Cabinet lists low electric rates as number
15 five: “*5. Electrifying power rates. Among the more significant location factors*
16 *having a direct influence on bottom line costs is the annual capital that must be*
17 *committed to utility consumption. Kentucky has the lowest cost of electricity in the*
18 *industrial sector among states east of the Mississippi River and one of the lowest*
19 *in the U.S., coming in nearly 20 percent lower than the national average.”*

1 Q. Are you aware of any Kentucky state government studies that back up the
2 claim that low industrial electric rates are critical to the economic well-being
3 of the Commonwealth?
4

5 A. Yes. An October 2012 study entitled The Vulnerability of Kentucky's
6 Manufacturing Economy to Increasing Electricity Prices prepared by the Kentucky
7 Energy and Environment Cabinet supports this proposition and warns that
8 increasing industrial electric rates is a major threat to the economy. The first
9 sentence of the Executive Summary states: "*Kentucky's low electric prices have*
10 *fostered the single-most electricity-intensive manufacturing economy in the United*
11 *States, a manufacturing economy that is now threatened by future electricity price*
12 *increases.*" The study goes on to state that "*Kentucky's electricity-intensive*
13 *manufacturing economy is threatened by increasing electricity prices. While the*
14 *price of electricity is only one of several factors influencing industrial location*
15 *decisions, Kentucky's historically low and stable electricity prices have fostered*
16 *the most electricity-intensive economy in the United States. In the twenty-first*
17 *century, the bulwark of the Kentucky economy is clearly manufactured goods—the*
18 *Commonwealth's single largest source of economic activity....In addition, to being*
19 *Kentucky's largest source of revenue and a leading source of employment,*
20 *manufacturing is sui generis, fulfilling a unique economic function in that most*
21 *goods are exported, bringing revenue to the Commonwealth from other economies.*

1 *This is in contrast to other top employment opportunities in Kentucky: retail*
2 *services, health care, local government, food service, and construction, which*
3 *principally depend upon local sources of revenue. Employment opportunities in*
4 *manufacturing pay more than the two larger employment sectors, retail and*
5 *hospitality. Large manufacturers, such as General Electric, Toyota, and Ford*
6 *Motor in Kentucky, also have a more significant multiplier effect on a regional*
7 *economy because they encourage suppliers to collocate with manufacturing*
8 *facilities.”*

9
10 **Q. Are there more recent state government studies that address the relationship**
11 **between electric prices and economic development in Kentucky?**

12
13 A. Yes. The 2018 KENTUCKY ANNUAL ECONOMIC REPORT was prepared by
14 the Center for Business and Economic Research at the University of Kentucky. This
15 Annual Report is required by KRS 164.738, and “*is to be disseminated to the*
16 *Governor’s Financial Planning Council, state agencies, and other potential users*
17 *of such information.”* The 2018 Annual Report states: “*Kentucky has an energy*
18 *intensive economy. To generate \$1 in state gross domestic product, Kentucky*
19 *consumes about 8,990 Btu (2015). By comparison, the U.S. average is around 5,430*
20 *Btu and the competitor state average is 6,320 Btu. This difference is driven, in part,*
21 *by Kentucky’s larger than average manufacturing sector, which, of course, depends*

1 *greatly upon energy as a production input. One implication of this higher*
2 *dependence on energy as an economic input is that, compared to most competitor*
3 *states, Kentucky's economy is more sensitive to energy prices." The 2018 Annual*
4 *Report cautions that because industrial electricity rates in Kentucky have risen by*
5 *103% from 1997 to 2016, compared to 50%-55% for competitor states, Kentucky*
6 *is losing its comparative advantage in low-cost utility rates.*

7
8 **Q. Do you support the Companies' proposed TIER based rate class revenue**
9 **apportionment?**

10 A. Conceptually, I do support the Companies' approach. However, I believe that it
11 should be modified to reflect the actual rate increases that customers will face, with
12 the implementation of new base rates in this case. The Companies' analysis shows
13 the increases in base revenues for each rate class, but it does not reflect the very
14 significant impact from the termination of the current TCJA surcredits. Companies'
15 witness Christopher M. Garrett explains this at page 34 of his testimony, as follows:

16 The Companies began providing the TCJA Surcredit to distribute the base
17 rate benefits of the TCJA to customers on April 1, 2018, and will continue
18 to do so through April 30, 2019. The TCJA Surcredit is set to expire on
19 April 30, 2019 because the tax benefits from the TCJA are being
20 incorporated into base rates as discussed above per the terms of the Offer
21 and Acceptance of Satisfaction approved in the March 20, 2018 Order in
22 Case No. 2018-00034.
23

1 **Q. What are the actual rate increases that each rate class will face when new base**
2 **rates become effective?**

3 A. Table 3 below shows the increases by rate class and TIER, for each of LG&E's rate
4 schedules, reflecting only the base revenue impacts, compared to the actual increases
5 that these rate schedules will receive, which includes both the base rate increase and
6 the simultaneous elimination of the TCJA surcredits. Also shown on the table are the
7 percentage increases proposed by the Company, excluding fuel (both base rate fuel
8 and the FAC). Since this case only concerns non-fuel changes, the non-fuel
9 percentage changes more closely reflect changes of the costs at issue in this case.
10 Table 4 shows similar information for KU.

Table 3					
LG&E Proposed Increases by TIER					
Revenues, Excluding TCJA Impacts					
TIER	Total Revenue at Present Rates	Total Revenue at Proposed Rates	Change in Total Revenue	% Change	% Change Non-Fuel
Tier I	\$ 459,888,134	\$ 478,687,224	\$ 18,799,091	4.09%	5.18%
Tier II	\$ 371,399,366	\$ 381,269,113	\$ 9,869,747	2.66%	3.37%
Tier III	\$ 312,727,313	\$ 319,284,905	\$ 6,557,592	2.10%	3.11%
Tier IV	\$ 635,162	\$ 635,157	\$ (6)	0.00%	0.00%
Total*	\$ 1,144,649,976	\$ 1,179,876,399	\$ 35,226,423	3.08%	4.06%
Revenues, Including TCJA Impacts					
TIER	Total Revenue at Present Rates with TCJA Surcredits	Total Revenue at Proposed Rates	Change in Total Revenue	% Change	% Change Non-Fuel
Tier I	\$ 443,495,106	\$ 478,687,224	\$ 35,192,119	7.94%	10.16%
Tier II	\$ 361,154,717	\$ 381,269,113	\$ 20,114,396	5.57%	7.11%
Tier III	\$ 299,357,423	\$ 319,284,905	\$ 19,927,482	6.66%	10.10%
Tier IV	\$ 612,453	\$ 635,157	\$ 22,704	3.71%	5.17%
Total*	\$ 1,104,619,699	\$ 1,179,876,399	\$ 75,256,700	6.81%	9.10%
*Excludes EV, Solar, CSR, other operating revenues					

1

Table 4
KU Proposed Increases by TIER

Revenues, Excluding TCJA Impacts					
TIER	Total Revenue at Present Rates	Total Revenue at Proposed Rates	Change in Total Revenue	% Change	% Change Non-Fuel
Tier I	\$ 622,450,115	\$ 672,890,172	\$ 50,440,057	8.10%	10.56%
Tier II	\$ 465,112,880	\$ 495,866,546	\$ 30,753,667	6.61%	8.32%
Tier III	\$ 518,915,395	\$ 550,648,014	\$ 31,732,619	6.12%	9.73%
Tier IV	\$ 289,144	\$ 288,748	\$ (396)	-0.14%	-0.18%
Total*	\$ 1,606,767,533	\$ 1,719,693,480	\$ 112,925,947	7.03%	9.62%
Revenues, Including TCJA Impacts					
TIER	Total Revenue at Present Rates with TCJA Surcredits	Total Revenue at Proposed Rates	Change in Total Revenue	% Change	% Change Non-Fuel
Tier I	\$ 599,602,343	\$ 672,890,172	\$ 73,287,829	12.22%	16.12%
Tier II	\$ 453,344,923	\$ 495,866,546	\$ 42,521,624	9.38%	11.89%
Tier III	\$ 495,184,732	\$ 550,648,014	\$ 55,463,282	11.20%	18.33%
Tier IV	\$ 280,506	\$ 288,748	\$ 8,242	2.94%	3.92%
Total*	\$ 1,548,412,504	\$ 1,719,693,480	\$ 171,280,977	11.06%	15.36%
*Excludes EV, Solar, CSR other operating revenues					

As can be seen in Tables 3 and 4, the actual increases are much higher (6.8% for LG&E versus 3.1% when the TCJA termination impact is excluded, and 11.1% versus 7.0% for KU). Excluding fuel, the increases with the TCJA impacts for LG&E TIER III customers will be 10.1% and 18.3% for KU. Moreover, for LG&E, the increases for TIER III rate schedules (large general service and manufacturing customers) are nearly equal to the average retail increase, rather than 1% lower, when the TCJA impacts are properly reflected. For KU, the increases for TIER III rate schedules

1 (large general service and manufacturing customers) are higher than the average retail
2 increase, rather than 1% lower, when the TCJA impacts are properly reflected.

3

4 **Q. What changes do you recommend to the Companies' proposed revenue increases**
5 **to reflect the impact of the loss of the TCJA surcredits?**

6 A. I am recommending a modification to the Companies revenue allocation
7 methodology to fully reflect the actual increases that each TIER group of rate
8 schedules will receive upon the implementation of new base rates in this case. As I
9 discussed above, each rate schedule will simultaneously receive both a base rate
10 increase and a loss of TCJA surcredits, which is effectively another component of the
11 base revenue increase. To reflect the full impact of new base rates, I used the
12 Company's revenue allocation method that assigns a 1% higher than average revenue
13 increase to the residential class (TIER I), a 1% lower than average increase to TIER
14 III large industrial rate schedules, no increase to TIER IV and the residual revenue
15 increase to TIER II rate classes. These increases, by TIER, are shown for LG&E and
16 KU in Tables 5 and 6 below.

17

18 **Q. What is the impact of your recommendation on residential customers in TIER**
19 **I?**

1 A. As can be seen in Tables 5 and 6, the TIER I increases are almost exactly the same as
2 proposed by the Companies (actually, the increases are slightly less for both LG&E
3 and KU than proposed by the Companies).
4

	LGE Proposed Increases Including TCJA Surcredit Loss	KIUC Proposed Revenue Allocation Including TCJA Elimination	KIUC Proposed Base Revenue Increase Allocation	% Increase
Total Tier I	\$ 34,812,985	7.85%	18,419,956	4.01%
Total Tier II	\$ 22,909,534	6.34%	12,664,886	3.41%
Total Tier III	\$ 17,511,477	5.85%	4,141,587	1.32%
Total Tier IV	\$ 22,704	3.71%	(6)	0.00%
Subtotal Excluding EV, Solar, CSR	\$ 75,256,700	6.81%	35,226,423	3.08%
EV, Solar, CSR	(15,951)		(15,966)	
Sales to Ultimate Customers	75,240,749	6.85%	35,210,457	3.09%

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Table 6
KIUC Proposed Revenue Allocation - KU

	KU Proposed Increases Including TCJA Surcredit Loss	KIUC Proposed Revenue Allocation Including TCJA	KIUC Proposed Base Revenue Increase Allocation	% Increase
Total Tier I	\$ 73,104,898	12.19%	\$ 50,257,127	8.07%
Total Tier II	\$ 47,697,468	10.52%	\$ 35,929,511	7.72%
Total Tier III	\$ 50,470,368	10.19%	\$ 26,739,705	5.15%
Total Tier IV	\$ 8,242	2.94%	\$ (396)	-0.14%
EV, Solar, CSR	\$ (7,057)		\$ (7,072)	
Sales to Ultimate Customers	\$ 171,273,919	11.19%	\$ 112,925,947	7.11%

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4

Q. KIUC is recommending significant adjustments to the Companies' overall revenue increases in this case. In the event that the Commission adopts KIUC's position, how should your recommended TIER increases be adjusted?

5

6

7

A. My recommendation is to apply a uniform percentage scale-back to the proposed TIER increases shown in my Tables 5 and 6. For example, in the case of KU, the Company is requesting a base revenue increase of \$112.925 million. If the Commission approves an increase of only \$80.925 million, the difference of \$32 million represents a 28.3% decrease to the Company's requested increase. In this example, each of the TIER base revenue increases shown in my Table 6 would be

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1 reduced by 28.3%. My recommended approach should apply to any revenue
2 adjustment approved in this case.

3
4 **IV. LOAD FORECAST ISSUES**

5
6 **Q. Have you identified any problems associated with the Companies' test year sales**
7 **and revenue forecast?**

8 A. Yes. Mr. Sinclair's Exhibits DSS-1 (KU) and DSS-2 (LG&E) present comparisons
9 of Base year sales and billing demand data for each rate class, compared to the
10 forecasted test year for each Company. For Rate RTS (retail transmission service),
11 kVA billing demands for both KU and LG&E are shown to be decreasing in the test
12 year. The Base year data in the Companies' filing included 6 months of actual data
13 and 6 months of forecasted data. In response to KIUC 2-1, the Companies provided
14 updated actual data for 2018 through November for both KU and LG&E. Tables 7
15 and 8 below show the original Base year vs. forecasted test year data and the updated
16 Base year data that now reflects 11 months of actual 2018 data for each Company.

Table 7
Comparison of KU Electric Customers, Billing Demand, and Energy For Rate RTS
Base Period vs Future Test Period

Original - As Filed

Rate	Category	Period	Base Period (Jan '18 - Dec '18)	Forecasted Test Period (May '19 - Apr '20)	Difference	% Difference
RTS	Customers		25	25	-	0.0%
	Demand	MVA Base	3,387	3,357	(30)	-0.9%
	Demand	MVA Intermediate	3,051	2,986	(65)	-2.1%
	Demand	MVA Peak	3,032	2,989	(43)	-1.4%
	Energy	GWh	1,481	1,473	(9)	-0.6%

Updated Per KIUC 2-1

Rate	Category	Period	Updated Base Period (Jan '18 - Dec '18)	Forecasted Test Period (May '19 - Apr '20)	Difference	% Difference
RTS	Customers		25	25	-	0.0%
	Demand	MVA Base	3,429	3,357	(72)	-2.1%
	Demand	MVA Intermediate	3,118	2,986	(133)	-4.3%
	Demand	MVA Peak	3,085	2,989	(96)	-3.1%
	Energy	GWh	1,506	1,473	(34)	-2.2%

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Table 8 Comparison of LG&E Electric Customers, Billing Demand, and Energy For Rate RTS Base Period vs Future Test Period							
Original - As Filed							
Rate	Category		Period	Base Period (Jan '18 - Dec '18)	Forecasted Test Period (May '19 - Apr '20)	Difference	% Difference
RTS	Customers			13	13	-	0.0%
	Demand	MVA	Base	2,570	2,362	(207)	-8.1%
	Demand	MVA	Intermediate	2,172	2,089	(83)	-3.8%
	Demand	MVA	Peak	2,132	2,063	(69)	-3.2%
	Energy	GWh		1,052	1,056	4	0.4%
Updated Per KIUC 2-1							
Rate	Category		Period	Updated Base Period (Jan '18 - Dec '18)	Forecasted Test Period (May '19 - Apr '20)	Difference	% Difference
RTS	Customers			13	13	-	0.0%
	Demand	MVA	Base	2,557	2,362	(195)	-7.6%
	Demand	MVA	Intermediate	2,212	2,089	(123)	-5.6%
	Demand	MVA	Peak	2,175	2,063	(111)	-5.1%
	Energy	GWh		1,077	1,056	(21)	-1.9%

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Q. What do you conclude from the updated Base year data?

A. As can be seen in Tables 7 and 8, the decrease in billing demand assumed by the Companies is significantly greater when updated actual 2018 data is used for the Base year.

1 **Q. Can this forecasted decrease in Rate RTS usage be explained by weather**
2 **impacts?**

3 A. No. Rate RTS is not weather normalized because it is primarily comprised of large
4 manufacturing facilities that would not be materially impacted by weather effects.

5
6 **Q. Are the decreases by the Companies due to an assumed loss of RTS customers?**

7 A. No. The RTS customer count for each Company is identical in the Base year and the
8 Forecasted test year.

9
10 **Q. Have you calculated the revenue impact of using the 2018 Base year billing kVa**
11 **instead of the Companies' forecast for Rate RTS?**

12 A. Yes. For KU, substituting the updated actual Base year billing kVa for the Company's
13 projected data would increase RTS demand revenues by \$1,475,122. For LG&E, the
14 increase in RTS demand revenues would be \$1,788,503.

15
16 **Q. Do you recommend that the updated 2018 Base year billing kVa data be used in**
17 **lieu of the Companies' forecasts to determine the KU and LG&E Rate RTS**
18 **revenues in this case?**

19 A. Yes. The Companies' forecast implies a significant decline in economic activity for
20 large manufacturing customers in the KU and LG&E service areas. While no one can
21 accurately predict the economy, I believe that the Companies' forecast is unduly

1 pessimistic. I believe that a better measure of future test year revenues for these large
2 manufacturing customers is the most recent actual data.

3

4 **Q. Does that complete your testimony?**

5 **A. Yes.**

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

STEPHEN J. BARON, being duly sworn, deposes and states: that the attached is his sworn testimony and that the statements contained are true and correct to the best of his knowledge, information and belief.

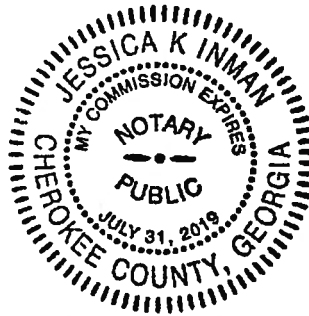
Stephen G. Baron

Stephen G. Baron

Sworn to and subscribed before me on this
16th day of January 2019.

Jessica K. Inman

Notary Public



COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

**EXHIBITS
OF
STEPHEN J. BARON**

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

**EXHIBIT__(SJB-1)
OF
STEPHEN J. BARON**

Professional Qualifications**Of****Stephen J. Baron**

Mr. Baron graduated from the University of Florida in 1972 with a B.A. degree with high honors in Political Science and significant coursework in Mathematics and Computer Science. In 1974, he received a Master of Arts Degree in Economics, also from the University of Florida. His areas of specialization were econometrics, statistics, and public utility economics. His thesis concerned the development of an econometric model to forecast electricity sales in the State of Florida, for which he received a grant from the Public Utility Research Center of the University of Florida. In addition, he has advanced study and coursework in time series analysis and dynamic model building.

Mr. Baron has more than forty years of experience in the electric utility industry in the areas of cost and rate analysis, forecasting, planning, and economic analysis.

Following the completion of my graduate work in economics, he joined the staff of the Florida Public Service Commission in August of 1974 as a Rate Economist. His responsibilities included the analysis of rate cases for electric, telephone, and gas utilities, as well as the preparation of cross-examination material and the preparation of staff recommendations.

In December 1975, he joined the Utility Rate Consulting Division of Ebasco Services, Inc.

J. KENNEDY AND ASSOCIATES, INC.

as an Associate Consultant. In the seven years he worked for Ebasco, he received successive promotions, ultimately to the position of Vice President of Energy Management Services of Ebasco Business Consulting Company. His responsibilities included the management of a staff of consultants engaged in providing services in the areas of econometric modeling, load and energy forecasting, production cost modeling, planning, cost-of-service analysis, cogeneration, and load management.

He joined the public accounting firm of Coopers & Lybrand in 1982 as a Manager of the Atlanta Office of the Utility Regulatory and Advisory Services Group. In this capacity he was responsible for the operation and management of the Atlanta office. His duties included the technical and administrative supervision of the staff, budgeting, recruiting, and marketing as well as project management on client engagements. At Coopers & Lybrand, he specialized in utility cost analysis, forecasting, load analysis, economic analysis, and planning.

In January 1984, he joined the consulting firm of Kennedy and Associates as a Vice President and Principal. Mr. Baron became President of the firm in January 1991.

He has presented numerous papers and published an article entitled "How to Rate Load Management Programs" in the March 1979 edition of "Electrical World." His article on "Standby Electric Rates" was published in the November 8, 1984 issue of "Public Utilities Fortnightly." In February of 1984, he completed a detailed analysis entitled "Load Data

Transfer Techniques" on behalf of the Electric Power Research Institute, which published the study.

Mr. Baron has presented testimony as an expert witness in Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Indiana, Kentucky, Louisiana, Maine, Michigan, Minnesota, Maryland, Missouri, Montana, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, Wyoming, the Federal Energy Regulatory Commission and in United States Bankruptcy Court. A list of his specific regulatory appearances follows.

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdic.	Party	Utility	Subject
4/81	203(B)	KY	Louisville Gas & Electric Co.	Louisville Gas & Electric Co.	Cost-of-service.
4/81	ER-81-42	MO	Kansas City Power & Light Co.	Kansas City Power & Light Co.	Forecasting.
6/81	U-1933	AZ	Arizona Corporation Commission	Tucson Electric Co.	Forecasting planning.
2/84	8924	KY	Airco Carbide	Louisville Gas & Electric Co.	Revenue requirements, cost-of-service, forecasting, weather normalization.
3/84	84-038-U	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Excess capacity, cost-of-service, rate design.
5/84	830470-EI	FL	Florida Industrial Power Users' Group	Florida Power Corp.	Allocation of fixed costs, load and capacity balance, and reserve margin. Diversification of utility.
10/84	84-199-U	AR	Arkansas Electric Energy Consumers	Arkansas Power and Light Co.	Cost allocation and rate design.
11/84	R-842651	PA	Lehigh Valley Power Committee	Pennsylvania Power & Light Co.	Interruptible rates, excess capacity, and phase-in.
1/85	85-65	ME	Airco Industrial Gases	Central Maine Power Co.	Interruptible rate design.
2/85	I-840381	PA	Philadelphia Area Industrial Energy Users' Group	Philadelphia Electric Co.	Load and energy forecast.
3/85	9243	KY	Alcan Aluminum Corp., et al.	Louisville Gas & Electric Co.	Economics of completing fossil generating unit.
3/85	3498-U	GA	Attorney General	Georgia Power Co.	Load and energy forecasting, generation planning economics.
3/85	R-842632	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Generation planning economics, prudence of a pumped storage hydro unit.
5/85	84-249	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Cost-of-service, rate design return multipliers.
5/85		City of Santa Clara	Chamber of Commerce	Santa Clara Municipal	Cost-of-service, rate design.
6/85	84-768-E-42T	WV	West Virginia Industrial Intervenors	Monongahela Power Co.	Generation planning economics, prudence of a pumped storage hydro unit.
6/85	E-7	NC	Carolina	Duke Power Co.	Cost-of-service, rate design,

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdict.	Party	Utility	Subject
	Sub 391		Industrials (CIGFUR III)		interruptible rate design.
7/85	29046	NY	Industrial Energy Users Association	Orange and Rockland Utilities	Cost-of-service, rate design.
10/85	85-043-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Regulatory policy, gas cost-of- service, rate design.
10/85	85-63	ME	Airco Industrial Gases	Central Maine Power Co.	Feasibility of interruptible rates, avoided cost.
2/85	ER- 8507698	NJ	Air Products and Chemicals	Jersey Central Power & Light Co.	Rate design.
3/85	R-850220	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Optimal reserve, prudence, off-system sales guarantee plan.
2/86	R-850220	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Optimal reserve margins, prudence, off-system sales guarantee plan.
3/86	85-299U	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Cost-of-service, rate design, revenue distribution.
3/86	85-726- EL-AIR	OH	Industrial Electric Consumers Group	Ohio Power Co.	Cost-of-service, rate design, interruptible rates.
5/86	86-081- E-GI	WV	West Virginia Energy Users Group	Monongahela Power Co.	Generation planning economics, prudence of a pumped storage hydro unit.
8/86	E-7 Sub 408	NC	Carolina Industrial Energy Consumers	Duke Power Co.	Cost-of-service, rate design, interruptible rates.
10/86	U-17378	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Excess capacity, economic analysis of purchased power.
12/86	38063	IN	Industrial Energy Consumers	Indiana & Michigan Power Co.	Interruptible rates.
3/87	EL-86- 53-001 EL-86- 57-001	Federal Energy Regulatory Commission (FERC)	Louisiana Public Service Commission Staff	Gulf States Utilities, Southern Co.	Cost/benefit analysis of unit power sales contract.
4/87	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Load forecasting and imprudence damages, River Bend Nuclear unit.

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdiction	Party	Utility	Subject
5/87	87-023-E-C	WV	Airco Industrial Gases	Monongahela Power Co.	Interruptible rates.
5/87	87-072-E-G1	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Analyze Mon Power's fuel filing and examine the reasonableness of MP's claims.
5/87	86-524-E-SC	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Economic dispatching of pumped storage hydro unit.
5/87	9781	KY	Kentucky Industrial Energy Consumers	Louisville Gas & Electric Co.	Analysis of impact of 1986 Tax Reform Act.
6/87	3673-U	GA	Georgia Public Service Commission	Georgia Power Co.	Economic prudence, evaluation of Vogtle nuclear unit - load forecasting, planning.
6/87	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Phase-in plan for River Bend Nuclear unit.
7/87	85-10-22	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co.	Methodology for refunding rate moderation fund.
8/87	3673-U	GA	Georgia Public Service Commission	Georgia Power Co.	Test year sales and revenue forecast.
9/87	R-850220	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Excess capacity, reliability of generating system.
10/87	R-870651	PA	Duquesne Industrial Intervenors	Duquesne Light Co.	Interruptible rate, cost-of-service, revenue allocation, rate design.
10/87	I-860025	PA	Pennsylvania Industrial Intervenors		Proposed rules for cogeneration, avoided cost, rate recovery.
10/87	E-015/GR-87-223	MN	Taconite Intervenors	Minnesota Power & Light Co.	Excess capacity, power and cost-of-service, rate design.
10/87	8702-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Revenue forecasting, weather normalization.
12/87	87-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light Power Co.	Excess capacity, nuclear plant phase-in.
3/88	10064	KY	Kentucky Industrial Energy Consumers	Louisville Gas & Electric Co.	Revenue forecast, weather normalization rate treatment of cancelled plant.
3/88	87-183-TF	AR	Arkansas Electric Consumers	Arkansas Power & Light Co.	Standby/backup electric rates.

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdict.	Party	Utility	Subject
5/88	870171C001	PA	GPU Industrial Intervenors	Metropolitan Edison Co.	Cogeneration deferral mechanism, modification of energy cost recovery (ECR).
6/88	870172C005	PA	GPU Industrial Intervenors	Pennsylvania Electric Co.	Cogeneration deferral mechanism, modification of energy cost recovery (ECR).
7/88	88-171- EL-AIR 88-170- EL-AIR Interim Rate Case	OH	Industrial Energy Consumers	Cleveland Electric/ Toledo Edison	Financial analysis/need for interim rate relief.
7/88	Appeal of PSC	19th Judicial Docket U-17282	Louisiana Public Service Commission Circuit Court of Louisiana	Gulf States Utilities	Load forecasting, imprudence damages.
11/88	R-880989	PA	United States Steel	Carnegie Gas	Gas cost-of-service, rate design.
11/88	88-171- EL-AIR 88-170- EL-AIR	OH	Industrial Energy Consumers	Cleveland Electric/ Toledo Edison. General Rate Case.	Weather normalization of peak loads, excess capacity, regulatory policy.
3/89	870216/283 284/286	PA	Armco Advanced Materials Corp., Allegheny Ludlum Corp.	West Penn Power Co.	Calculated avoided capacity, recovery of capacity payments.
8/89	8555	TX	Occidental Chemical Corp.	Houston Lighting & Power Co.	Cost-of-service, rate design.
8/89	3840-U	GA	Georgia Public Service Commission	Georgia Power Co.	Revenue forecasting, weather normalization.
9/89	2087	NM	Attorney General of New Mexico	Public Service Co. of New Mexico	Prudence - Palo Verde Nuclear Units 1, 2 and 3, load fore- casting.
10/89	2262	NM	New Mexico Industrial Energy Consumers	Public Service Co. of New Mexico	Fuel adjustment clause, off- system sales, cost-of-service, rate design, marginal cost.
11/89	38728	IN	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Excess capacity, capacity equalization, jurisdictional cost allocation, rate design, interruptible rates.
1/90	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Jurisdictional cost allocation, O&M expense analysis.

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5/90	890366	PA	GPU Industrial Intervenors	Metropolitan Edison Co.	Non-utility generator cost recovery.
6/90	R-901609	PA	Armco Advanced Materials Corp., Allegheny Ludlum Corp.	West Penn Power Co.	Allocation of QF demand charges in the fuel cost, cost-of- service, rate design.
9/90	8278	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost-of-service, rate design, revenue allocation.
12/90	U-9346 Rebuttal	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Demand-side management, environmental externalities.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements, jurisdictional allocation.
12/90	90-205	ME	Airco Industrial Gases	Central Maine Power Co.	Investigation into interruptible service and rates.
1/91	90-12-03 Interim	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co.	Interim rate relief, financial analysis, class revenue allocation.
5/91	90-12-03 Phase II	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co.	Revenue requirements, cost-of- service, rate design, demand-side management.
8/91	E-7, SUB 487	NC	North Carolina Industrial Energy Consumers	Duke Power Co.	Revenue requirements, cost allocation, rate design, demand- side management.
8/91	8341 Phase I	MD	Westvaco Corp.	Potomac Edison Co.	Cost allocation, rate design, 1990 Clean Air Act Amendments.
8/91	91-372 EL-UNC	OH	Armco Steel Co., L.P.	Cincinnati Gas & Electric Co.	Economic analysis of cogeneration, avoid cost rate.
9/91	P-910511 P-910512	PA	Allegheny Ludlum Corp., Armco Advanced Materials Co., The West Penn Power Industrial Users' Group	West Penn Power Co.	Economic analysis of proposed CWIP Rider for 1990 Clean Air Act Amendments expenditures.
9/91	91-231 -E-NC	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Economic analysis of proposed CWIP Rider for 1990 Clean Air Act Amendments expenditures.
10/91	8341 - Phase II	MD	Westvaco Corp.	Potomac Edison Co.	Economic analysis of proposed CWIP Rider for 1990 Clean Air Act Amendments expenditures.

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Date	Case	Jurisdic.	Party	Utility	Subject
10/91	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Results of comprehensive management audit.
Note: No testimony was prefiled on this.					
11/91	U-17949 Subdocket A	LA	Louisiana Public Service Commission Staff	South Central Bell Telephone Co. and proposed merger with Southern Bell Telephone Co.	Analysis of South Central Bell's restructuring and
12/91	91-410-EL-AIR	OH	Armco Steel Co., Air Products & Chemicals, Inc.	Cincinnati Gas & Electric Co.	Rate design, interruptible rates.
12/91	P-880286	PA	Armco Advanced Materials Corp., Allegheny Ludlum Corp.	West Penn Power Co.	Evaluation of appropriate avoided capacity costs - QF projects.
1/92	C-913424	PA	Duquesne Interruptible Complainants	Duquesne Light Co.	Industrial interruptible rate.
6/92	92-02-19	CT	Connecticut Industrial Energy Consumers	Yankee Gas Co.	Rate design.
8/92	2437	NM	New Mexico Industrial Intervenors	Public Service Co. of New Mexico	Cost-of-service.
8/92	R-00922314	PA	GPU Industrial Intervenors	Metropolitan Edison Co.	Cost-of-service, rate design, energy cost rate.
9/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost-of-service, rate design, energy cost rate, rate treatment.
10/92	M-00920312 C-007	PA	The GPU Industrial Intervenors	Pennsylvania Electric Co.	Cost-of-service, rate design, energy cost rate, rate treatment.
12/92	U-17949	LA	Louisiana Public Service Commission Staff	South Central Bell Co.	Management audit.
12/92	R-00922378	PA	Armco Advanced Materials Co. The WPP Industrial Intervenors	West Penn Power Co.	Cost-of-service, rate design, energy cost rate, SO ₂ allowance rate treatment.
1/93	8487	MD	The Maryland Industrial Group	Baltimore Gas & Electric Co.	Electric cost-of-service and rate design, gas rate design (flexible rates).
2/93	E002/GR-92-1185	MN	North Star Steel Co. Praxair, Inc.	Northern States Power Co.	Interruptible rates.
4/93	EC92	Federal	Louisiana Public	Gulf States	Merger of GSU into Entergy

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Date	Case	Jurisdic.	Party	Utility	Subject
	21000 ER92-806- 000 (Rebuttal)	Energy Regulatory Commission	Service Commission Staff	Utilities/Entergy agreement.	System; impact on system
7/93	93-0114- E-C	WV	Airco Gases	Monongahela Power Co.	Interruptible rates.
8/93	930759-EG	FL	Florida Industrial Power Users' Group	Generic - Electric Utilities	Cost recovery and allocation of DSM costs.
9/93	M-009 30406	PA	Lehigh Valley Power Committee	Pennsylvania Power & Light Co.	Ratemaking treatment of off-system sales revenues.
11/93	346	KY	Kentucky Industrial Utility Customers	Generic - Gas Utilities	Allocation of gas pipeline transition costs - FERC Order 636.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Nuclear plant prudence, forecasting, excess capacity.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Cost allocation, rate design, rate phase-in plan.
5/94	U-20178	LA	Louisiana Public Service Commission	Louisiana Power & Light Co.	Analysis of least cost integrated resource plan and demand-side management program.
7/94	R-00942986	PA	Armco, Inc.; West Penn Power Industrial Intervenors	West Penn Power Co.	Cost-of-service, allocation of rate increase, rate design, emission allowance sales, and operations and maintenance expense.
7/94	94-0035- E-42T	WV	West Virginia Energy Users Group	Monongahela Power Co.	Cost-of-service, allocation of rate increase, and rate design.
8/94	EC94 13-000	Federal Energy Regulatory Commission	Louisiana Public Service Commission	Gulf States Utilities/Entergy	Analysis of extended reserve shutdown units and violation of system agreement by Entergy.
9/94	R-00943 081 R-00943 081C0001	PA	Lehigh Valley Power Committee	Pennsylvania Public Utility Commission	Analysis of interruptible rate terms and conditions, availability.
9/94	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Evaluation of appropriate avoided cost rate.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Revenue requirements.
10/94	5258-U	GA	Georgia Public Service Commission	Southern Bell Telephone &	Proposals to address competition in telecommunication markets.

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Date	Case	Jurisdic.	Party	Utility	Subject
				Telegraph Co.	
11/94	EC94-7-000 ER94-898-000	FERC	Louisiana Public Service Commission	El Paso Electric and Central and Southwest	Merger economics, transmission equalization hold harmless proposals.
2/95	941-430EG	CO	CF&I Steel, L.P.	Public Service Company of Colorado	Interruptible rates, cost-of-service.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Cost-of-service, allocation of rate increase, rate design, interruptible rates.
6/95	C-00913424 C-00946104	PA	Duquesne Interruptible Complainants	Duquesne Light Co.	Interruptible rates.
8/95	ER95-112 -000	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Open Access Transmission Tariffs - Wholesale.
10/95	U-21485	LA	Louisiana Public Service Commission	Gulf States Utilities Company	Nuclear decommissioning, revenue requirements, capital structure.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	System Energy Resources, Inc.	Nuclear decommissioning, revenue requirements.
10/95	U-21485	LA	Louisiana Public Service Commission	Gulf States Utilities Co.	Nuclear decommissioning and cost of debt capital, capital structure.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Retail competition issues.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Revenue requirement analysis.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Elec. Co., Potomac Elec. Power Co., Constellation Energy Co.	Ratemaking issues associated with a Merger.
8/96	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Decommissioning, weather normalization, capital structure.
2/97	R-973877	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Competitive restructuring policy issues, stranded cost, transition charges.
6/97	Civil Action	US Bank- ruptcy	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Confirmation of reorganization plan; analysis of rate paths

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Date	Case	Jurisdiction	Party	Utility	Subject
	No. 94-11474	Court Middle District of Louisiana			produced by competing plans.
6/97	R-973953	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Retail competition issues, rate unbundling, stranded cost analysis.
6/97	8738	MD	Maryland Industrial Group	Generic	Retail competition issues
7/97	R-973954	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Retail competition issues, rate unbundling, stranded cost analysis.
10/97	97-204	KY	Alcan Aluminum Corp. Southwire Co.	Big River Electric Corp.	Analysis of cost of service issues - Big Rivers Restructuring Plan
10/97	R-974008	PA	Metropolitan Edison Industrial Users	Metropolitan Edison Co.	Retail competition issues, rate unbundling, stranded cost analysis.
10/97	R-974009	PA	Pennsylvania Electric Industrial Customer	Pennsylvania Electric Co.	Retail competition issues, rate unbundling, stranded cost analysis.
11/97	U-22491	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Decommissioning, weather normalization, capital structure.
11/97	P-971265	PA	Philadelphia Area Industrial Energy Users Group	Enron Energy Services Power, Inc./ PECO Energy	Analysis of Retail Restructuring Proposal.
12/97	R-973981	PA	West Penn Power Industrial Intervenor	West Penn Power Co.	Retail competition issues, rate unbundling, stranded cost analysis.
12/97	R-974104	PA	Duquesne Industrial Intervenor	Duquesne Light Co.	Retail competition issues, rate unbundling, stranded cost analysis.
3/98 (Allocated Stranded Cost Issues)	U-22092	LA	Louisiana Public Service Commission	Gulf States Utilities Co.	Retail competition, stranded cost quantification.
3/98	U-22092	LA	Louisiana Public Service Commission	Gulf States Utilities, Inc.	Stranded cost quantification, restructuring issues.
9/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative, Inc.	Revenue requirements analysis, weather normalization.
12/98	8794	MD	Maryland Industrial Group and Millennium Inorganic Chemicals Inc.	Baltimore Gas and Electric Co.	Electric utility restructuring, stranded cost recovery, rate unbundling.

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Date	Case	Jurisdct.	Party	Utility	Subject
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Nuclear decommissioning, weather normalization, Entergy System Agreement.
5/99 (Cross- 40-000 Answering Testimony)	EC-98-	FERC	Louisiana Public Service Commission	American Electric Power Co. & Central South West Corp.	Merger issues related to market power mitigation proposals.
5/99 (Response Testimony)	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co.	Performance based regulation, settlement proposal issues, cross-subsidies between electric. gas services.
6/99	98-0452	WV	West Virginia Energy Users Group	Appalachian Power, Monongahela Power, & Potomac Edison Companies	Electric utility restructuring, stranded cost recovery, rate unbundling.
7/99	99-03-35	CT	Connecticut Industrial Energy Consumers	United Illuminating Company	Electric utility restructuring, stranded cost recovery, rate unbundling.
7/99	Adversary Proceeding No. 98-1065	U.S. Bankruptcy Court	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Motion to dissolve preliminary injunction.
7/99	99-03-06	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co.	Electric utility restructuring, stranded cost recovery, rate unbundling.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Nuclear decommissioning, weather normalization, Entergy System Agreement.
12/99	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative, Inc.	Ananlysi of Proposed Contract Rates, Market Rates.
03/00	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative, Inc.	Evaluation of Cooperative Power Contract Elections
03/00	99-1658-EL-ETP	OH	AK Steel Corporation	Cincinnati Gas & Electric Co.	Electric utility restructuring, stranded cost recovery, rate Unbundling.

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Date	Case	Jurisdct.	Party	Utility	Subject
08/00	98-0452 E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co. American Electric Co.	Electric utility restructuring rate unbundling.
08/00	00-1050 E-T 00-1051-E-T	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Electric utility restructuring rate unbundling.
09/00	00-1178-E-T	WV	West Virginia Energy Users Group	Appalachian Power Co. Wheeling Power Co.	Electric utility restructuring rate unbundling
10/00	SOAH 473- 00-1020 PUC 2234	TX	The Dallas-Fort Worth Hospital Council and The Coalition of Independent Colleges And Universities	TXU, Inc.	Electric utility restructuring rate unbundling.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Nuclear decommissioning, revenue requirements.
12/00	EL00-66- 000 & ER00-2854 EL95-33-002	LA	Louisiana Public Service Commission	Entergy Services Inc.	Inter-Company System Agreement: Modifications for retail competition, interruptible load.
04/01	U-21453, U-20925, U-22092 (Subdocket B) Addressing Contested Issues	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Jurisdictional Business Separation - Texas Restructuring Plan
10/01	14000-U	GA	Georgia Public Service Commission Adversary Staff	Georgia Power Co.	Test year revenue forecast.
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Nuclear decommissioning requirements transmission revenues.
11/01	U-25965	LA	Louisiana Public Service Commission	Generic	Independent Transmission Company ("Transco"). RTO rate design.
03/02	001148-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Company	Retail cost of service, rate design, resource planning and demand side management.
06/02	U-25965	LA	Louisiana Public Service Commission	Entergy Gulf States Entergy Louisiana	RTO Issues
07/02	U-21453	LA	Louisiana Public Service Commission	SWEPCO, AEP	Jurisdictional Business Sep. - Texas Restructuring Plan.

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Date	Case	Jurisdct.	Party	Utility	Subject
08/02	U-25888	LA	Louisiana Public Service Commission	Entergy Louisiana, Inc. Entergy Gulf States, Inc.	Modifications to the Inter-Company System Agreement, Production Cost Equalization.
08/02	EL01-88-000	FERC	Louisiana Public Service Commission	Entergy Services Inc. and the Entergy Operating Companies	Modifications to the Inter-Company System Agreement, Production Cost Equalization.
11/02	02S-315EG	CO	CF&I Steel & Climax Molybdenum Co.	Public Service Co. of Colorado	Fuel Adjustment Clause
01/03	U-17735	LA	Louisiana Public Service Commission	Louisiana Coops	Contract Issues
02/03	02S-594E	CO	Cripple Creek and Victor Gold Mining Co.	Aquila, Inc.	Revenue requirements, purchased power.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Weather normalization, power purchase expenses, System Agreement expenses.
11/03	ER03-753-000	FERC	Louisiana Public Service Commission Staff	Entergy Services, Inc. and the Entergy Operating Companies	Proposed modifications to System Agreement Tariff MSS-4.
11/03	ER03-583-000 ER03-583-001 ER03-583-002 ER03-681-000, ER03-681-001 ER03-682-000, ER03-682-001 ER03-682-002	FERC	Louisiana Public Service Commission	Entergy Services, Inc., the Entergy Operating Companies, EWO Marketing, L.P., and Entergy Power, Inc.	Evaluation of Wholesale Purchased Power Contracts.
12/03	U-27136	LA	Louisiana Public Service Commission	Entergy Louisiana, Inc.	Evaluation of Wholesale Purchased Power Contracts.
01/04	E-01345-03-0437	AZ	Kroger Company	Arizona Public Service Co.	Revenue allocation rate design.
02/04	00032071	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Provider of last resort issues.
03/04	03A-436E	CO	CF&I Steel, LP and Climax Molybdenum	Public Service Company of Colorado	Purchased Power Adjustment Clause.

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Date	Case	Jurisdic.	Party	Utility	Subject
04/04	2003-00433 2003-00434	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co. Kentucky Utilities Co.	Cost of Service Rate Design
0-6/04	03S-539E	CO	Cripple Creek, Victor Gold Mining Co., Goodrich Corp., Holcim (U.S.), Inc., and The Trane Co.	Aquila, Inc.	Cost of Service, Rate Design Interruptible Rates
06/04	R-00049255	PA	PP&L Industrial Customer Alliance PPLICA	PPL Electric Utilities Corp.	Cost of service, rate design, tariff issues and transmission service charge.
10/04	04S-164E	CO	CF&I Steel Company, Climax Mines	Public Service Company of Colorado	Cost of service, rate design, Interruptible Rates.
03/05	Case No. 2004-00426 Case No. 2004-00421	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Louisville Gas & Electric Co.	Environmental cost recovery.
06/05	050045-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Company	Retail cost of service, rate design
07/05	U-28155	LA	Louisiana Public Service Commission Staff	Entergy Louisiana, Inc. Entergy Gulf States, Inc.	Independent Coordinator of Transmission – Cost/Benefit
09/05	Case Nos. WV 05-0402-E-CN 05-0750-E-PC	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Environmental cost recovery, Securitization, Financing Order
01/06	2005-00341	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Cost of service, rate design, transmission expenses. Congestion Cost Recovery Mechanism
03/06	U-22092	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Separation of EGS1 into Texas and Louisiana Companies.
03/06	05-1278-E-PC -PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. Wheeling Power Co.	Retail cost of service, rate design.
04/06	U-25116	LA	Louisiana Public Service Commission Staff	Entergy Louisiana, Inc.	Transmission Prudence Investigation
06/06	R-00061346 C0001-0005	PA	Duquesne Industrial Intervenors & IECPA	Duquesne Light Co.	Cost of Service, Rate Design, Transmission Service Charge, Tariff Issues
06/06	R-00061366 R-00061367 P-00062213 P-00062214		Met-Ed Industrial Energy Users Group and Penelec Industrial Customer Alliance	Metropolitan Edison Co. Pennsylvania Electric Co.	Generation Rate Cap, Transmission Service Charge, Cost of Service, Rate Design, Tariff Issues
07/06	U-22092 Sub-J	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Separation of EGS1 into Texas and Louisiana Companies.

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Date	Case	Jurisdic.	Party	Utility	Subject
07/06	Case No. 2006-00130 Case No. 2006-00129	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Louisville Gas & Electric Co.	Environmental cost recovery.
08/06	Case No. PUE-2006-00065	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Co.	Cost Allocation, Allocation of Rev Incr, Off-System Sales margin rate treatment
09/06	E-01345A-	AZ	Kroger Company Arizona Public Service Co.	Revenue allocation, cost of service,	05-0816
11/06	Doc. No. 97-01-15RE02	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power United Illuminating	Rate unbundling issues.
01/07	Case No. 06-0960-E-42T	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Retail Cost of Service Revenue apportionment
03/07	U-29764	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc. Entergy Louisiana, LLC	Implementation of FERC Decision Jurisdictional & Rate Class Allocation
05/07	Case No. 07-63-EL-UNC	OH	Ohio Energy Group	Ohio Power, Columbus Southern Power	Environmental Surcharge Rate Design
05/07	R-00049255 Remand	PA	PP&L Industrial Customer Alliance PPLICA	PPL Electric Utilities Corp.	Cost of service, rate design, tariff issues and transmission service charge.
06/07	R-00072155	PA	PP&L Industrial Customer Alliance PPLICA	PPL Electric Utilities Corp.	Cost of service, rate design, tariff issues.
07/07	Doc. No. 07F-037E	CO	Gateway Canyons LLC	Grand Valley Power Coop.	Distribution Line Cost Allocation
09/07	Doc. No. 05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Cost of Service, rate design, tariff Issues, Interruptible rates.
11/07	ER07-682-000	FERC	Louisiana Public Service Commission Staff	Entergy Services, Inc. and the Entergy Operating Companies	Proposed modifications to System Agreement Schedule MSS-3. Cost functionalization issues.
1/08	Doc. No. 20000-277-ER-07	WY	Cimarex Energy Company	Rocky Mountain Power (PacifiCorp)	Vintage Pricing, Marginal Cost Pricing Projected Test Year
1/08	Case No. 07-551	OH	Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Class Cost of Service, Rate Restructuring, Apportionment of Revenue Increase to Rate Schedules
2/08	ER07-956	FERC	Louisiana Public Service Commission Staff	Entergy Services, Inc. and the Entergy Operating Companies	Entergy's Compliance Filing System Agreement Bandwidth Calculations.
2/08	Doc No. P-00072342	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Default Service Plan issues.
3/08	Doc No. E-01933A-05-0650	AZ	Kroger Company	Tucson Electric Power Co.	Cost of Service, Rate Design

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Date	Case	Jurisdct.	Party	Utility	Subject
05/08	08-0278 E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co. American Electric Power Co.	Expanded Net Energy Cost "ENEC" Analysis.
6/08	Case No. OH 08-124-EL-ATA		Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Recovery of Deferred Fuel Cost
7/08	Docket No. UT 07-035-93		Kroger Company	Rocky Mountain Power Co.	Cost of Service, Rate Design
08/08	Doc. No. WI 6680-JR-116		Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light Co.	Cost of Service, rate design, tariff Issues, Interruptible rates.
09/08	Doc. No. WI 6690-JR-119		Wisconsin Industrial Energy Group, Inc.	Wisconsin Public Service Co.	Cost of Service, rate design, tariff Issues, Interruptible rates.
09/08	Case No. OH 08-936-EL-SSO		Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Provider of Last Resort Competitive Solicitation
09/08	Case No. OH 08-935-EL-SSO		Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Provider of Last Resort Rate Plan
09/08	Case No. OH 08-917-EL-SSO 08-918-EL-SSO		Ohio Energy Group	Ohio Power Company Columbus Southern Power Co.	Provider of Last Resort Rate Plan
10/08	2008-00251 2008-00252	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co. Kentucky Utilities Co.	Cost of Service, Rate Design
11/08	08-1511 E-GI	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost "ENEC" Analysis.
11/08	M-2008- 2036188, M- 2008-2036197	PA	Met-Ed Industrial Energy Users Group and Penelec Industrial Customer Alliance	Metropolitan Edison Co. Pennsylvania Electric Co.	Transmission Service Charge
01/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Entergy's Compliance Filing System Agreement Bandwidth Calculations.
01/09	E-01345A- 08-0172	AZ	Kroger Company	Arizona Public Service Co.	Cost of Service, Rate Design
02/09	2008-00409	KY	Kentucky Industrial Utility Customers, Inc.	East Kentucky Power Cooperative, Inc.	Cost of Service, Rate Design
5/09	PUE-2009 -00018	VA	VA Committee For Fair Utility Rates	Dominion Virginia Power Company	Transmission Cost Recovery Rider
5/09	09-0177- E-GI	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost "ENEC" Analysis
6/09	PUE-2009 -00016	VA	VA Committee For Fair Utility Rates	Dominion Virginia Power Company	Fuel Cost Recovery Rider

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Date	Case	Jurisdic.	Party	Utility	Subject
6/09	PUE-2009-00038	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Company	Fuel Cost Recovery Rider
7/09	080677-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Company	Retail cost of service, rate design
8/09	U-20925 (RRF 2004)	LA	Louisiana Public Service Commission Staff	Entergy Louisiana LLC	Interruptible Rate Refund Settlement
9/09	09AL-299E	CO	CF&I Steel Company Climax Molybdenum	Public Service Company of Colorado	Energy Cost Rate issues
9/09	Doc. No. 05-UR-104	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Cost of Service, rate design, tariff issues, Interruptible rates.
9/09	Doc. No. 6680-UR-117	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light Co.	Cost of Service, rate design, tariff issues, Interruptible rates.
10/09	Docket No. 09-035-23	UT	Kroger Company	Rocky Mountain Power Co.	Cost of Service, Allocation of Rev Increase
10/09	09AL-299E	CO	CF&I Steel Company Climax Molybdenum	Public Service Company of Colorado	Cost of Service, Rate Design
11/09	PUE-2009-00019	VA	VA Committee For Fair Utility Rates	Dominion Virginia Power Company	Cost of Service, Rate Design
11/09	09-1485 E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost "ENEC" Analysis.
12/09	Case No. 09-906-EL-SSO	OH	Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Provider of Last Resort Rate Plan
12/09	ER09-1224	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Entergy's Compliance Filing System Agreement Bandwidth Calculations.
12/09	Case No. PUE-2009-00030	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Co.	Cost Allocation, Allocation of Rev Increase, Rate Design
2/10	Docket No. 09-035-23	UT	Kroger Company	Rocky Mountain Power Co.	Rate Design
3/10	Case No. 09-1352-E-42T	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Retail Cost of Service Revenue apportionment
3/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power Co.	Cost of Service, rate design
4/10	EL09-61	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement Issues Related to off-system sales
4/10	2009-00459	KY	Kentucky Industrial	Kentucky Power Company	Cost of service, rate design,

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdic.	Party	Utility	Subject
			Utility Customers, Inc.		transmission expenses.
4/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co. Kentucky Utilities Co.	Cost of Service, Rate Design
7/10	R-2010- 2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Cost of Service, Rate Design
09/10	2010-00167	KY	Kentucky Industrial Utility Customers, Inc.	East Kentucky Power Cooperative, Inc.	Cost of Service, Rate Design
09/10	10M-245E	CO	CF&I Steel Company Climax Molybdenum	Public Service Company of Colorado	Economic Impact of Clean Air Act
11/10	10-0699- E-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Cost of Service, Rate Design, Transmission Rider
11/10	Doc. No. 4220-JR-116	WI	Wisconsin Industrial Energy Group, Inc.	Northern States Power Co. Wisconsin	Cost of Service, rate design
12/10	10A-554EG	CO	CF&I Steel Company Climax Molybdenum	Public Service Company	Demand Side Management Issues
12/10	10-2586-EL- SSO	OH	Ohio Energy Group	Duke Energy Ohio	Provider of Last Resort Rate Plan Electric Security Plan
3/11	20000-384- ER-10	WY	Wyoming Industrial Energy Consumers	Rocky Mountain Power Wyoming	Electric Cost of Service, Revenue Apportionment, Rate Design
5/11	2011-00036	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Cost of Service, Rate Design
6/11	Docket No. 10-035-124	UT	Kroger Company	Rocky Mountain Power Co.	Class Cost of Service
6/11	PUE-2011- 00045	VA	VA Committee For Fair Utility Rates	Dominion Virginia Power Company	Fuel Cost Recovery Rider
07/11	U-29764	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc. Entergy Louisiana, LLC	Entergy System Agreement - Successor Agreement, Revisions, RTO Day 2 Market Issues
07/11	Case Nos. 11-346-EL-SSO 11-348-EL-SSO	OH	Ohio Energy Group	Ohio Power Company Columbus Southern Power Co.	Electric Security Rate Plan, Provider of Last Resort Issues
08/11	PUE-2011- 00034	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Co.	Cost Allocation, Rate Recovery of RPS Costs
09/11	2011-00161 2011-00162	KY	Kentucky Industrial Utility	Louisville Gas & Electric Co. Kentucky Utilities Company	Environmental Cost Recovery
09/11	Case Nos. 11-346-EL-SSO 11-348-EL-SSO	OH	Ohio Energy Group	Ohio Power Company Columbus Southern Power Co.	Electric Security Rate Plan, Stipulation Support Testimony
10/11	11-0452	WV	West Virginia	Mon Power Co.	Energy Efficiency/Demand Reduction

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdict.	Party	Utility	Subject
	E-P-T		Energy Users Group	Potomac Edison Co.	Cost Recovery
11/11	11-1272 E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost "ENEC" Analysis
11/11	E-01345A- 11-0224	AZ	Kroger Company	Arizona Public Service Co.	Decoupling
12/11	E-01345A- 11-0224	AZ	Kroger Company	Arizona Public Service Co.	Cost of Service, Rate Design
3/12	Case No. 2011-00401	KY	Kentucky Industrial Utility Consumers	Kentucky Power Company	Environmental Cost Recovery
4/12	2011-00036 Rehearing Case	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Cost of Service, Rate Design
5/12	2011-346 2011-348	OH	Ohio Energy Group	Ohio Power Company	Electric Security Rate Plan Interruptible Rate Issues
6/12	PUE-2012 -00051	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Company	Fuel Cost Recovery Rider
6/12	12-00012 12-00026	TN	Eastman Chemical Co. Air Products and Chemicals, Inc.	Kingsport Power Company	Demand Response Programs
6/12	Docket No. 11-035-200	UT	Kroger Company	Rocky Mountain Power Co.	Class Cost of Service
6/12	12-0275- E-GI	WV	West Virginia Energy Users Group	Appalachian Power Company	Energy Efficiency Rider
6/12	12-0399- E-P	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost ("ENEC")
7/12	120015-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Company	Retail cost of service, rate design
7/12	2011-00063	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Environmental Cost Recovery
8/12	Case No. 2012-00226	KY	Kentucky Industrial Utility Consumers	Kentucky Power Company	Real Time Pricing Tariff
9/12	ER12-1384	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Entergy System Agreement, Cancelled Plant Cost Treatment
9/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co. Kentucky Utilities Co.	Cost of Service, Rate Design
11/12	12-1238 E-GI	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost Recovery Issues
12/12	U-29764	LA	Louisiana Public Service Commission Staff	Entergy Gulf States Louisiana	Purchased Power Contracts
12/12	EL09-61	FERC	Louisiana Public Service	Entergy Services, Inc.	System Agreement Issues

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdic.	Party	Utility	Subject
			Service Commission	and the Entergy Operating Companies	Related to off-system sales Damages Phase
12/12	E-01933A-12-0291	AZKroger Company		Tucson Electric Power Co.	Decoupling
1/13	12-1188 E-PC	WV	West Virginia Energy Users Group	Appalachian Power Company	Securitization of ENEC Costs
1/13	E-01933A-12-0291	AZKroger Company		Tucson Electric Power Co.	Cost of Service, Rate Design
4/13	12-1571 E-PC	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Generation Resource Transition Plan Issues
4/13	PUE-2012-00141	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Company	Generation Asset Transfer Issues
6/13	12-1655 E-PC/11-1775-E-P	WV	West Virginia Energy Users Group	Appalachian Power Company	Generation Asset Transfer Issues
06/13	U-32675	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc. Entergy Louisiana, LLC	MISO Joint Implementation Plan Issues
7/13	130040-EI	FL	WCF Health Utility Alliance	Tampa Electric Company	Cost of Service, Rate Design
7/13	13-0467-E-P	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost ("ENEC")
7/13	13-0462-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Company	Energy Efficiency Issues
8/13	13-0557-E-P	WV	West Virginia Energy Users Group	Appalachian Power Company	Right-of-Way, Vegetation Control Cost Recovery Surcharge Issues
10/13	2013-00199	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Ratemaking Policy Associated with Rural Economic Reserve Funds
10/13	13-0764-E-CN	WV	West Virginia Energy Users Group	Appalachian Power Company	Rate Recovery Issues – Clinch River Gas Conversion Project
11/13	R-2013-2372129	PA	United States Steel Corporation	Duquesne Light Company	Cost of Service, Rate Design
11/13	13A-0686EG CO		CF&I Steel Company Climax Molybdenum	Public Service Company of Colorado	Demand Side Management Issues
11/13	13-1064-E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Right-of-Way, Vegetation Control Cost Recovery Surcharge Issues
4/14	ER-432-002	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement Issues Related to Union Pacific Railroad Litigation Settlement

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdiction	Party	Utility	Subject
5/14	2013-2385 2013-2386	OH	Ohio Energy Group	Ohio Power Company	Electric Security Rate Plan Interruptible Rate Issues
5/14	14-0344- E-GI	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost ("ENEC")
5/14	14-0345- E-PC	WV	West Virginia Energy Users Group	Appalachian Power Company	Energy Efficiency Issues
5/14	Docket No. 13-035-184	UT	Kroger Company	Rocky Mountain Power Co.	Class Cost of Service
7/14	PUE-2014 -00007	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Company	Renewable Portfolio Standard Rider Issues
7/14	ER13-2483	FERC	Bear Island Paper WB LLC	Old Dominion Electric Cooperative	Cost of Service, Rate Design Issues
8/14	14-0546- E-PC	WV	West Virginia Energy Users Group	Appalachian Power Company	Rate Recovery Issues – Mitchell Asset Transfer
8/14	PUE-2014 -00026	VA	Old Dominion Committee	Appalachian Power Company	Biennial Review Case - Cost of Service Issues
9/14	14-841-EL- SSO	OH	Ohio Energy Group	Duke Energy Ohio	Electric Security Rate Plan Standard Service Offer
10/14	14-0702- E-42T	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Cost of Service, Rate Design
11/14	14-1550- E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost ("ENEC")
12/14	EL14-026	SD	Black Hills Power Industrial Intervenors	Black Hills Power, Inc.	Cost of Service Issues
12/14	14-1152- E-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Cost of Service, Rate Design transmission, lost revenues
2/15	14-1297 EI-SSO	OH	Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Electric Security Rate Plan Standard Service Offer
3/15	2014-00396	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Cost of service, rate design, transmission expenses.
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co. Kentucky Utilities Co.	Cost of Service, Rate Design
5/15	EL10-65	FERC	Louisiana Public Service Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement Issues Related to Interruptible load
5/15	15-0301- E-GI	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost ("ENEC")
5/15	15-0303-	WV	West Virginia Energy	Appalachian Power	Energy Efficiency/Demand Response

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdiction	Party	Utility	Subject
	E-P		Users Group	Company, Wheeling Power Co.	
6/15	14-1580-EL-RDR	OH	Ohio Energy Group	Duke Energy Ohio	Energy Efficiency Rider Issues
7/15	EL10-65	FERC	Louisiana Public Service Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement Issues Related to Off-System Sales and Bandwidth Tariff
8/15	PUE-2015-00034	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Company	Renewable Portfolio Standard Rider Issues
8/15	87-0669-E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Cost of Service, Rate Design
11/15	D2015-6.51	MT	Montana Large Customer Group	Montana Dakota Utilities Co.	Class Cost of Service, Rate Design
11/15	15-1351-E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost ("ENEC")
3/16	EL01-88 Remand	FERC	Louisiana Public Service Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement Issues Related to Bandwidth Tariff
5/16	16-0239-E-ENEC	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost ("ENEC")
6/16	E-01933A-15-0322		AZKroger Company	Tucson Electric Power Co.	Cost of Service, Rate Design
6/16	16-00001	TN	East Tennessee Energy Consumers	Kingsport Power Co.	Cost of Service, Rate Design
6/16	14-1297-EL-SS0-Rehearing	OH	Ohio Energy Group	Ohio Edison, Toledo Edison Cleveland Electric Illuminating	Electric Security Rate Plan Standard Service Offer
06/16	15-1734-E-T-PC	WV	West Virginia Energy Users Group	Appalachian Power Company, Wheeling Power Co.	Demand Response Rider
7/16	160021-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Company	Retail cost of service, rate design
7/16	16AL-0048E	CO	CF&I Steel LP Climax Molybdenum	Public Service Company of Colorado	Cost of Service, Rate Design
7/16	16-0403-E-P	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Energy Efficiency/Demand Response
10/16	16-1121-E-ENEC	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost ("ENEC")
11/16	16-0395-EL-SS0	OH	Ohio Energy Group	Dayton Power & Light	Electric Security Rate Plan

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdct.	Party	Utility	Subject
11/16	EL09-61-004 FERC Remand		Louisiana Public Service Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement Issues Related to off-system sales Damages Phase
12/16	1139	D.C.	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of Service, Rate Design
1/17	E-01345A-16-0036	AZ	Kroger	Arizona Public Service Co.	Cost of Service, Rate Design
2/17	16-1026-E-PC	WV	West Virginia Energy Users Group	Appalachian Power Co.	Wind Project Purchase Power Agreement
3/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co. Kentucky Utilities Co.	Cost of Service, Rate Design
5/17	16-1852	OH	Ohio Energy Group	Ohio Power Company	Electric Security Rate Plan Interruptible Rate Issues
7/17	17-00032	TN	East Tennessee Energy Consumers	Kingsport Power Co.	Vegetation Management Cost Recovery
8/17	17-0631-E-P	WV	West Virginia Energy Users Group	Monongahela Power Co.	Electric Energy Purchase Agreement
8/17	17-0296-E-PC	WV	West Virginia Energy Users Group	Monongahela Power Co.	Generation Resource Asset Transfer
9/17	2017-0179	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Cost of service, rate design, transmission cost recover.
9/17	17-0401 E-P	WV	West Virginia Energy Users Group	Appalachian Power Company	Energy Efficiency Issues
12/17	17-0894-E-PC	WV	West Virginia Energy Users Group	Appalachian Power Co.	Wind Project Asset Purchase
5/18	1150/1151	D.C.	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of Service, Rate Design Tax Cut and Jobs Act Issues
6/18	17-00143	TN	East Tennessee Energy Consumers	Kingsport Power Co.	Storm Damage Rider Cost Recovery
7/18	18-0503-E-ENEC	WV	West Virginia Energy Users Group	Appalachian Power Company	Expanded Net Energy Cost ("ENEC")
7/18	18-0504-E-P	WV	West Virginia Energy Users Group	Appalachian Power Company	Vegetation Management Cost Recovery
7/18	G.O.236.1	WV	West Virginia Energy Users Group	Appalachian Power Company	Tax Cut and Jobs Act Issues
7/18	G.O.236.1	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Tax Cut and Jobs Act Issues

**Expert Testimony Appearances
of
Stephen J. Baron
As of December 2018**

Date	Case	Jurisdic.	Party	Utility	Subject
10/18	18-0646- E-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Cost of Service, Rate Design TCJA issues
10/18	18-00038	TN	East Tennessee Energy Consumers	Kingsport Power Co.	Tax Cut and Jobs Act Issues
11/18	18-1231- E-ENEC	WV	West Virginia Energy Users Group	Mon Power Co. Potomac Edison Co.	Expanded Net Energy Cost ("ENEC")
11/18	2018-00054	VA	Old Dominion Committee For Fair Utility Rates	Appalachian Power Company	Tax Cut and Jobs Act Issues
12/18	2018-00134	VA	Collegiate Clean Energy	Appalachian Power Company	Competitive Service Provider Issues

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

**EXHIBIT __ (SJB-2)
OF
STEPHEN J. BARON**

KENTUCKY UTILITIES COMPANY

**Response to First Set of Data Requests of
Kentucky Industrial Utility Customers, Inc.
Dated November 13, 2018**

Case No. 2018-00294

Question No. 16

Responding Witness: William Steven Seelye

- Q.1-16. Please provide any testimony, papers or presentations prepared by Mr. Seelye or any other employee of the Prime Group in the past ten years which addresses the LOLP cost of service methodology. This would include all testimony, papers or presentations supporting the LOLP method and testimony opposing the LOLP method.
- A.1-16. Mr. Seelye submitted testimony supporting the LOLP methodology in KU's and LG&E's last rate case proceedings (Case No. 2016-00370 and Case No. 2016-00371, respectively).

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

EXHIBIT__(SJB-3)

OF

STEPHEN J. BARON

KENTUCKY UTILITIES COMPANY

**Response to First Set of Data Requests of
Kentucky Industrial Utility Customers, Inc.
Dated November 13, 2018**

Case No. 2018-00294

Question No. 15

Responding Witness: William Steven Seelye

Q.1-15. Please provide any information available to Mr. Seelye, the Prime Group or LG&E/KU regarding the following:

- a. Any regulatory jurisdiction that has adopted the LOLP cost of service method used by Mr. Seelye in this case.
- b. For each such jurisdiction, please provide a copy of a Commission Order addressing this issue.
- c. Identification of any electric utility that supported the LOLP method in testimony before a state regulatory commission. Please identify the name of the utility, the case number and a copy of the testimony.
- d. Identification of any electric utility in KY that has presented testimony before the KPSC in support of the LOLP cost of service method. For each such utility, please provide the name of the utility, the case number and a copy of the testimony.

A.1-15.

- a. Mr. Seelye is unaware of any regulatory jurisdiction that has adopted the LOLP cost of service method used in this case.
- b. See the response to part a.
- c. KU and LG&E supported the LOLP methodology in Case No. 2016-00370 and Case No. 2016-00371, respectively.
- d. See the response to part c.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

**EXHIBIT __ (SJB-4)
OF
STEPHEN J. BARON**

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power)
Company For (1) A General Adjustment Of Its)
Rates For Electric Service; (2) An Order)
Approving Its 2017 Environmental Compliance)
Plan; (3) An Order Approving Its Tariffs And) Case No. 2017-00179
Riders; (4) An Order Approving Accounting)
Practices To Establish Regulatory Assets Or)
Liabilities; And (5) An Order Granting All Other)
Required Approvals And Relief)

Notice Of Filing Of Supporting Calculations For Allocating PJM Interconnection LLC
Costs Using 12-Coincident-Peak Methodology

Kentucky Power Company files KPCO_2018_12CP_Allocation_Analysis.xlsx

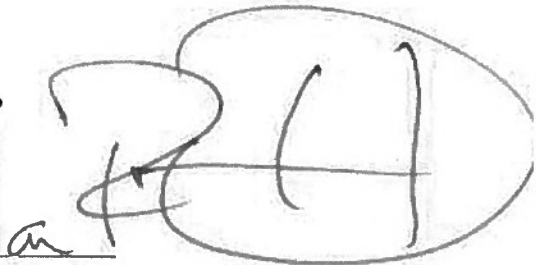
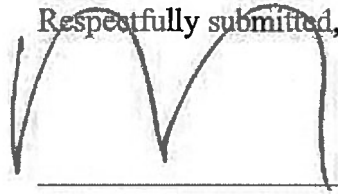
(“Allocation Analysis”) with the Public Service Commission of Kentucky in conformity with ordering paragraph 20 of the Commission’s January 18, 2018 order.

The Allocation Analysis provides the supporting calculations used to derive Kentucky Power’s 5.657 percent allocated share of PJM LSE OATT charges using a 12-coincident-peak methodology. Kentucky Power’s allocated share is derived by first calculating the average of Kentucky Power’s coincident peak load for each of the twelve months for the period November 2016 through October 2017 (943.887 MW). This average is then divided by the average of the sum of the coincident peaks (16,683.894 MW) for each of the six AEP-East operating companies (Ohio Power Company, Indiana Michigan Power Company, Wheeling Power Company, Appalachian Power Company, Kentucky Power Company, and Kingsport Power Company) to calculate Kentucky Power’s allocated share ($943.887 \text{ MW} \div 16,683.894 \text{ MW} = 5.657 \text{ percent}$).

The AEP-East operating companies utilize the 12 CP methodology for cost allocation of PJM LSE OATT charges to the operating companies to decrease annual volatility and potential rate shock. The PJM zonal 1-CP can occur (and has) in both summer and winter months which can cause large shifts in year to year cost allocation depending on whether or not an operating company is winter or summer peaking. The 12-CP methodology creates a less volatile cost allocation.

Kentucky Power proposes to file future 12 CP-allocation analyses in conjunction with its annual filing of the Company's FRR-RPM election analysis. Kentucky Power's election, and its subsequent filing with the Commission, typically are made in the second quarter of each year

Respectfully submitted,



Mark R. Overstreet
Katie M. Glass
STITES & HARBISON PLLC
421 West Main Street
P.O. Box 634
Frankfort, Kentucky 40602-0634
Telephone: (502) 223-3477
Facsimile: (502) 779-8349
moverstreet@stites.com
kglass@stites.com

John W. Pollom
STITES & HARBISON PLLC
250 West Main Street, Suite 2300
Lexington, Kentucky 40507
Telephone: (859) 226-2300
jpollom@stites.com

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

EXHIBIT __ (SJB-5)

OF

STEPHEN J. BARON

LGE

PRODUCTION DEMAND ALLOCATED ON AVERAGE 12 COINCIDENT PEAKS

PRO FORMA PRESENT REVENUES

	Total					
	Operating Revenue	Operating Expense	Net Income	Rate Base	Rate of Return	
Residential	409,875,403	366,113,427	43,761,976	1,298,385,197	3.37%	
General Service	139,297,770	104,218,630	35,079,140	297,537,844	11.79%	
Rate PS	8,267,365	6,489,801	1,777,564	15,372,954	11.56%	
Rate PS	152,694,568	115,837,563	36,857,004	297,296,868	12.40%	
Rate TOD	133,460,280	110,665,409	22,794,872	254,312,344	8.96%	
Rate TOD	88,027,510	73,008,552	15,018,958	183,482,711	8.19%	
Rate RTS	58,303,615	48,559,039	9,744,576	107,558,796	9.06%	
Special Contract	3,464,397	3,135,964	328,433	7,548,127	4.35%	
Street Lighting	19,596,810	13,715,878	5,880,933	84,253,303	6.98%	
Street Lighting	261,183	213,058	48,125	403,310	11.93%	
Traffic Street Lighting	294,970	228,919	66,052	493,339	13.39%	
Outdoor Sports Lighting	8,351	5,412	2,940	23,820	12.34%	
Electric Vehicle Charging	13,277	23,674	(10,397)	139,009	-7.48%	
Solar Share	147,420	87,466	59,955	1,193,920	5.02%	
Business Solar	9,936	4,665	5,271	75,609	6.97%	
Total System	1,013,722,856	842,307,455	171,415,400	2,548,077,151	6.73%	

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

EXHIBIT __ (SJB-6)

OF

STEPHEN J. BARON

PRODUCTION DEMAND ALLOCATED ON 12CP
PRO FORMA PRESENT REVENUES

	Total		Rate of Return		
	Operating Revenue	Operating Expense	Net Income	Rate Base	
Residential	Rate RS	569,441,274	56,988,150	1,922,801,949	2.96%
General Service	GS	200,319,901	55,387,834	446,699,636	12.40%
All Electric Schools	AES	10,988,960	1,248,917	33,559,339	3.72%
Power Service	PS-Secondary	157,158,663	39,063,007	348,682,029	11.20%
Power Service	PS-Primary	12,422,764	3,502,780	24,193,060	14.48%
Time of Day	TOD-Secondary	127,123,540	18,972,324	305,374,253	6.21%
Time of Day	TOD-Primary	243,928,475	26,728,372	599,684,636	4.46%
Retail Transmission Service	RTS - Transmission	80,042,898	10,108,752	181,300,183	5.58%
Fluctuating Load Service	FLS - Transmission	18,769,777	4,019,074	82,736,747	4.86%
Outdoor Lighting	LS & RLS	27,088,568	9,685,673	98,266,250	9.86%
Lighting Energy	LE	86,329	20,377	137,552	14.81%
Traffic Energy	TE	164,581	45,913	311,359	14.75%
Outdoor Sports Lighting	OSL	54,158	13,083	174,751	7.49%
Electric Vehicle Charging	EV	8,320	(11,653)	124,112	-9.39%
Solar Share	SSP	53,220	(32,257)	1,173,128	-2.75%
Total System		1,447,651,428	225,740,344	4,045,218,982	5.58%

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

**APPLICATION OF KENTUCKY UTILITIES)
COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC RATES) 2018-00294**

AND

**APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY FOR AN ADJUSTMENT) CASE NO.
OF ITS ELECTRIC AND GAS BASE RATES) 2018-00295**

**EXHIBIT __ (SJB-7)
OF
STEPHEN J. BARON**

KENTUCKY UTILITIES COMPANY**Response to First Set of Data Requests of
Kentucky Industrial Utility Customers, Inc.
Dated November 13, 2018****Case No. 2018-00294****Question No. 23****Responding Witness: David S. Sinclair**

- Q.1-23. With regard to the Rate FLS, please identify, by month for the last 3 years, each curtailment pursuant to the following provision of the FLS tariff.

***SYSTEM CONTINGENCIES AND INDUSTRY SYSTEM
PERFORMANCE CRITERIA***

Company reserves the right to interrupt up to 95% of Customer's load to facilitate Company compliance with system contingencies and with industry performance criteria. Customer will permit Company to install electronic equipment and associated real-time metering to permit Company interruption of Customer's load. Such equipment will immediately notify Customer five (5) minutes before an electronically initiated interruption that will begin immediately thereafter and last no longer than ten (10) minutes nor shall the interruptions exceed twenty (20) per month. Such interruptions will not be accumulated nor credited against annual hours, if any, under either Rider CSR-1 or CSR-2. Company's right to interrupt under this provision is restricted to responses to unplanned outage or de-rates of LG&E and KU Energy LLC System (LKE System) owned or purchased generation or when Automatic Reserve Sharing is invoked. LKE System, as used herein, shall consist of KU and LG&E. At Customer's request, Company shall provide documentation of the need for interruption under this provision within sixty (60) days of the end of the applicable billing period.

For each such curtailment, provide the following information:

- a. The length of the interruption, and the date and hour of the interruption.
- b. The MW amount of load interrupted.
- b. The specific reason (e.g., unplanned outage or de-rate of LG&E and KU owned generation or when Automatic Reserve Sharing is invoked) for the curtailment.
- c. The specific actions taken by LKE during the 10-minute interruption to respond to the unplanned outage or de-rate, once the 10-minute maximum

interruption period is completed (for example, start-up a quick start unit, rely on spinning reserve capacity, etc.).

- A.1-23. a.-c. See attachment for details of events during the period November 1, 2015 thru November 14, 2018 where curtailment occurred under the FLS tariff.

Attachment to Response to KIUC-1 Question No. 23

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Sinclair

Date	Est. Time (EST)	Event	Response			FLS load before curtailment (MW)
			Spinning Reserves	Fast Start CT	Automatic Reserve Sharing	
11/08/2015	19:19	Unplanned Outage	Yes	Yes	No	122
11/09/2015	09:33	Unplanned Outage	Yes	Yes	No	0
11/13/2015	03:55	Unplanned Outage	Yes	Yes	No	54
11/13/2015	22:24	Unplanned Outage	Yes	Yes	No	0
11/16/2015	09:43	Unplanned Outage	Yes	Yes	No	80
11/16/2015	21:23	Unplanned Outage	Yes	Yes	Yes	51
11/17/2015	07:13	Unplanned Outage	Yes	Yes	No	63
11/17/2015	21:00	Unplanned Outage	Yes	No	No	157
11/30/2015	2:38	Unplanned Outage	Yes	No	Yes	0
12/03/2015	21:58	Unplanned Outage	Yes	No	No	115
12/18/2015	09:28	Unplanned Outage	Yes	No	No	74
01/05/2016	06:03	Unplanned Outage	Yes	No	No	83
01/10/2016	11:54	Unplanned Outage	Yes	Yes	No	83
01/11/2016	13:47	Unplanned Outage	Yes	No	No	158
01/13/2016	21:19	Unplanned Outage	Yes	Yes	No	0
01/14/2016	18:12	Unplanned Outage	Yes	No	No	77
01/20/2016	09:15	Unplanned Outage	Yes	Yes	No	81
02/01/2016	08:22	Unplanned Outage	Yes	No	No	106
02/02/2016	13:01	Unplanned Outage	Yes	Yes	No	73
02/04/2016	16:51	Unplanned Outage	Yes	Yes	No	57
02/27/2016	21:44	Unplanned Outage	Yes	No	No	0
03/14/2016	06:18	Unplanned Outage	Yes	Yes	No	64
03/15/2016	18:13	Unplanned Outage	Yes	Yes	No	0
03/18/2016	06:03	Unplanned Derate	Yes	Yes	No	81
03/24/2016	08:06	Unplanned Outage	Yes	Yes	No	76
04/02/2016	08:08	Unplanned Outage	Yes	No	No	147
04/06/2016	20:27	Unplanned Outage	Yes	Yes	No	64
05/17/2016	19:46	Unplanned Outage	Yes	Yes	No	185
06/06/2016	11:31	Unplanned Outage	Yes	Yes	No	56
06/25/2016	15:01	Unplanned Outage	Yes	Yes	No	0
06/26/2016	15:52	Unplanned Outage	Yes	Yes	Yes	115
07/15/2016	02:41	Unplanned Outage	Yes	No	No	65
07/18/2016	12:33	Unplanned Outage	Yes	Yes	Yes	56
07/31/2016	7:44	Unplanned Outage	Yes	No	Yes	129
08/04/2016	12:18	Unplanned Outage	Yes	Yes	No	124
09/11/2016	01:33	Unplanned Outage	Yes	Yes	No	59
09/16/2016	18:37	Unplanned Outage	Yes	No	No	53
09/27/2016	6:47	Unplanned Outage	Yes	No	Yes	0
10/05/2016	00:06	Unplanned Outage	Yes	No	No	124
10/28/2016	06:26	Unplanned Outage	Yes	No	No	61
10/30/2016	08:46	Unplanned Outage	Yes	Yes	No	0
11/01/2016	06:56	Unplanned Outage	Yes	No	No	72
11/03/2016	04:43	Unplanned Outage	Yes	Yes	No	147
11/03/2016	17:17	Unplanned Outage	Yes	No	No	141
11/14/2016	08:48	Unplanned Outage	Yes	Yes	No	57
12/08/2016	23:50	Unplanned Outage	Yes	No	No	0

Attachment to Response to KIUC-1 Question No. 23

Sinclair

Date	Est. Time (EST)	Event	Response			FLS load before curtailment (MW)
			Spinning Reserves	Fast Start CT	Automatic Reserve Sharing	
12/18/2016	18:38	Unplanned Outage	Yes	No	No	67
01/05/2017	10:47	Unplanned Outage	Yes	Yes	No	126
01/26/2017	19:00	Unplanned Outage	Yes	Yes	No	59
02/08/2017	21:58	Unplanned Outage	Yes	No	No	57
02/14/2017	02:17	Unplanned Outage	Yes	No	No	56
02/14/2017	14:41	Unplanned Outage	Yes	No	No	0
02/21/2017	21:32	Unplanned Outage	Yes	No	Yes	142
02/25/2017	18:02	Unplanned Outage	Yes	Yes	No	0
02/26/2017	22:51	Unplanned Outage	Yes	Yes	No	134
03/08/2017	08:23	Unplanned Outage	Yes	No	No	134
03/20/2017	16:27	Unplanned Outage	Yes	No	No	44
03/24/2017	10:45	Unplanned Outage	Yes	Yes	No	108
03/24/2017	11:36	Unplanned Outage	Yes	Yes	No	66
03/30/2017	14:49	Unplanned Outage	Yes	No	No	61
04/07/2017	00:53	Unplanned Outage	Yes	No	No	81
04/29/2017	07:44	Unplanned Outage	Yes	No	No	121
05/08/2017	01:47	Unplanned Outage	Yes	No	No	85
05/19/2017	02:16	Unplanned Outage	Yes	No	No	51
05/25/2017	06:02	Unplanned Outage	Yes	No	No	125
05/31/2017	13:51	Unplanned Outage	Yes	Yes	Yes	67
06/04/2017	15:48	Unplanned Outage	Yes	Yes	No	138
06/08/2017	09:09	Unplanned Outage	Yes	No	No	58
06/13/2017	20:46	Unplanned Outage	Yes	No	No	0
06/25/2017	07:02	Unplanned Outage	Yes	No	No	65
07/20/2017	14:53	Unplanned Outage	Yes	No	No	13
09/02/2017	00:25	Unplanned Outage	Yes	No	No	142
09/20/2017	14:12	Unplanned Outage	Yes	No	No	158
11/18/2017	17:13	Unplanned Outage	Yes	No	No	137
11/25/2017	02:34	Unplanned Outage	Yes	No	No	55
11/28/2017	18:02	Unplanned Outage	Yes	Yes	No	81
12/01/2017	09:40	Unplanned Outage	Yes	Yes	No	0
01/31/2018	22:04	Unplanned Outage	Yes	No	No	112
02/07/2018	18:04	Unplanned Outage	Yes	No	No	0
02/19/2018	10:24	Unplanned Outage	Yes	No	No	12
02/24/2018	11:54	Unplanned Outage	Yes	No	No	123
02/24/2018	16:55	Unplanned Outage	Yes	Yes	No	120
02/25/2018	06:55	Unplanned Outage	Yes	Yes	No	69
03/07/2018	03:06	Unplanned Outage	Yes	Yes	No	0
03/12/2018	01:46	Unplanned Outage	Yes	Yes	No	61
03/28/2018	13:41	Unplanned Outage	Yes	Yes	No	0
03/28/2018	14:42	Unplanned Outage	Yes	Yes	No	164
04/12/2018	17:17	Unplanned Outage	Yes	No	No	146
04/29/2018	07:20	Unplanned Outage	Yes	Yes	No	58
05/01/2018	18:32	Unplanned Outage	Yes	No	No	130
05/13/2018	12:19	Unplanned Outage	Yes	Yes	No	124
05/14/2018	19:08	Unplanned Outage	Yes	Yes	No	56
05/15/2018	00:12	Unplanned Outage	Yes	No	No	71
05/20/2018	13:35	Unplanned Outage	Yes	No	No	94

Attachment to Response to KIUC-1 Question No. 23

Sinclair

Date	Est. Time (EST)	Event	Response			FLS load before curtailment (MW)
			Spinning Reserves	Fast Start CT	Automatic Reserve Sharing	
05/23/2018	16:58	Unplanned Outage	Yes	Yes	No	40
05/29/2018	20:10	Unplanned Outage	Yes	No	No	0
06/07/2018	15:11	Unplanned Outage	Yes	Yes	No	0
06/13/2018	12:38	Unplanned Outage	Yes	No	No	195
06/14/2018	00:50	Unplanned Outage	Yes	No	No	147
06/17/2018	23:21	Unplanned Outage	Yes	No	No	84
06/18/2018	13:01	Unplanned Outage	Yes	Yes	No	139
06/29/2018	14:19	Unplanned Outage	Yes	Yes	No	14
08/21/2018	12:15	Unplanned Outage	Yes	No	No	62
08/25/2018	21:26	Unplanned Derate	Yes	No	No	106
09/08/2018	22:11	Unplanned Outage	Yes	No	No	58
09/18/2018	12:10	Unplanned Outage	Yes	Yes	No	55
09/30/2018	23:52	Unplanned Outage	Yes	No	No	0
10/02/2018	19:11	Unplanned Outage	Yes	No	Yes	118
10/03/2018	11:35	Unplanned Outage	Yes	No	No	52
10/03/2018	12:12	Unplanned Outage	Yes	No	Yes	62
10/05/2018	11:25	Unplanned Outage	Yes	Yes	Yes	84
10/07/2018	17:31	Unplanned Outage	Yes	No	No	148
11/01/2018	0:45	Unplanned Outage	Yes	No	Yes	77
11/01/2018	23:23	Unplanned Outage	Yes	Yes	No	0