BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Northern States Power Company - Wisconsin, for Authority to Adjust Electric and Natural Gas Rates — Docket No. 4220-UR-123

REBUTTAL TESTIMONY OF RICHARD BAUDINO ON BEHALF OF WISCONSIN INDUSTRIAL ENERGY GROUP

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant with Kennedy and Associates.

Q. Did you submit Direct Testimony in this proceeding?

A. Yes. I submitted Direct Testimony on behalf of the Wisconsin Industrial Energy Group, Inc. (“WIEG”).

Q. What is the purpose of your Rebuttal Testimony?

A. The purpose of my Rebuttal Testimony is to respond to certain Direct Testimony submitted by the Staff of the Public Service Commission of Wisconsin (the “Commission” or "PSC") and the Citizens Utility Board ("CUB"). Specifically, I will respond to the Direct Testimonies of Staff witness Tanner Blair and CUB witness Corey Singletary.

<u>Response to Staff witness Blair</u>

Q. Please briefly summarize Mr. Blair's approach to class cost of service studies ("CCOSS") in his Direct Testimony.

A. Mr. Blair described his approach to class cost of service beginning on Direct-PSC-Blair-3, line 4. Mr. Blair testified that the Commission Staff did not sponsor a specific CCOSS in this proceeding. Instead, Mr. Blair requested that NSPW prepare a set of five CCOSS based on Staff's audited revenue requirement that "are representative of the CCOSS approaches preferred by intervening parties in past NSPW rate cases and are intended to present a range of reasonable CCOSSs for the Commission's consideration." Direct-PSC-Blair-3, lines 8 through 10. Mr. Blair noted that summary results and descriptions of all five CCOSS were filed under Ex.-NSPW-Schlosser-2.

Q. Please summarize the results of the five CCOSS included in Mr. Blair's Direct Testimony and in Ms. Schlosser's Ex.-NSPW-Schlosser-2.

A. My Rebuttal Table 1 summarizes the results of the five CCOSS methods that the Staff directed NSPW to perform. This table is similar to Mr. Blair's Table 1 on Direct-PSC-Blair-4.

Rebuttal Table 1
Staff Requested CCOSS Results
Staff Audited Revenue Requirement

	Method 1 4CP	Method 2 TOU 4CP	Method 3 12CP	Method 4 TOU 12CP	Method 5 Locational
Residential	5.2%	3.6%	2.8%	2.1%	-1.9%
Small Non-Demand GS	10.2%	7.1%	7.9%	5.6%	3.6%
Medium GS	-6.3%	-5.4%	-5.9%	-5.2%	-0.9%
Large TOD Secondary	3.3%	2.9%	3.0%	2.7%	5.6%
Large TOD Primary	-6.4%	-2.3%	3.0%	3.4%	5.7%
Large TOD Transformed	-3.1%	0.7%	-1.1%	2.0%	2.0%
RTP	-4.3%	1.5%	0.2%	4.3%	4.3%
Street Lighting	-1.7%	2.3%	2.7%	5.0%	7.2%
Total	1.6%	1.6%	1.6%	1.6%	1.6%

Q. Please describe the difference in Methods 3 through 5 presented in Mr. Blair's Direct Testimony.

A. Method 3 is the 12CP CCOSS. This method allocates NSPW's fixed production plant based on each customer class' respective contribution to NSPW's 12 monthly system peaks. It differs from WIEG's recommended 4CP CCOSS (Method 1) in that the 4CP CCOSS only considers each customer class' contribution to the four summer peak months. Neither the 4CP nor 12 CP CCOSS consider energy usage in the allocation of the Company's fixed costs of production.

Method 4 is the TOU 12CP CCOSS. According to Ex.-NSPW-Scholsser-2, page 1 of 4 this method allocates production plant 60% on the 12CP demand allocator and 40% on marginal energy. Production operations and maintenance ("O&M") expense is allocated 25% to firm 12CP demand and 75% to marginal energy.

Method 5 is the Locational CCOSS, which allocates production plant and production O&M on the same basis as Method 4. In addition, Method 5 allocates distribution plant and O&M based on 100% CP demand. Methods 1 through 4 allocate these costs based on NSPW's minimum size system analysis.

Q. What is your recommendation with respect to the CCOSS Methods presented by Mr. Blair?

A. I recommend that the Commission reject CCOSS Methods 3, 4, and 5. I maintain that the Commission use NSPW's Method 1 4CP 100% Demand CCOSS as the basis for revenue allocation in this case.

Q. Please explain why the Commission should reject the Method 3 12CP CCOSS.

A. As both Ms. Schlosser and I demonstrated in our Direct Testimonies, NSPW is a strongly summer peaking utility. As such, customer class cost responsibility for NSPW's production plant and O&M expenses should be allocated based on the class contribution to the summer peak, which occurs during the months of June through September. Ms. Schlosser pointed out the following in her Direct Testimony with respect to the 12CP method:

"The 4CP allocator used puts more emphasis on the four summer peak demands rather than on the 12 monthly peak demands of a 12CP allocator. This is appropriate because on June 11, 2012, the Midcontinent Independent System Operator, Inc. ("MISO") changed its capacity planning guidelines adding emphasis on the summer season. For capacity planning in the MISO power pool, the NSP System is required to provide adequate generation capacity based on meeting the reliability guidelines at the time of the MISO summer season peak demand. Like the NSP System of which NSPW is part, NSPW is a summer peaking utility on a standalone basis as shown on my Schedule 3. MISO's change in guidelines is one consideration for the Company's use of the 4CP demand allocator. Another consideration is that the 12 CP demand allocator incorporates demands for all peak and non-peak months of the year. This in part overlaps the function of the energy allocator, which represents all months of energy usage." Direct-NSPW-Schlosser 6, line 16 through Direct-NSPW-Schlosser-7, line 8.

NSPW's pronounced summer peak as well as the MISO guidelines described by Ms. Schlosser require that all the Company's generating assets be online and available to serve the peak demand of customers on its system. The 12CP demand method assumes that each monthly peak is equally important with respect to cost responsibility. In other words, the class contribution to the system peak in the off-peak month of October is as equally important as the contribution in the peak month of July, according to the 12CP methodology. This is demonstrably incorrect. In the non-summer months, NSPW can schedule maintenance on its generating units when system demands are much lower. This cannot happen during the summer peak when all available generating resources must be available for customers.

In conclusion, the 12CP method does not match cost causation and customer cost responsibility. NSPW's production costs are drives by its summer peak demand and the 4CP CCOSS is the only CCOSS that correctly reflects this operational reality.

Q. How does your Rebuttal Table 1 demonstrate that the 12CP method fails to match customer class cost causation and cost responsibility?

A. Rebuttal Table 1 shows that under the 4CP method the Residential class would receive a 5.2% increase. With the 12CP CCOSS, the Residential class would only receive a 2.8% increase. What this means is that the Residential class has a much higher proportion of its demands in the summer months than it does throughout the year. It also means that the

Residential class has a higher share of the total system summer peak demand compared to its share of peak demands throughout the year. Therefore, the Residential class receives a lower increase under the 12CP CCOSS. However, this also means that other classes, such as Large Time of Day Primary and Transformed and RTP receive higher increases to make up for the lower increase to the Residential class. The 12CP method inappropriately shifts cost responsibility away from the Residential class.

Q. Did you prepare a chart that illustrates the point you just made with respect to the Residential class' increased contribution to peak summer demand?

A. Yes. Please refer to Chart 1 below. The data supporting this chart was taken from NSPW's confidential response to 3-WIEG RFP-3 (PSC REF #: 328180). Notice that the Residential class' share of the July 2018 system peak is 35.1% compared to its 22.8% share of the off-peak month of April.

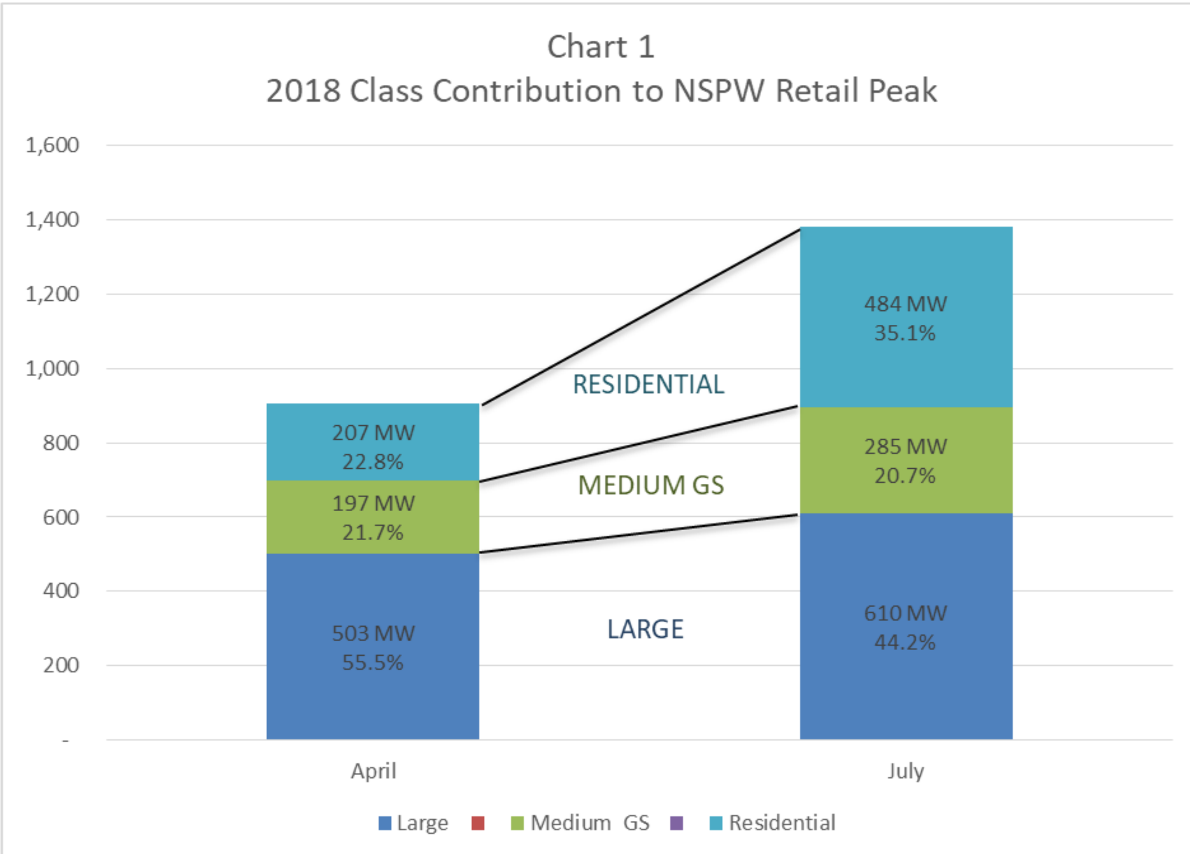


Chart 1 clearly shows how much more Residential customers contribute to NSPW's summer peak demand. The 4CP CCOSS accurately captures this increased responsibility for NSPW's production costs. The other CCOSS methods understate cost responsibility for the Residential class.

Q. Please explain your position with respect to CCOSS Methods 4 and 5.

A. I recommend that the Commission reject CCOSS Methods 4 and 5 and I continue to recommend that the Commission rely on NSPW's 4CP CCOSS Method 1. Using the 12CP allocator and energy usage to allocate the Company's fixed production costs is inappropriate for the reasons I stated in my Direct Testimony. Since Mr. Singletary recommended CCOSS Methods 4 and 5, I will address the specific problems with these CCOSS in more detail in the next section of my Rebuttal Testimony.

Q. Briefly summarize Mr. Blair's revenue allocation recommendation.

A. Mr. Blair described his approach to revenue allocation beginning on Direct-PSC-Blair-8, line 30. Mr. Blair noted that the rate design he presented in Ex.-PSC-Blair-1 "incorporates many of the rate design elements presented by NSPW witness Donald Dahl …. and is adjusted to reflect the Commission staff-adjusted revenue requirement and the results of the five COSSs discussed previously." Direct-PWC-Blair-9, lines 2 through 5. Mr. Blair summarized his revenue allocation proposal in his Table 2.

Q. Have you developed a proposed revenue allocation based on the Commission Staff's adjusted revenue requirement?

A. Yes. Please refer to Ex.-WIEG-Baudino-2 for my recommended revenue allocation using the Staff's adjusted revenue increase. I adjusted the class revenue increases as follows:

- I maintained my recommended decrease for the RTP classes at -1.0%.
- I applied the difference between the Staff's recommended increase of $10.874 million and the Company's requested increase of $24.704 million and proportionately reduced the WIEG's proposed increases to the other classes. This includes my recommended reallocation of the proposed decrease to RTP to the Residential and Small non-demand general service classes that I described in my Direct Testimony.

Q. How does your revenue allocation compare with Mr. Blair's recommendation at Staff's 1.6% total system increase?

A. Rebuttal Table 2 below compares the percentage increases from Mr. Blair's and my recommendations.

Rebuttal Table 2
Comparison of Staff and WIEG
Class Revenue Increases at Staff 1.6%

	Staff Proposed % Increase	WIEG Proposed % Increase
Residential	2.4%	2.7%
Small C&I	1.9%	2.5%
Medium C&I	0.0%	0.6%
Large General TOD	1.6%	1.0%
Peak Controlled TOD	1.0%	0.8%
RTP	0.5%	-1.0%
Public St. Lighting	1.3%	0.6%
Total Operating Revenue	1.6%	1.6%

In my opinion, Mr. Blair and I are quite close in our recommended customer class increases. My recommended -1.0% decrease for RTP had very little impact on the increases to Residential and Small C&I. I continue to recommend that the Commission adopt my class revenue allocation approach, which is based on the Method 1 4CP CCOSS.

Q. How does your proposed increase for the Residential class compare with the CCOSS results shown in your Rebuttal Table 1?

A. My recommended increase for the Residential class of 2.7% is substantially less than the 5.2% increase shown in the Method 1 CCOSS, WIEG's preferred CCOSS. This shows that even with a decrease of -1.0% to RTP, I recommend substantial rate mitigation for NSPW's residential customers. My recommendation is also lower than Method 2 and very close to the Method 3 (12 CP) CCOSS.

Only Methods 4 and 5 show lower increases for the Residential class than my recommended increase. I will explain in the next section of my Rebuttal Testimony why these methods are inappropriate and should be rejected by the Commission.

Q. How did Mr. Blair approach rate design for the Large customer classes?

A. My review of Mr. Blair's proposal focused on Cg-9. Once again, Mr. Blair's recommendation is similar to the approach I recommended in my Direct Testimony, with the main exception being that Mr. Blair accepted Mr. Dahl's proposal to maintain the High Load Factor Credit ("HLFC") at $.013 per kilowatt-hour ("kWh"). Mr. Blair also reduced energy charges slightly, which I support.

If the Commission chooses to adopt Mr. Blair's proposed rate design for Cg-9 customers, then I continue to recommend that the HLFC be increased to $.015 per kWh and that the summer and winter demand charges be increased by the amount of the increase in the HLFC.

<u>Response to CUB witness Singletary</u>

Q. Please summarize Mr. Singletary's approach to cost and revenue allocation.

A. On Direct-CUB-Singletary-4 Mr. Singletary testified that he relied primarily on CCOSS Methods 4 and 5. He also considered the full range of other CCOSS results, although to a lesser degree. Direct-CUB-Singletary-4, lines 9 through 12.

Mr. Singletary also testified that the TOU and Locational CCOSS (Methods 4 and 5) "more accurately reflect utility cost causation, and therefore are more appropriate to use as the basis for revenue allocation and rate design." Direct-CUB-Singletary-4, lines 14 through 17.

Q. Please state your response to Mr. Singletary's reliance on the Method 4 and 5 CCOSS for class cost and revenue allocation.

A. The TOU and Locational CCOSS are the least reflective of utility cost causation and are not appropriate bases for revenue allocation and rate design.

Q. Beginning at Direct-CUB-Singletary-8, Mr. Singletary testified that in instances in which installed cost and generating capacity for each of a utility's generating facilities can be reasonably identified, the Equivalent Peaker method of classifying production costs is preferable. Is this correct?

A. No, definitely not.

Q. Please explain why the EP method is not reasonable for a CCOSS.

A. The EP method calculates the percentage of production plant to be classified as "energy related" by subtracting the cost of a combustion turbine unit from the cost of all non-peaking units (*i.e.*, intermediate and base load) on the system and calculating a ratio to the total cost of production plant. The main flaw with this method is that it incorrectly assumes that all such "excess costs" are due to a utility's need to achieve fuel savings, rather than to meet peak demand requirements on the system. However, this assumption is completely unsupported, as Mr. Singletary offers no analysis to show that it is correct from a planning perspective. Any relevant EP cost of service analysis would require a detailed examination of the economic analyses and decision-making processes that were performed for each base load and intermediate load power plant on the NSPW's system. The economic trade-offs between 1) each base load and intermediate load unit, and 2) an alternative peaking unit would likely have been different for each unit since the decision to choose one over the other is dependent on the economic parameters existing at the time of decision. Without incorporating these historic analyses into the EP methodology, it is impossible to identify the "cost causation" underlying each unit and the expected fuel savings that a base load coal or nuclear unit was likely to achieve. Since the premise behind the EP method is that expected fuel savings drove a utility's decision to construct a base or intermediate load generating unit in lieu of a less expensive peaking unit, the so-called "decision" would have considered the capital cost of each unit and the fuel cost differences to the system between the two choices. The additional cost of a base load unit may not have been justified by fuel savings expectations alone. Rather, the decision may also have considered other factors (such as the longer life of a base load unit) that, when combined with fuel savings, justified the higher cost base load unit.

In supporting the EP method in this case, Mr. Singletary would have had to assume that the main reason NSPW built its power plants was to satisfy energy consumption throughout the year. There is no such evidence in this case to support this tacit assumption in Mr. Singletary's Direct Testimony. Further, the EP method gives very little weight to summer peak demands.

Q. Did Mr. Singletary perform a EP study?

A. No. Mr. Singletary accepted a demand/energy ratio based on the explanation contained in Ms. Schlosser's Direct Testimony. However, I note that in her Supplemental Direct Testimony Ms. Schlosser maintained support for Methods 1 and 2 as filed in her Direct Testimony. In that testimony, Ms. Schlosser used a demand/energy split of 61.3%/38.7% for her Method 2 CCOSS. The CCOSS Methods 2, 4, and 5 submitted in her Supplemental

Direct Testimony use a 60%/40% demand/energy split. Ms. Schlosser, Mr. Blair, and Mr. Singletary did not explain why the Staff requested Methods 2, 4, and 5 use a higher percentage of energy (40%) in the classification of fixed production costs than Ms. Schlosser's original Method 2 CCOSS.

Q. Did Mr. Singletary properly consider summer peak demands in his discussion of using Methods 4 and 5 as the basis for cost and revenue allocation?

A. No. This is because Mr. Singletary supported the 12CP allocator to allocate the insufficient amount (60%) of remaining demand-related production plant to customer classes. Combining the 12CP and energy allocation factors for allocating fixed production plant in the Method 4 and 5 CCOSS fails to give proper weight to NSPW's summer peak period. As I described in detail in my Direct Testimony, NSPW is a strongly summer peaking utility.

Q. Mr. Baudino, you noted earlier in your testimony that Methods 4 and 5 classified and allocated fixed production costs based on 25% 12 CP and 75% energy. Is there any foundation for this approach to classifying and allocating the Company's production O&M?

A. No. None of the witnesses in this proceeding provided any justification, analyses, or other support for a 25%/75% demand/energy split for NSPW's fixed production O&M. This approach should be summarily rejected by the Commission.

Q. Beginning on Direct-CUB-Singletary-10, Mr. Singletary begins a critique of the NSPW's minimum size system method to classify and allocate distribution costs in FERC accounts 364 through 369. Are Mr. Singletary's criticisms well founded?

A. No. The principles underlying the minimum system approach that NSPW uses is well reasoned and well supported. I recommend that the Commission adopt the Company's minimum system analysis.

Q. Would you explain the concept underlying the minimum system approach that the Company used to classify distribution plant and expenses between customer and demand components?

A. Yes. The principle supporting the minimum system approach, which includes a customer component, is that utilities must invest a minimal amount in distribution facilities to connect a customer to the distribution system (lines, poles, transformers) that is independent of the customer's level of demand. For example, there is a minimum amount of investment that a utility will make in poles, lines and transformers to connect a customer, whether that customer has a demand of 3 kW or a demand of 5 kW. This does not mean that the investment would be the same, but rather a minimum investment is required regardless of size. Under the minimum distribution system methodology, the minimum component is allocated on a per customer basis, while the portion of cost above minimum is allocated on demand. Thus, to the extent that the utility incurs a distribution cost simply to connect a customer to its system, regardless of that customer's size, it is appropriate to assign the cost of these minimal facilities to rate schedules based on the number of customers, rather than on the kW demand of the class. As stated on page 90 of the NARUC Electric Utility Cost Allocation Manual, January 1992:

> When the utility installs distribution plant to provide service to a customer and to meet the individual customer's peak demand requirements, the utility must classify distribution plant data separately into demand- and customer-related costs.

Please refer to Ex.-WIEG-Baudino-3 for an excerpt from the NARUC Manual regarding the use of the minimum size and zero intercept approaches to classifying and allocating distribution costs.

Q. Is the Company's use of a minimal system methodology a reasonable alternative to the methods discussed in the NARUC manual?

A. Yes, it is. NARUC recognizes two methodologies for estimating the customer component of distribution costs. These methods, which are described in the NARUC manual, are the “minimum-intercept” method and the “minimum size” method (which is the same as the “minimum system” method). Each of the two methods captures customer-related costs and is designed to estimate the component of distribution plant cost that is incurred by a utility to effectively connect a customer to its system, as opposed to providing a specific level of power (kW demand) to the customer. The conceptual basis for the minimum size method is that it reflects a classification of the distribution facilities that would be required to simply connect a customer to the system, irrespective of the customer’s kW load. From a cost causation standpoint, the argument supporting this approach is that these minimal facilities would be required simply due to the requirement to connect the customer.

The minimum-intercept (also referred to as zero-intercept) method seeks the same end as the minimum size system approach but is much more data intensive. This method estimates the portion of distribution plant that is related to a hypothetical no-load, or zero-load situation. This is the amount of plant that would be required to serve customers regardless of their demands. Typically, the zero-intercept method utilizes regression analysis to estimate the customer-related portion of distribution plant.

NSPW’s minimal system analysis uses a combination of minimum system and regression techniques to classify and allocate certain distribution accounts. I reviewed the Company’s study and find that it is reasonable and appropriate to use for purposes of classifying and allocating distribution costs.

Q. Please respond to Mr. Singletary's proposed customer class revenue allocation.

A. On Direct-CUB-Singletary-13 Mr. Singletary noted that his class rate increases "are based mostly on the TOU CCOSS." Direct-CUB-Singletary-13, lines 8 through 9. Based on the discussion I presented regarding the energy-based production cost allocation approach in the TOU studies (Methods 2, 4, and 5) I recommend that the Commission reject Mr. Singletary's proposed revenue allocation.

<u>Response to Wal-Mart Direct</u>

Q. Did you review the Direct Testimony submitted by Wal-Mart witness Gregory Tillman regarding his proposed rate design for Cg-9 Secondary?

A. Yes, I reviewed Mr. Tillman's proposed rate design for Cg-9 Secondary customers. WIEG is generally supportive of Mr. Tillman's recommendation. His recommendation is consistent with the general movement and design of the demand and energy components of the Cg-9 Secondary rates that I recommended in my Direct Testimony. My recommended just follows a more gradual approach toward cost-based Cg-9 rates.

Q. Does this complete your Rebuttal Testimony?

A. Yes.

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Northern States Power Company - Wisconsin, for Authority to Adjust Electric and Natural Gas Rates — Docket No. 4220-UR-123

DIRECT TESTIMONY OF RICHARD BAUDINO
ON BEHALF OF WISCONSIN INDUSTRIAL ENERGY GROUP

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant with Kennedy and Associates.

Q. Please describe your education and professional experience.

A. I received my Master of Arts degree with a major in Economics and a minor in Statistics from New Mexico State University in 1982. I also received my Bachelor of Arts Degree with majors in Economics and English from New Mexico State in 1979.

I began my professional career with the New Mexico Public Service Commission Staff in October 1982 and was employed there as a Utility Economist. During my employment with the Staff, my responsibilities included the analysis of a broad range of issues in the ratemaking field. Areas in which I testified included cost of service, rate of return, rate design, revenue requirements, analysis of sale/leasebacks of generating plants, utility finance issues, and generating plant phase-ins.

In October 1989, I joined the utility consulting firm of Kennedy and Associates as a Senior Consultant where my duties and responsibilities covered substantially the same areas as those during my tenure with the New Mexico Public Service Commission Staff. I became Manager in July 1992 and was named Director of Consulting in January 1995. Currently, I am a consultant with Kennedy and Associates.

A summary of my expert testimony experience is found in Ex.-WIEG-Baudino-1.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Wisconsin Industrial Energy Group, Inc. ("WIEG").

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide recommendations to the Public Service Commission of Wisconsin ("Commission" or "PSCW") regarding class cost of service, revenue allocation, and rate design. I will also respond to the pre-filed direct testimonies of Michelle Schlosser and Donald Dahl, witnesses for Northern States Power Company - Wisconsin ("NSPW" or "Company").

Q. Please summarize your conclusions and recommendations.

A. My conclusions and recommendations are as follows.

First, consistent with my position in past NSPW proceedings, I recommend that the Commission adopt a class cost of service study ("CCOSS") that allocates fixed production costs using the 4-coincident peak ("4CP") allocation method. This approach most accurately tracks customer cost causation on NSPW's system, which is strongly summer peaking. Ms. Schlosser presented this approach in her Method 1 CCOSS.

Second, I recommend that the Commission follow my revenue allocation recommendation, which is based on NSPW's Method 1 CCOSS using the 4CP allocator for production capacity costs and the E8760 allocator for energy costs. My position is consistent with Mr. Dahl's revenue allocation proposal with one exception. *The RTP class should receive a small -1% decrease in this case, as this class is paying significantly more than its cost to serve and has been doing so for the last several NSPW rate proceedings.*

Third, I disagree with Mr. Dahl's general approach to rate design for the Large time-of-day customer classes and recommend that the Commission reject his proposed rate design for these classes. Instead, I recommend the Commission adopt a rate design structure that moves current demand charges closer toward cost-based charges by allocating the entire class increase to the demand charges. Current demand charges for the Large time-of-day classes are too low and do not reflect the demand related costs that should be recovered through the demand charge. This results in energy charges that are excessive. In addition, to further mitigate the impact of excessive energy charges on high load factor customers, I recommend that the Commission increase the currently effective high load factor credit applicable to high load factor customers from 1.3 cents per kilowatt hour ("kWh") to 1.5 cents per kWh.

COST OF SERVICE ALLOCATION AND PROPER PRICING

Q. Please briefly summarize the important aspects of a class cost of service study.

A. A class cost of service study allocates the total joint cost of providing utility service to the classes of customers receiving that service. In certain limited instances, the utility can identify and directly assign costs. But for the vast majority of costs, a cost of service study is required so that the remaining costs may be properly allocated and reflected in rates to customers.

The development of a class cost of service study consists of three steps: functionalization, classification, and allocation. Step 1, functionalization, involves separating the utility's investment and expenses into major functional categories. The FERC Uniform System of Accounts provides the method by which costs are identified and segregated into these various functional categories.

Step 2 is classification. Once functionalization is complete, the utility's costs are classified into demand, energy, and customer components. Demand-related costs are fixed in the short run and are sized based on the yearly demands of the utility's customers. Fixed production and transmission costs and a significant portion of the distribution system investment in poles, wires, etc. is considered demand-related. Energy-related costs vary with kWh consumption and include fuel and variable purchased power costs. Customer-related costs are associated with the number of customers and include items such as meters and services. It is also appropriate to classify a portion of distribution investment in FERC Accounts 364 through 370 as customer-related.

Step 3 is allocation. After costs are classified, they are allocated to customer classes based on each class' contribution to the respective cost classifications. Generally, demand costs are allocated based on class contributions to system peak and/or non-coincident peaks. Energy costs are allocated based on class kWh consumption. Customer costs are allocated based on the number of customers or on weighted customer allocation factors.

Q. Why is a properly constructed CCOSS important in the ratemaking process?

A. A properly performed class cost of service study assigns and allocates the utility's total cost of service to the customer classes that cause the utility to incur those costs. Based on current class revenues, the regulatory commission may then determine whether each customer class is paying its fair share of costs and can then allocate any revenue increase (or decrease) accordingly. For example, a customer class that is not paying its fair share of costs should receive a percentage revenue increase greater than the overall system increase. Likewise, a customer class that is paying more than its fair share of costs should receive a lower than average percentage increase. In certain cases, it may be appropriate for such a class of customers to receive no increase or even a decrease in rates if that class is paying rates greatly exceeding its allocated cost of service.

Accurate cost allocation also promotes economic efficiency. If electricity prices are based on an accurate assessment of the underlying cost to serve customers, then customers can make correctly informed decisions about their usage of electricity. For example, many industrial firms use significant amounts of electricity in their production processes. If the price these companies pay for electricity is based on costs, then they will be able to produce their goods and services at the lowest and most efficient cost for society. If electricity prices are set above the actual underlying cost, then these goods and services will be overpriced, under produced, or both. Unfortunately, this is the case for NSPW's RTP class, as I will show later in my testimony.

Q. Is economic efficiency an important consideration to WIEG members?

A. Yes, economic efficiency is vitally important. For WIEG's energy-intensive members, the cost of electricity is a major component of their cost of production. WIEG members must compete in national and international markets and must remain cost competitive. Therefore, it is important that the rates they pay for electricity be reasonable and based on the cost to serve.

I am advised that WIEG members compete with other facilities located in the Midwest and Southeast regions of the United States. Table 1 below presents average 2014 and 2016 industrial rates in cents per kWh for several regions of the United States and for Wisconsin from the U.S. Energy Information Administration. Wisconsin is included in the East North Central region of the U.S. I also included NSP's average rate in cents per kWh for its Large customer tariff reported by NSP in its 2016 Form 10-K.

TABLE 1

AVERAGE INDUSTRIAL ELECTRICITY PRICES
(Cents / kWh)

	2014	2016
United States (Average all states)	7.10	6.75
East North Central U.S.	7.07	6.91
West North Central U.S.	6.73	7.07
South Atlantic U.S.	6.75	6.40
Wisconsin	7.52	7.74
NSP	7.48	7.58

Source: U.S. Energy Information Administration,
NSP 2016 Form 10-K, pg.11

For 2014, Table 1 shows that Wisconsin's average industrial rate was 5.9% higher than the national average and 6.36% higher than the East North Central region in which Wisconsin is included. NSPW's 2014 average industrial rate was lower than the average Wisconsin rate, but was 5.8% higher than the East North Central region and 5.35% higher than the national average.

Now, if one compares the average rate numbers in 2016, one sees that these comparisons have gotten worse for Wisconsin and for NSP. Wisconsin's industrial rates rose while the U.S. average fell. Wisconsin's average industrial rate is now 14.7% higher than the national average and 12.0% higher than the East North Central region. Likewise, NSP's 2016 average industrial rate was 12.3% higher than the national average and 9.7% higher than the East North Central region.

Finally, if one looks at the average revenue in cents/kWh for NSPW's Large C&I group, the comparison gets worse yet. Using the total megawatt hours and revenues set forth in Ex.-NSPW-Dahl-1, the average revenues for NSPW's Large C&I group of customers is 8.59 cents/kWh. Clearly, this trend is going in the wrong direction for NSPW's and Wisconsin's industrial customers.

Given Wisconsin's high industrial rates, it is imperative that NSPW's rates for its Large customers reflect both cost responsibility and economic efficiency. A CCOSS that allocates fixed production costs based on NSPW's 4CP will accomplish both goals and provide much needed rate relief to NSPW's Large customers.

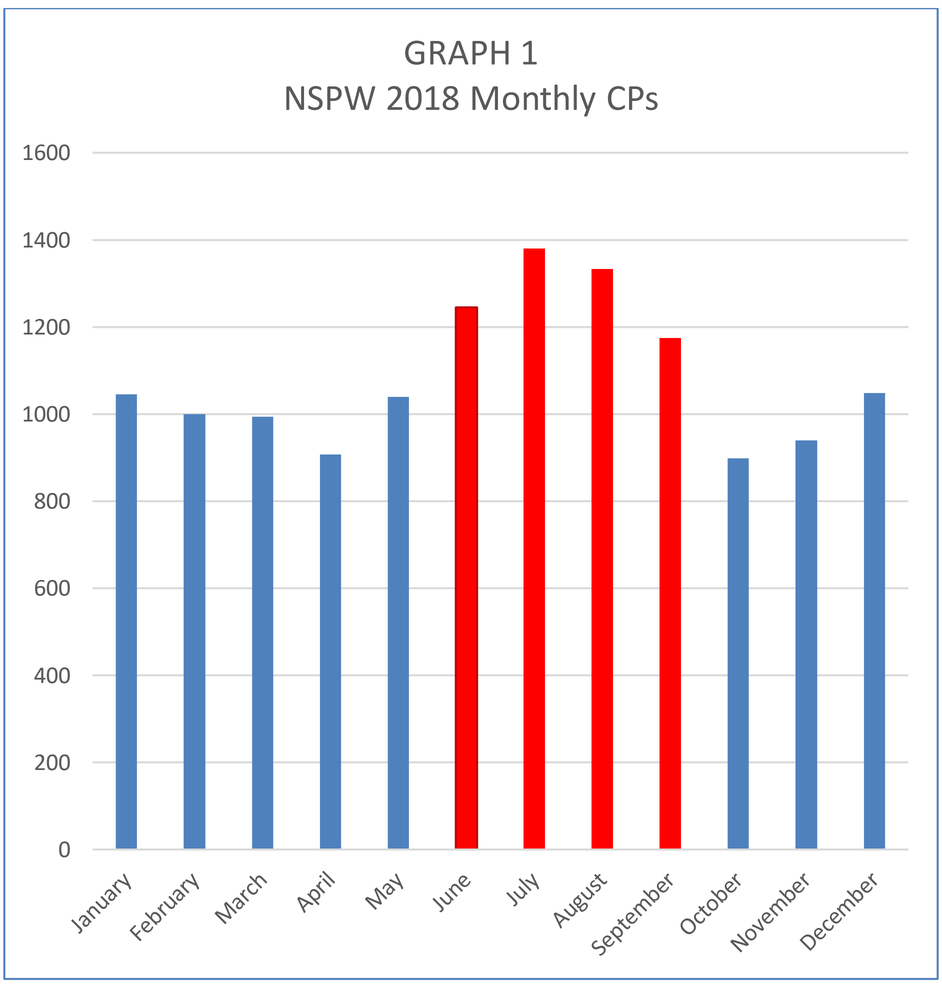
NSPW CCOSS APPROACH AND ISSUES

Q. Please summarize NSPW's approach to cost allocation in this proceeding.

A. Ms. Schlosser presented the results of two CCOSSs at Direct-NSPW-Schlosser-5 of her direct testimony. These CCOSS studies use different methods of allocating fixed production costs and include: Method 1 using the 4CP method and Method 2 using a blended 4CP demand and energy-based allocation.

Q. Does NSPW support a particular production cost allocation methodology in this proceeding?

A. Ms. Schlosser testified at Direct-NSPW-Schlosser-6 that the Company supports a range of results bounded by Methods 1 and 2 and are more appropriate than a CCOSS using a 12CP allocator. At Direct-NSPW-Schlosser-7 Ms. Schlosser testified that NSP is a summer peaking utility as shown in her Schedule 3. Ms. Schlosser's Schedule 3 shows graphically that NSPW is a strongly summer peaking utility. Graph 1 below is my reproduction of Ms. Schlosser’s graph in her Schedule 3 showing the monthly NSPW retail coincident peaks for 2018.



Graph 1 demonstrates the marked difference between the four summer peak months – June through September – and the non-summer months. The average of the four summer peaks of June through September is 1,283 megawatts ("mW"). The average of the non-summer months is 984 mWs. The average summer peak month is 30.4% higher than the average non-summer month. It is obvious from NSPW's monthly coincident peaks that the Company is a strongly summer peaking electric utility and that the four summer peaks are significantly higher than the non-summer CPs.

Q. Mr. Baudino, what is your conclusion with respect to NSPW's recommended approach to classifying and allocating production plant and expenses?

A. I acknowledge the Company's continued move toward a more demand-based allocation of production costs and away from an energy-based allocation. Including the 4CP class allocator in Methods 1 and 2 greatly improves the accuracy of NSPW's cost and revenue allocation to its customers. WIEG also appreciates the Company's acceptance and use of the E8760 allocator for energy-related costs. This allocator is more accurate than the E10 allocator used by NSPW in past cases. However, I continue to disagree with any CCOSS that allocates fixed production costs based on energy and this includes the Company's Method 2 CCOSS.

Q. Please explain why a CCOSS should allocate fixed production costs using an allocation factor based on customer class contribution to system peak demands.

A. Classifying and allocating production demand costs based on class contribution to system peak recognizes the critical importance of having NSPW's full production plant capability online and available to meet the peak demand requirements of its customers. Allocating cost responsibility to customer classes based on each class' contribution to system peak forges the important link between how production capacity is actually used and how it should be paid for.

Excess capacity exists during off-peak periods, which enables the Company to take its generating units offline for maintenance. Thus, off-peak loads and energy consumption do not require the Company's full production capacity. With this being the case, production costs should not be allocated to customers based on off-peak demand and energy usage.

As in past NPSW cases, I recommend that the Commission adopt the Method 1 CCOSS results that use a 4CP allocation factor for NSPW's production demand costs.

Q. Please describe the disadvantages of classifying and allocating fixed production costs using and energy allocation factor.

A. Because an energy-based methodology such as Method 2 assigns such a large percentage of fixed production plant based on energy use (38.7%), NSPW's customers get a price signal that tells them that additional off-peak energy usage imposes a cost on the Company that is greater than actual off-peak energy costs. This occurs because each additional kWh of off-peak usage results in additional fixed production costs (return, depreciation, fixed O&M expenses) being assigned to the rate class. This results in an inefficient use of the Company's generation resources because the effective rate charged to customers is substantially above marginal off-peak energy costs.

Additionally, high load factor customers, particularly the larger commercial and industrial customers, are penalized for their more even and efficient use of energy throughout the year. If these customers were to consider moving a portion of their load to off-peak periods, they would be faced with off-peak rates that are overstated. Likewise, all customers would have less incentive to reduce their peak demand because their demand charges will be lower than the costs actually incurred by the Company to serve the system peak.

Q. How did NSPW determine the energy-related portion of fixed production costs?

A. Ms. Schlosser described the methodology she employed beginning at Direct-NSPW-Schlosser-8. The blended production capacity allocation factor was calculated based on a ratio derived from NSPW's retail electric demand data. For the Method 2 CCOSS, the 61.3% portion attributable to demand was calculated based on the average of four summer monthly peak demands divided by the sum of the average of the four summer monthly peak demands plus the average annual demand. Ms. Schlosser testified on lines 1 through 4 that this blended allocator recognizes "(i) the dual function of production plant operation to provide both electrical energy and meet customer peak demands during the same time periods and (ii) the relatively higher levels of generation plant investment needed to economically produce electrical energy."

Q. Is the Company's approach to its blended production demand allocator appropriate?

A. No. Ms. Schlosser provided no sound basis for classifying 38.7% of the Company's fixed production plant based on energy. This blended production demand allocator fails to fully recognize the Company's summer peak period as the driver of the Company's production costs. While it is correct that NSPW's generation provides electrical energy throughout the year, it is the peak period from June through September when the Company must have all its generating units on line to serve its customers.

Moreover, fixed production costs do not vary with energy consumption throughout the year. In other words, NSPW does not incur lower fixed production costs when kilowatt-hour ("kWh") consumption declines during the non-summer months. The costs that vary with energy consumption are mainly fuel, purchased energy, and certain variable operations and maintenance expenses. It is these variable costs that should be classified and allocated based on energy usage, not fixed production costs.

Q. Does the fact that base load units have higher capacity factors justify classifying and allocating their fixed costs partly on the basis of energy consumption?

A. No, not at all. The higher fixed cost of a base load unit may not have been justified by its lower energy cost. Rather, generation planning decisions may also have considered other factors such as the longer life of a base load unit which, when combined with fuel savings, justified the higher cost base load unit. Without a detailed generating planning analysis, it is nearly impossible to identify the "cost causation" underlying each of the Company's generating units. Nevertheless, the fact remains that NSPW's peaking, intermediate, and base load units all must be online during the Company's peak summer months. This fact alone fully supports classifying and allocating production capacity costs based on the summer 4CP.

Q. How did the Company allocate energy production costs in its CCOSS?

A. Ms. Schlosser described the Company's approach allocating energy production costs to customer classes beginning on Direct-NSPW-Schlosser-10. The Company allocated production energy costs in its CCOSS using the E8760 allocator. As Ms. Schlosser described on Direct-NSPW-Schlosser-12 the E8760 allocator reflects customer class production energy cost responsibility for each of the 8760 hours of the year.

WIEG appreciates the Company's adoption of the E8760 allocation factor for energy-related costs. The E8760 is a superior method of determining customer class responsibility for energy production costs and has been advocated by WIEG in past NSPW cases. I support Ms. Schlosser's use of the E8760 allocator in this proceeding.

Q. What is your recommendation regarding the appropriate CCOSS for the Commission to use to allocate cost and revenue responsibility in this case?

A. Based on the foregoing discussion in my testimony, I recommend that the Commission rely upon Method 1, which uses the 4CP allocator for NSPW's fixed production costs.

REVENUE ALLOCATION AND RATE DESIGN

Q. Did NSPW prepare an analysis that compared its recommended class revenue allocation with its recommended range of CCOSS results?

A. Yes. Mr. Dahl presented such a comparison in Ex.-NSPW-Dahl-1, Schedule No. 3. Table 2 below presents a comparison of NSPW's proposed revenue allocation and the Method 1 CCOSS results for NSPW's customer classes. I have also included the CCOSS results for the RTP classes separately.

TABLE 2
NSPW CUSTOMER CLASS INCREASES
NSPW Proposed and Method 1 CCOSS

	NSPW Proposed	Method 1 CCOSS
Residential	6.0%	7.4%
Small ND GS	5.4%	12.5%
Total Medium	1.4%	-4.6%
Total Large	2.0%	2.0%
-RTP	1.0%	-2.6%
Total NSPW Retail	3.5%	3.5%

Q. How did Mr. Dahl approach the Company's recommended revenue allocation?

A. Mr. Dahl testified that NSPW's rate design objective was to produce class increases within the range of results produced by the two CCOSS presented by Ms. Schlosser where practical. Dahl Direct Testimony at Direct-NSPW-Dahl-5, lines 9 – 13.

Q. What is your conclusion with respect to NSPW's recommended class revenue allocation?

A. For purposes of this case, I will accept Mr. Dahl's proposed class increases with one exception. The RTP classes are already paying more than their fair share of costs and should actually receive rate decreases in this case. Therefore, I recommend that the Commission approve a -1.0% decrease in revenues for the RTP classes in this proceeding.

Q. Mr. Baudino, have the RTP classes been consistently paying more than their fair share of costs over the last few years?

A. Yes. Table 3 below presents the results of the 4 CP method from NSPW Docket Nos. 4220-UR-117, 4220-U-118, 4220-UR-119, and 4220-UR-121.

TABLE 3

Rate RTP 4CP CCOSS Results

Docket No.	4CP RTP Result	NSPW Total Increase
4220-UR-117	-7.0%	4.6%
4220-UR-118	-3.0%	6.7%
4220-UR-119	-8.6%	6.5%
4220-UR-121	-1.9%	3.9%

Table 3 clearly shows that the RTP classes have needed a rate decrease for quite some time now. I strongly recommend that the Commission move to provide rate relief to RTP customers that have been chronically overpaying for their electric service. Although the Commission could certainly justify a -2.6% rate decrease, I recommend a modest -1.0% decrease in this case as a reasonable means to move RTP customers closer to their allocated cost to serve.

Note that the decrease I recommend is based upon NSPW's requested increase of $24.7 million, or 3.6%.

Q. What is the revenue effect of a decrease of -1.0% to RTP customers?

A. RTP customers currently produce revenues of $24.852 million. A -1.0% decrease results in a revenue reduction of $249,000 to RTP customers. I recommend that this amount, and the $256,000 increase NSPW recommended for RTP, be proportionately reallocated to the Residential and Small non-demand general service classes, which require greater increases than NSPW recommended. I calculate that this would result in a total percentage increase to these classes of 6.05%, compared to the Company's recommended increase of 5.9%. This is far below the full Method 1 4CP increases for these customer classes.

Q. Do you agree with the Company's general approach to rate design for CG-9?

A. I agree with the proposed increase in customer charges and customer demand charges. I do not agree, however, with the increases in energy charges proposed by Mr. Dahl. NSPW's demand charges for its large TOD classes are significantly understated based on the CCOSS results. Table 4 presents a comparison of NSPW's current demand charges with cost-based demand charges from the Method 2 CCOSS presented by Ms. Schlosser in her Table 6.

TABLE 4

NSPW DEMAND CHARGES
ACTUAL VS. COST BASED (4CP CCOSS)

	Current		Cost Based	
	Summer	Winter	Summer	Winter
Cg-9 Secondary	$12.86	$10.86	$29.57	$26.13

Ms. Schlosser did not include cost-based demand charges for the higher voltage customers in Cg-9, but they would be somewhat lower than the Secondary demand charges. NSPW's current Large customer demand charges are simply too low, less than half of their cost-based levels, and simply cannot be justified. In addition to the deleterious effects these demand rates have on high load factor customers, they provide less revenue stability to the utility company. This is because energy usage tends to fluctuate more than demand. Higher demand charges would, other things equal, be a benefit to NSPW.

Q. You mentioned the negative impact on high load factor customers from the currently excessive energy charges in the Large time of day classes. Is there a mechanism in current rates that is designed to mitigate this impact?

A. Yes. NSPW has a high load factor credit ("HLFC") applicable to Cg-9 that is designed to offset some of the impact of inflated energy charges on high load factor customers. The HLFC is applied to a kWh over 400 hours times the on-peak billing demand. Currently, the HLFC stands at 1.3 cents per kWh. The Commission approved an increase to the HLFC from 1.1 cents to 1.3 cents in Docket No. 4220-UR-122.

Essentially, the HLFC acts as a reduction to NSPW's energy charges for high load factor customers, offsetting in part NSPW's high energy charges.

Q. Do you recommend another increase in the HLFC in this case?

A. Yes. The currently effective demand charges for Cg-9 are so far below the cost-based demand charges that another increase to the HLFC is both reasonable and necessary in this proceeding.

Q. Based on the foregoing analysis and discussion, what is your recommended rate design for the Large classes?

A. I recommend the following with respect to rate design for the Large TOD classes:

1. Accept NSPW's proposed customer charge, customer demand charge, and high load factor discount.
2. Hold current energy charges constant.
3. Collect the remaining class revenue increase through increased summer and winter demand charges.
4. Increase the HLFC from 1.3 cents per kWh to 1.5 cents per kWh.

My rate design recommendation will move demand charges toward cost-based rates, mitigate the impact of overstated energy charges on high load factor customers, and provide more revenue stability to NSPW. Table 5 below shows my recommended rate design for Cg-9 Secondary as an example of how my recommendations should be reflected in this case using the Company's proposed revenue requirement.

TABLE 5

Rate Schedule Cg-9 Secondary
WIEG Proposed Rate Design

	Current Rate	Proposed Rate	Pct. Change
Bills-Regular	$180.00	$180.00	0.0%
Bills-Optional	$65.00	$65.00	0.0%
LM kW - CL1	$(3.00)	$(3.00)	0.0%
kW-On-Peak-S	$12.86	$13.29	3.3%
kW-On-Peak-W	$10.86	$11.22	3.3%
kW-On-Peak			
kW-Customer	$1.86	$2.50	34.4%
MWh-Delivery			
MWh-Energy-On-Sum	$0.084710	$0.084710	0.0%
MWh-Energy-On-Win	$0.076400	$0.076400	0.0%
MWh-Energy-On-peak			
MWh-Energy-Off-Sum	$0.049920	$0.049920	0.0%
MWh-Energy-Off-Win	$0.049920	$0.049920	0.0%
MWh-Energy-Off-peak			
MWh-LF Dsct	$(0.013000)	$(0.015000)	15.4%
Act 141 Credit	$(0.001220)	$(0.001390)	13.9%

Q. Did you review the proposed rate design for the RTP classes presented by Mr. Dahl?

A. Yes. I reviewed Mr. Dahl's "recontouring" proposal for the RTP class and, based on my review to date, it appears to be reasonable. This is based on my understanding that the proposed rate design is to be roughly revenue neutral to existing RTP customers. However, the Company should lower the overall proposed rates such that total revenues are reduced by the -1.0% decrease that I propose for the RTP classes. Finally, I may have more comments in subsequent rounds of testimony if additional testimony and analysis makes such comments necessary and appropriate.

Q. Does this complete your direct testimony?

A. Yes.

Control Number: 45414

Item Number: 528

Addendum StartPage: 0

RECEIVED
2017 FEB 28 AM 11:46
FILING CLERK

SOAH DOCKET NO. 473-16-4051
PUC DOCKET NO. 45414

REVIEW OF THE RATES OF SHARYLAND UTILITIES, L.P., ESTABLISHMENT OF RATES FOR SHARYLAND DISTRIBUTION & TRANSMISSION SERVICES, L.L.C., AND REQUEST FOR GRANT OF A CERTIFICATE OF CONVENIENCE AND NECESSITY AND TRANSFER OF CERTIFICATE RIGHTS	§ § § § § § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

REDACTED DIRECT TESTIMONY

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

CITIES OF MIDLAND, MCALLEN, AND COLORADO CITY

FEBRUARY 28, 2017

528

REDACTED DIRECT TESTIMONY OF
RICHARD A. BAUDINO

TABLE OF CONTENTS

Page

ATTACHMENTS

SCHEDULES

WORKPAPERS – Provided on CD

I. QUALIFICATIONS AND SUMMARY

A. Qualifications

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Richard A. Baudino, a Consultant with J. Kennedy and Associates, Inc., an economic consulting firm specializing in utility ratemaking and planning issues. My business address is 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I provide this information in Attachment A, which includes a list of my testimony experience.

B. Summary

Q. ON WHOSE BEHALF ARE YOU PROVIDING TESTIMONY IN THIS PROCEEDING?

A. I am providing testimony on behalf of the Cities of Midland, McAllen, and Colorado City, Texas ("Cities").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address and make recommendations with respect to the return on equity for Sharyland Utilities, L.P. ("SU") and Sharyland Distribution and Transmission Services, L.L.C. ("SDTS") (collectively "Applicants").

Q. PLEASE SUMMARIZE THE RECOMMENDATIONS CONTAINED IN YOUR TESTIMONY.

A. Based on my analysis in this case, I recommend a 8.90% return on equity ("ROE") for SU and SDTS. I base my recommendation on the results of the Discounted Cash Flow ("DCF") model for a proxy group of 21 electric companies used by the Applicants' witness Robert Hevert. I also included two Capital Asset Pricing Model ("CAPM") analyses for additional information. I did not incorporate the results of the CAPM in my recommendation, however the results from the CAPM generally confirm the reasonableness of my 8.90% ROE recommendation for SU and SDTS. In fact, the CAPM results are lower than my DCF results.

As I shall explain later in my testimony, an 8.90% ROE is a reasonable estimate of the investor required return on equity for low risk transmission and distribution utility companies such as SU and SDTS. Furthermore, in the current low-interest rate environment, a 8.90% ROE is fully justified and supported, even considering the recent increases in the general level of interest rates since the November 2016 election and the recent decisions by the Federal Reserve to raise short-term interest rates.

II. <u>REVIEW OF ECONOMIC AND FINANCIAL CONDITIONS</u>

Q. MR. BAUDINO, WHAT HAS THE TREND BEEN IN LONG-TERM CAPITAL COSTS OVER THE LAST FEW YEARS?

A. Generally speaking, interest rates have declined over the last few years, though they have increased since the November 2016 election. Schedule 1 presents a graphic depiction of the trend in interest rates from January 2008 through January 2017. The interest rates shown in this exhibit are for the 20-year U.S. Treasury Bond and the average public utility bond from the Mergent Bond Record. In January 2008, the average public utility bond yield was 6.08% and the 20-year Treasury Bond yield was 4.35%. As of January 2017, the average public utility bond yield was 4.24%, representing a decline of 184 basis points, or 1.84 percentage points, from January 2008. Likewise, the 20-year Treasury bond stood at 2.75% in January 2017, a decline of 1.60 percentage points (160 basis points) from January 2008.

Q. WAS THERE A SIGNIFICANT CHANGE IN FEDERAL RESERVE POLICY DURING THE HISTORICAL PERIOD SHOWN IN SCHEDULE 1?

A. Yes. In response to the 2007 financial crisis and severe recession that followed in December 2007, the Federal Reserve ("Fed") undertook a series of steps to stabilize the economy, ease credit conditions, and lower unemployment and interest rates. These steps are commonly known as Quantitative Easing ("QE") and were implemented in three distinct stages: QE1, QE2, and QE3. The Fed's stated purpose of QE was "to support the liquidity of financial institutions and foster improved conditions in financial markets."[1]

QE1 was implemented from November 2008 through approximately March 2010. During this time, the Fed cut its key Federal Funds Rate to nearly 0% and purchased $1.25 trillion of mortgage-backed securities and $175 billion of agency debt purchases.

QE2 was implemented in November 2010 with the Fed announcing that it would purchase an additional $600 billion of Treasury securities by the second quarter of 2011.[2]

---

1 (http://www.federalreserve.gov/monetarypolicy/bst_crisisresponse.htm).

2 (http://www.federalreserve.gov/newsevents/press/monetary/20101103a.htm).

Beginning in September 2011, the Fed initiated a "maturity extension program" in which it sold or redeemed $667 billion of shorter-term Treasury securities and used the proceeds to buy longer-term Treasury securities. This program, also known as "Operation Twist," was designed by the Fed to lower long-term interest rates and support the economic recovery.

QE3 began in September 2012 with the Fed announcing an additional bond purchasing program of $40 billion per month of agency mortgage backed securities. More recently, the Fed began to pare back its purchases of securities. For example, on January 29, 2014 the Fed stated that beginning in February 2014 it would reduce its purchases of long-term Treasury securities to $35 billion per month. The Fed continued to reduce these purchases throughout the year and in a press release issued October 29, 2014 announced that it decided to close this asset purchase program in October.[3]

Q. HAS THE FED RECENTLY INDICATED ANY IMPORTANT CHANGES TO ITS MONETARY POLICY?

A. Yes. In March 2016, the Fed raised its target range for the federal funds rate to 1/4% to 1/2% from 0% to 1/4%. The Fed further increased the target range to 1/2% to 3/4% in a press release dated December 14, 2017. In its press release dated February 1, 2017, the Fed held the federal funds rate steady and stated:

> Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will rise to 2 percent over the medium term. Near-term risks to the economic outlook appear

---

[3] (http://www.federalreserve.gov/newsevents/press/monetary/20141029a.htm).

> roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.
>
> In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1/2 to 3/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a return to 2 percent inflation.[4]

Q. MR. BAUDINO, WHY IS IT IMPORTANT TO UNDERSTAND THE FED'S ACTIONS WITH RESPECT TO MONETARY POLICY SINCE 2007?

A. The Fed's monetary policy actions since 2007 were deliberately undertaken to lower interest rates and support economic recovery. The Fed's actions have been quite successful in lowering interest rates given that the 20-year Treasury Bond yield in June 2007 was 5.29% and the public utility bond yield was 6.34%. The U.S. economy is currently in a low interest rate environment. As I will demonstrate later in my testimony, low interest rates have also significantly lowered investors' required return on equity for the stocks of regulated utilities.

Q. ARE CURRENT INTEREST RATES INDICATIVE OF INVESTOR EXPECTATIONS REGARDING THE FUTURE DIRECTION OF INTEREST RATES?

A. Yes. Securities markets are efficient and most likely reflect investors' expectations about future interest rates. As Dr. Roger Morin pointed out in *New Regulatory Finance:*

---

4 (https://www.federalreserve.gov/newsevents/press/monetary/20170201a.htm).

> A considerable body of empirical evidence indicates that U.S. capital markets are efficient with respect to a broad set of information, including historical and publicly available information.[5]

Despite recent increases in interest rates, including long-term Treasury Bonds and average utility bonds, the U.S. economy continues to operate in a low interest rate environment. It is likely at some point this year that the Federal Reserve will once again raise short-term interest rates. However, the timing and the level of any such move are not known at this time. It is important to realize that investor expectations of higher interest rates, if any, are already embodied in current securities prices, which include debt securities and stock prices.

The current low interest rate environment favors lower risk regulated utilities. It would not be advisable for utility regulators to raise ROEs in anticipation of higher interest rates that may or may not occur.

Q. HOW DOES THE INVESTMENT COMMUNITY REGARD THE ELECTRIC UTILITY INDUSTRY CURRENTLY?

A. The Value Line Investment Survey issued its report on the Electric Utility (West) Industry dated January 27, 2017. I have taken the following excerpts from that report, which I believe will be helpful in providing a broader perspective on how the current economic environment is affecting the regulated utility industry.

> The year that just ended was an excellent one for most electric utility equities. In the first half, most stocks performed tremendously as interest rates declined from an already-low level and many investors sought a (relatively) safe haven in an increasingly volatile market. These issues gave back some of their first-half gains in the final six months of 2016, but the industry posted a total return of 17.4%. This topped the total return of the Standard and Poor's 500, which was 12.0%.

---

[5] Morin, Roger A., *New Regulatory Finance,* Public Utilities Reports, Inc., 279 (2006).

* * *

> In early 2017, most electric utility stocks have not moved significantly. Thus, they retain their high valuation. In 2016, most traded at a price-earnings ratio in the high teens—about the same as the overall market—and the dividend yields of most issues were below 4%. These measures indicate a high valuation, by historical standards. The industry's current average dividend yield is 3.5%. Investors should note, too, that the recent quotations of some electric utility issues are near the upper end or even above their 2019-2021 Target Price Range.[6]

Value Line's remarks with respect to the electric utility industry indicate that despite the recent increase in interest rates, utility stocks continue to be highly valued investments for their stability in today's volatile marketplace for stocks. The safety and relatively high dividend yields for regulated utilities are attractive to investors, although Value Line recommended caution due to the group's currently high price valuation.

Q. BRIEFLY DESCRIBE SU AND STDS.

A. Mr. David A. Campbell, witness for SU and SDTS, provided a general description of the Applicants on page 3 of his Direct Testimony. Based on an Order in Docket No. 35287 from the Public Utility Commission of Texas ("Commission"), a restructuring plan was approved for SU and SDTS that enabled the Applicants to utilize a Real Estate Investment Trust ("REIT") to finance new transmission and distribution assets. SU transferred its transmission and distribution ("T&D") assets to SDTS, which then leased these assets to SU. SU maintains operational responsibility for the T&D assets and is the managing member of SDTS. SDTS, in addition to owning the assets, is the primary source of capital for the Sharyland system.

---

6 Value Line's Electric Utility (West) Industry Investment Survey at 2225 (Jan. 27, 2017).

Neither SU nor SDTS has public ratings from any of the bond rating agencies, such as Standard and Poor's, Moody's, and Fitch. SDTS did file an unpublished Credit Opinion from Moody's as SDTS WP/II-C.210 (HSPM). [redacted]

III. DETERMINATION OF FAIR RATE OF RETURN

Q. PLEASE DESCRIBE THE METHODS YOU EMPLOYED IN ESTIMATING A FAIR RATE OF RETURN FOR SU AND SDTS.

A. I estimated the return on equity for the Applicants' regulated transmission and distribution operations using a DCF analysis for a group of proxy group of electric companies. I also employed two CAPM analyses using both historical and forward-looking data. However, I did not directly incorporate the CAPM results in my recommendation.

Q. WHAT ARE THE MAIN GUIDELINES TO WHICH YOU ADHERE IN ESTIMATING THE COST OF EQUITY FOR A FIRM?

A. Generally speaking, the estimated cost of equity should be comparable to the returns of other firms with similar risk structures and should be sufficient for the firm to attract capital. These are the basic standards set out by the United States Supreme

Court in *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) and *Bluefield W.W. & Improv. Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1922).

From an economist's perspective, the notion of "opportunity cost" plays a vital role in estimating the return on equity. One measures the opportunity cost of an investment equal to what one would have obtained in the next best alternative. For example, let us suppose that an investor decides to purchase the stock of a publicly traded electric utility. That investor made the decision based on the expectation of dividend payments and perhaps some appreciation in the stock's value over time; however, that investor's opportunity cost is measured by what they could have invested in as the next best alternative. That alternative could have been another utility stock, a utility bond, a mutual fund, a money market fund, or any other number of investment vehicles.

The key determinant in deciding whether to invest, however, is based on comparative levels of risk. Our hypothetical investor would not invest in a particular electric company stock if it offered a return lower than other investments of similar risk. The opportunity cost simply would not justify such an investment. Thus, the task for the rate of return analyst is to estimate a return that is equal to the return being offered by other risk-comparable firms.

Q. WHAT ARE THE MAJOR TYPES OF RISK FACED BY UTILITY COMPANIES?

A. In general, risk associated with the holding of common stock can be separated into three major categories: business risk, financial risk, and liquidity risk. Business risk refers to risks inherent in the operation of the business. Volatility of the firm's sales, long-term demand for its product(s), the amount of operating leverage, and quality of management are all factors that affect business risk. The quality of regulation at the state and federal levels also plays an important role in business risk for regulated utility companies.

Financial risk refers to the impact on a firm's future cash flows from the use of debt in the capital structure. Interest payments to bondholders represent a prior call on the firm's cash flows and must be met before income is available to the common shareholders. Additional debt means additional variability in the firm's earnings, leading to additional risk.

Liquidity risk refers to the ability of an investor to quickly sell an investment without a substantial price concession. The easier it is for an investor to sell an investment for cash, the lower the liquidity risk will be. Stock markets, such as the New York and American Stock Exchanges, help ease liquidity risk substantially. Investors who own stocks that are traded in these markets know on a daily basis what the market prices of their investments are and that they can sell these investments fairly quickly. Many electric utility stocks are traded on the New York Stock Exchange and are considered liquid investments.

Q. ARE THERE ANY INDICES AVAILABLE TO INVESTORS THAT QUANTIFY THE TOTAL RISK OF A COMPANY?

A. Bond and credit ratings are tools that investors use to assess the risk comparability of firms. Bond rating agencies such as Moody's and Standard and Poor's ("S&P") perform detailed analyses of factors that contribute to the risk of a particular investment. The end result of their analyses is a bond rating that reflects these risks. This information can then be used to select a comparison group for use in the DCF model.

A. DCF Model

Q. PLEASE DESCRIBE THE BASIC DCF APPROACH.

A. The basic DCF approach is rooted in valuation theory. It is based on the premise that the value of a financial asset is determined by its ability to generate future net cash flows. In the case of a common stock, those future cash flows take the form of dividends and appreciation in stock price. The value of the stock to investors is the discounted present value of future cash flows. The general equation then is:

$$V = \frac{R}{(1+r)} + \frac{R}{(1+r)^2} + \frac{R}{(1+r)^3} + \cdots \frac{R}{(1+r)^n}$$

Where: V = *asset value*
R = *yearly cash flows*
r = *discount rate*

This is no different from determining the value of any asset from an economic point of view; however, the commonly employed DCF model makes certain simplifying assumptions. One is that the stream of income from the equity share is assumed to be perpetual; that is, there is no salvage or residual value at the end of some maturity date (as is the case with a bond). Another important assumption is that financial markets are reasonably efficient; that is, they correctly evaluate the cash flows relative to the appropriate discount rate, thus rendering the stock price efficient relative to other alternatives. Finally, the model also assumes a constant growth rate in dividends. The fundamental relationship employed in the DCF method is described by the formula:

$$k = {}^{D_1}/_{P_0} + g$$

Where: D_1 = *the next period dividend*
P_0 = *current stock price*
g = *expected growth rate*
k = *investor-required return*

Under the formula, it is apparent that "k" must reflect the investors' expected return. Use of the DCF method to determine an investor-required return is complicated by the need to express investors' expectations relative to dividends, earnings, and book value over an infinite time horizon. Financial theory suggests that stockholders purchase common stock on the assumption that there will be some change in the rate of dividend payments over time. We assume that the rate of growth in dividends is constant over the assumed time horizon, but the model could easily handle varying growth rates if we knew what they were. Finally, the relevant time frame is prospective rather than retrospective.

Q. WHAT WAS YOUR FIRST STEP IN CONDUCTING YOUR DCF ANALYSIS FOR SU AND SDTS?

A. My first step was to construct a proxy group of electric companies. In this case, I chose to use the same group of companies used by Applicants' witness Hevert. Mr. Hevert described his selection criteria on page 16 of his Direct Testimony. Although my typical selection criteria are somewhat different from Mr. Hevert's, his proxy group contains many electric utilities that I have included in my comparison groups in other recent cases. For purposes of this case, it is reasonable to proceed with the proxy group of 21 companies shown by Mr. Hevert in Table 2, page 17, of his Direct Testimony.

Q. WHAT WAS YOUR FIRST STEP IN DETERMINING THE DCF RETURN ON EQUITY FOR THE PROXY GROUP OF COMPANIES?

A. I first determined the current dividend yield, D_0/P_0, from the basic equation. My general practice is to use six months as the most reasonable period over which to estimate the dividend yield.

Q. WHICH SIX-MONTH PERIOD DID YOU USE AND WHAT WERE THE RESULTS?

A. The six-month period I used covered the months from August 2016 through January 2017. I obtained historical prices and dividends from Yahoo! Finance. The annualized dividend divided by the average monthly price represents the average dividend yield for each month in the period.

The average dividend yield for the comparison group is 3.27%. These calculations are shown on Schedule 2.

Q. HAS THE PROXY GROUP DIVIDEND YIELD CHANGED MUCH DURING THE SIX-MONTH PERIOD YOU EXAMINED?

A. Schedule 2, page 4, shows that the monthly group dividend yield tended to track the movement of interest rates over the six-month period. The January 2017 dividend yield for the group was 3.27%, which is slightly higher than the 3.19% yield in August 2016. Despite recent increases in interest rates, particularly since November 2016, the average dividend yield for the proxy group has not changed significantly from August 2016, although the yield increased somewhat in October and November 2016.

Q. HAVING ESTABLISHED THE AVERAGE DIVIDEND YIELD, HOW DID YOU DETERMINE THE INVESTORS' EXPECTED GROWTH RATE FOR THE PROXY GROUP?

A. The investors' expected growth rate, in theory, correctly forecasts the constant rate of growth in dividends. The dividend growth rate is a function of earnings growth and the payout ratio, neither of which is known precisely for the future. We refer to a perpetual growth rate since the DCF model has no arbitrary cut-off point. We must estimate the investors' expected growth rate because there is no way to know with absolute certainty what investors expect the growth rate to be in the short term, much less in perpetuity.

For my analysis in this proceeding, I used three major sources of analysts' forecasts for growth. These sources are The Value Line Investment Survey, Zacks, and First Call. This is the method I typically use for estimating growth for my DCF calculations.

Q. PLEASE BRIEFLY DESCRIBE VALUE LINE, ZACKS, AND FIRST CALL.

A. The Value Line Investment Survey is a widely used and respected source of investor information that covers approximately 1,700 companies in its Standard Edition and several thousand in its Plus Edition. It is updated quarterly and probably represents the most comprehensive of all investment information services. It provides both historical and forecasted information on a number of important data elements. Value Line neither participates in financial markets as a broker nor works for the utility industry in any capacity of which I am aware.

Zacks gathers opinions from a variety of analysts on earnings growth forecasts for numerous firms including regulated electric utilities. The estimates of the analysts responding are combined to produce consensus average estimates of earnings growth. I obtained Zacks' earnings growth forecasts from its web site.

Like Zacks, First Call also compiles and reports consensus analysts' forecasts of earnings growth. I obtained these forecasts from Yahoo! Finance.

Q. WHY DID YOU RELY ON ANALYSTS' FORECASTS IN YOUR ANALYSIS?

A. Return on equity analysis is a forward-looking process. Five-year or ten-year historical growth rates may not accurately represent investor expectations for future dividend and earnings growth. Analysts' forecasts for earnings and dividend growth provide better proxies for the expected growth component in the DCF model than historical growth rates. Analysts' forecasts are also widely available to investors and one can reasonably assume that they influence investor expectations.

Q. HOW DID YOU UTILIZE YOUR DATA SOURCES TO ESTIMATE GROWTH RATES FOR THE COMPARISON GROUPS?

A. Schedule 3 presents the Value Line, Zacks, and First Call forecasted growth estimates for the comparison group. These earnings and dividend growth estimates for the comparison group are summarized on Columns (1) through (5) of page 1 of Schedule 3.

In my analysis I used four of these growth rates: dividend and earnings growth from Value Line and earnings growth from Zacks and First Call. It is important to include dividend growth forecasts in the DCF model since the model calls for forecasted cash flows. Value Line is the only source of which I am aware that forecasts dividend growth and my approach gives this forecast equal weight with the three earnings growth forecasts.

Q. HOW DID YOU PROCEED TO DETERMINE THE DCF RETURN ON EQUITY FOR THE COMPARISON GROUP?

A. To estimate the expected dividend yield (D_1) for the group, the current dividend yield must be moved forward in time to account for dividend increases over the next twelve months. I estimated the expected dividend yield by multiplying the current dividend yield by one plus one-half the expected growth rate.

Page 2 of Schedule 3 presents my standard method of calculating dividend yields, growth rates, and return on equity for the comparison group of companies. The DCF Return on Equity Calculation section shows the application of each of four growth rates I used in my analysis to the current group dividend yield of 3.27% to calculate the expected dividend yield. I then added the expected growth rates to the expected dividend yield. In evaluating investor expected growth rates, I use both the average and the median values for the group under consideration. The calculations of the resulting DCF returns on equity for both methods are presented on page 2 of Schedule 3.

Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?

A. For the average growth rates in Method 1, the results range from 8.50% to 9.02%, with the average of these results being 8.87%. Using the median growth rates in Method 2, the results range from 8.86% to 9.07%, with the average of these results being 8.94%.

B. <u>CAPM</u>

Q. BRIEFLY SUMMARIZE THE CAPM APPROACH.

A. The theory underlying the CAPM approach is that investors, through diversified portfolios, may combine assets to minimize the total risk of the portfolio. Diversification allows investors to diversify away all risks specific to a particular company and be left only with market risk that affects all companies. Thus, the CAPM theory identifies two types of risks for a security: company-specific risk and market risk. Company-specific risk includes such events as strikes, management errors, marketing failures, lawsuits, and other events that are unique to a particular firm. Market risk includes inflation, business cycles, war, variations in interest rates, and changes in consumer confidence. Market risk tends to affect all stocks and cannot be diversified away. The idea behind the CAPM is that diversified investors are rewarded with returns based on market risk.

Within the CAPM framework, the expected return on a security is equal to the risk-free rate of return plus a risk premium that is proportional to the security's market, or non-diversifiable, risk. Beta is the factor that reflects the inherent market risk of a security and measures the volatility of a particular security relative to the overall market for securities. For example, a stock with a beta of 1.0 indicates that if the market rises by 15%, that stock will also rise by 15%. This stock moves in tandem with movements in the overall market. Stocks with a beta of 0.5 will only rise or fall 50% as much as the overall market. So with an increase in the market of 15%, this stock will only rise 7.5%. Stocks with betas greater than 1.0 will rise and fall more than the overall market. Thus, beta is the measure of the relative risk of individual securities vis-à-vis the market.

Based on the foregoing discussion, the equation for determining the return for a security in the CAPM framework is:

$$K = Rf + \beta(MRP)$$

Where: K = *Required Return on equity*
Rf = *Risk-free rate*
MRP = *Market risk premium*
β = *Beta*

This equation tells us about the risk/return relationship posited by the CAPM. Investors are risk averse and will only accept higher risk if they expect to receive higher returns. These returns can be determined in relation to a stock's beta and the market risk premium. The general level of risk aversion in the economy determines the market risk premium. If the risk-free rate of return is 3.0% and the required return on the total market is 15%, then the risk premium is 12%. Any stock's required return can be determined by multiplying its beta by the market risk premium. Stocks with betas greater than 1.0 are considered riskier than the overall market and will have higher required returns. Conversely, stocks with betas less than 1.0 will have required returns lower than the market as a whole.

Q. IN GENERAL, ARE THERE CONCERNS REGARDING THE USE OF THE CAPM IN ESTIMATING THE RETURN ON EQUITY?

A. Yes. There is some controversy surrounding the use of the CAPM.[7] There is evidence that beta is not the primary factor in determining the risk of a security. For example, Value Line's "Safety Rank" is a measure of total risk, not its calculated beta

[7] For a more complete discussion of some of the controversy surrounding the use of the CAPM, refer to *A Random Walk Down Wall Street* by Burton Malkiel, pp. 206-11, 2007 edition.

coefficient. Beta coefficients usually describe only a small amount of total investment risk.

There is also substantial judgment involved in estimating the required market return. In theory, the CAPM requires an estimate of the return on the total market for investments, including stocks, bonds, real estate, etc. It is nearly impossible for the analyst to estimate such a broad-based return. Often in utility cases, a market return is estimated using the S&P 500 or the return on Value Line's stock market composite. However, these are limited sources of information with respect to estimating the investor's required return for all investments. In practice, the total market return estimate faces significant limitations to its estimation and, ultimately, its usefulness in quantifying the investor required ROE.

In the final analysis, a considerable amount of judgment must be employed in determining the risk-free rate and market return portions of the CAPM equation. The analyst's application of judgment can significantly influence the results obtained from the CAPM. My past experience with the CAPM indicates that it is prudent to use a wide variety of data in estimating investor-required returns. Of course, the range of results may also be wide, indicating the difficulty in obtaining a reliable estimate from the CAPM.

Q. HOW DID YOU ESTIMATE THE MARKET RETURN PORTION OF THE CAPM?

A. The first source I used was the Value Line Investment Analyzer, Plus Edition, for February 14, 2017. This edition covers several thousand stocks. The Value Line Investment Analyzer provides a summary statistical report detailing, among other things, forecasted growth rates for earnings and book value for the companies Value

Line follows as well as the projected total annual return over the next 3 to 5 years. I present these growth rates and Value Line's projected annual return on page 2 of Schedule 4. I included median earnings and book value growth rates. The estimated market returns using Value Line's market data range from 9.50% to 9.85%. The average of these two market returns is 9.67%.

Q. WHY DID YOU USE MEDIAN GROWTH RATE ESTIMATES RATHER THAN THE AVERAGE GROWTH RATE ESTIMATES FOR THE VALUE LINE COMPANIES?

A. Using median growth rates is likely a more accurate method of estimating the central tendency of Value Line's large data set compared to the average growth rates. Average earnings and book value growth rates may be unduly influenced by very high or very low 3–5 year growth rates that are unsustainable in the long run. For example, Value Line's Statistical Summary shows both the highest and lowest value for earnings and book value growth forecasts. For earnings growth, Value Line showed the highest earnings growth forecast to be 140.4% and the lowest growth rate to be -30.5%. The highest book value growth rate was 72.5% and the lowest was -33%. None of these levels of growth is compatible with long-run growth prospects for the market as a whole. The median growth rate is not influenced by such extremes because it represents the middle value of a very wide range of earnings growth rates.

Q. PLEASE CONTINUE WITH YOUR MARKET RETURN ANALYSIS.

A. I also considered a supplemental check to the Value Line projected market return estimates. Duff and Phelps publishes a study of historical returns on the stock market in its *2016 SBBI Yearbook*. Some analysts employ this historical data to estimate the market risk premium of stocks over the risk-free rate. The assumption is that a risk premium calculated over a long period of time is reflective of investor expectations going forward. Schedule 5 presents the calculation of the market returns using the historical data.

Q. PLEASE EXPLAIN HOW THIS HISTORICAL RISK PREMIUM IS CALCULATED.

A. Schedule 5 shows both the geometric and arithmetic average of yearly historical stock market returns over the historical period from 1926–2015. The average annual income return for a 20-year Treasury bond is subtracted from these historical stock returns to obtain the historical market risk premium of stock returns over long-term Treasury bond income returns. The historical market risk premium range is 5.0%–7.0%.

Q. DID YOU ADD AN ADDITIONAL MEASURE OF THE HISTORICAL RISK PREMIUM IN THIS CASE?

A. Yes. Duff and Phelps reported the results of a study by Dr. Roger Ibbotson and Dr. Peng Chen indicating that the historical risk premium of stock returns over long-term government bond returns has been significantly influenced upward by substantial growth in the price/earnings ("P/E") ratio for stocks from 1980 through 2001.[8] Duff and Phelps noted that this growth in the P/E ratio for stocks was subtracted out of the historical risk premium because "it is not believed that P/E will continue to increase in the future." The adjusted historical arithmetic market risk

---

[8] *2016 SBBI Yearbook,* Duff and Phelps, pp. 10-28 through 10-30.

premium is 6.03%, which I have also included in Schedule 5. This risk premium estimate falls near the middle of the market risk premium range shown on Schedule 5.

Q. HOW DID YOU DETERMINE THE RISK FREE RATE?

A. I used the average yields on the 20-year Treasury bond and five-year Treasury note over the six-month period from August 2016 through January 2017. This was the latest available data from the Federal Reserve's Selected Interest Rates (Daily) H.15 web site during the preparation of my Direct Testimony. The 20-year or 30-year Treasury bond is often used by rate of return analysts as the risk-free rate, but it contains a significant amount of interest rate risk. The five-year Treasury note carries less interest rate risk than the 20-year bond and is more stable than three-month Treasury bills. Therefore, I have employed both of these securities as proxies for the risk-free rate of return. This approach provides a reasonable range over which the CAPM return on equity may be estimated.

Q. HOW DID YOU DETERMINE THE VALUE FOR BETA?

A. I obtained the betas for the companies in the proxy group from most recent Value Line reports. The average of the Value Line betas for the comparison group is 0.72.

Q. PLEASE SUMMARIZE THE CAPM RESULTS.

A. For my forward-looking CAPM return on equity estimates, the CAPM results are 7.38%–7.62%. Using historical risk premiums, the CAPM results are 5.96%–7.40%.

C. Conclusions and Recommendations

Q. PLEASE SUMMARIZE THE COST OF EQUITY RESULTS FROM YOUR DCF AND CPAM ANALYSES.

A. Table 1 below summarizes the cost of equity estimates I developed using the DCF model and the CAPM.

TABLE 1
SUMMARY OF ROE ESTIMATES

Baudino DCF Methodology:	
Average Growth Rates	
- High	9.02%
- Low	8.50%
- Average	8.87%
Median Growth Rates:	
- High	9.07%
- Low	8.86%
- Average	8.94%
CAPM:	
- 5-Year Treasury Bond	7.38%
- 20-Year Treasury Bond	7.62%
- Historical Returns	5.96% - 7.40%

Q. WHAT IS YOUR RECOMMENDED RETURN ON EQUITY FOR SU AND SDTS IN THIS PROCEEDING?

A. Mr recommended ROE for the Applicants is 8.90%. This is based on the approximate midpoint of the range of DCF results.

Q. PLEASE EXPLAIN IN MORE DETAIL WHY YOUR 8.90% ROE RECOMMENATION IS REASONABLE.

A. The Applicants' position as transmission and distribution-only regulated public utilities indicates that they are low-risk providers of electric service. SU and SDTS do not own and operate generation facilities therefore having none of the attendant risks of generation that vertically integrated electric utilities have. [redacted] Thus, it is quite reasonable to allow SU and SDTS a ROE based on the results from the proxy group that Mr. Hevert and I employed.

Q. DID YOU MAKE A COMPARISON OF SDTS' LONG-TERM DEBT RATES TO AVERAGE PUBLIC UTILITY BOND YIELDS?

A. Yes. SDTS' Schedule II-C-2.4 shows the interest rates for SDTS' long-term debt. SDTS' Series A Note was issued on December 3, 2015 with an interest rate of 3.86%. I compared this interest rate to the yields on long-term average public utility bonds from the data presented in my Schedule 1. Table 2 below shows the average public utility bond yields for each month in 2015 and the average yield for the year.

TABLE 2

Mergent
Average Public Utility
Bond Yield (%)

January	3.83
February	3.91
March	3.97
April	3.96
May	4.38
June	4.6
July	4.63
August	4.54
September	4.68
October	4.63
November	4.73
December	4.69
Average	4.38

Note that the interest rate for SDTS' Series A note, 3.86%, is significantly below the 2015 average utility bond yield and is lower in 11 out of the 12 months of 2015. I believe it is clear from Table 2 that SDTS did not have to pay a premium on its Series A bond interest rate compared to the average public utility bond in 2015. If anything, one could reasonably conclude that SDTS received a discount relative to the average public utility bond yield.

This analysis further supports my view that SU and SDTS are low-risk T&D companies and do not require any additional premium in the allowed ROE in this case.

IV. <u>RESPONSE TO SHARYLAND ROE TESTIMONY</u>

Q. HAVE YOU REVIEWED THE DIRECT TESTIMONY OF MR. ROBERT HEVERT?

A. Yes.

Q. PLEASE SUMMARIZE MR. HEVERT'S TESTIMONY AND APPROACH TO RETURN ON EQUITY.

A. Mr. Hevert employed four methods to estimate the investor required rate of return for the Applicants: (1) the constant growth DCF model, (2) a multi-stage DCF model, (3) the CAPM, and (4) the bond yield plus risk premium model.

For his constant growth DCF approach, he used Value Line, First Call, and Zacks for the investor expected growth rate. For the proxy group, Mr. Hevert's mean growth rate ROE results ranged from 8.91% to 8.93%.

Regarding his multi-stage DCF analysis, Mr. Hevert used the same proxy group. This model consisted of three distinct stages with assumptions regarding growth rates and payout ratio changes. Mr. Hevert used a forecast of growth in nominal Gross Domestic Product ("GDP") for his long-term growth rate. The results for this method using the mean growth rate for the proxy group ranged from 10.0% to 10.18%.

With respect to the CAPM, Mr. Hevert's results ranged from 8.88% to 11.30%.

Finally, Mr. Hevert's formulation of the bond yield plus risk premium approach resulted in a ROE range of 10.01% to 10.34%.

Based on the results of his analyses and judgment, Mr. Hevert recommended a ROE range for SU and SDTS of 10.00% to 10.60%, concluding that the cost of equity is 10.00%.

Q. BEFORE YOU PROCEED TO THE PARTICULARS OF YOUR REVIEW WITH RESPECT TO MR. HEVERT'S TESTIMONY, WHAT IS YOUR OVERALL CONCLUSION WITH RESPECT TO MR. HEVERT'S RECOMMENDED ROE RANGE?

A. In my opinion, the results of Mr. Hevert's ROE analyses do not support his recommended ROE range of 10.0% to 10.6%. His mean DCF results for both the constant growth and multi-stage models range from 8.91% to 10.18%. I would also note that the results for Mr. Hevert's constant growth DCF model are consistent with my DCF results using Methods 1 and 2. Mr. Hevert's bond yield plus risk premium approach yielded a high end ROE result of 10.34%. Only his CAPM results showed ROE estimtates significantly greater than 10%. Indeed, Mr. Hevert appears to have omitted the entirety of his average, or mean, DCF results, all of which are significantly below the lower end of his recommended range of 10%. The

Commission should reject Mr. Hevert's recommended ROE range as unsupported by his own analyses.

A. Constant Growth DCF Analyses

Q. YOU PREVIOUSLY SUMMARIZED THE RANGE OF MR. HEVERT'S AVERAGE, OR MEAN, CONSTANT GROWTH DCF RESULTS TO BE 8.91%–8.96%. DID MR. HEVERT PROPERLY ACCOUNT FOR THE CONSTANT GROWTH DCF RESULTS IN HIS RECOMMENDED ROE RANGE FOR SU AND SDTS?

A. No. In fact, Mr. Hevert apparently rejected the mean constant growth DCF results in their entirety, so far as they fall below the low end of his recommended ROE range (10.0%).

It is incorrect for Mr. Hevert to ignore the results of the constant growth DCF model in his recommended ROE for the Applicants. The constant growth DCF model utilizes public, verifiable information with respect to investor return requirements for electric utilities. Current stock prices are the best indicators we have of investor return requirements and expectations. Analysts' earnings and dividend growth forecasts may reasonably be assumed to influence investor expectations. Simply discarding this information, as Mr. Hevert has apparently done, merely serves to overstate his recommended investor required return for a low-risk utility investment like SU and SDTS.

Q. ON PAGE 25, LINES 7 THROUGH 9 OF HIS DIRECT TESTIMONY, MR. HEVERT TESTIFIED THAT THE CONSTANT GROWTH DCF "SHOULD BE GIVEN LESS WEIGHT THAN OTHER METHODS IN ESTABLISHING THE COMPANIES' ROE." DO YOU AGREE WITH MR. HEVERT ON THIS POINT?

A. No. The constant growth DCF model, which uses current stock prices, shows that investor required returns are lower for utility stocks given their relative safety and security relative to the stock market as a whole. The quote I cited from the Value Line Investment Survey in Section II indicated that investors view utility stocks as safe havens during volatile markets and I agree with Value Line on that point. Despite the Fed increasing the federal funds rate twice in 2016, utility stocks still outperformed the market as a whole in 2016. My Schedule 2 also shows that the dividend yield for the proxy group did not increase significantly from August 2016 through January 2017, although November and December 2016 yields for the group did increase in response to uncertain market conditions, including the recent presidential election and the Fed announcing that it expected to engage in additional, but gradual, increases in the federal funds rate. At any rate, the DCF model will reflect investor attitudes and expectations with respect to risk and return requirements through the use of current stock prices. Contrary to Mr. Hevert's conclusion, the constant growth DCF model should continue to be relied upon as the primary basis for the Applicants' allowed ROE in this proceeding.

Moreover, it appears that Mr. Hevert did not just give the constant growth DCF results "less weight," he gave them no weight in his recommended ROE range.

B. Multi-Stage DCF Model

Q. PLEASE SUMMARIZE THE COMPONENTS OF MR. HEVERT'S MULTI-STAGE DCF MODEL.

A. Mr. Hevert described the structure and the inputs for his multi-stage DCF model on pages 27 through 30 of his Direct Testimony. The main elements of Mr. Hevert's multi-stage DCF analyses are as follows:

- 30, 90, and 180 average stock prices.
- First stage of growth based on the average earnings growth rates from Value Line, Zacks, and First Call.
- A transition period from near-term to long-term growth.
- Long-term growth estimated using GDP growth based on historical real GDP growth from 1929 through 2015 (3.24%) and a forecasted inflation rate (2.05%). The total nominal GDP growth rate was 5.36%.
- Expected dividend in the final year divided by solved cost of equity less long-term growth rate.
- Payout ratio assumptions based on Value Line for the first stage, a transition period, and a long-term expected payout ratio.

Q. AS A PRACTICAL MATTER, IS IT LIKELY THAT INVESTORS WOULD USE THE MULTI-STAGE MODEL PRESENTED BY MR. HEVERT?

A. No. In my opinion, it is highly unlikely that investors would employ the complicated structure and set of assumptions used by Mr. Hevert. Mr. Hevert presented no evidence whatsoever that investors use such a model in forming their required return for transmission and distribution utilities like SU and SDTS. He presented no evidence that investors use GDP growth in their evaluation of expected growth in dividends and earnings for electric utility companies. Neither did he show that investors utilize his assumptions regarding the transition period or payout ratio forecasts.

Q. IN YOUR OPINION, DID MR. HEVERT OVERSTATE EXPECTED GDP GROWTH?

A. Yes. There are two publicly available forecasts of GDP growth that are relied upon by the Federal Energy Regulatory Commission ("FERC") in the determination of the second stage of the two-stage growth rate in its DCF return on equity formula. These forecasts come from the Energy Information Administration ("EIA"), and the Social Securities Administration ("SSA") Trustees Report.[9] The latest EIA GDP forecast shows expected growth in nominal GDP of 4.20%. The SSA Report forecasts nominal growth in GDP of 4.41%. The average of these two long-term GDP forecasts is 4.30%. I include the calculations of these two GDP growth rates on Schedule 6. My calculations are based on my understanding of how the FERC Staff uses the data contained in the EIA and SSA documents to calculate long-term GDP growth for the second stage of its two-stage DCF model.

These independent sources are forecasting nominal GDP growth to be substantially lower than the forecast used by Mr. Hevert (4.30% versus Mr. Hevert's forecast of 5.36%). In conclusion, Mr. Hevert's GDP forecast contributes to a significant overstatement of his multi-stage DCF results.

---

[9] Please see the Energy Information Administration, *Annual Energy Outlook 2017* (January 2017) and Social Security Administration, 2016 OASDI Trustees Report, Table VI.G6 - Selected Economic Variables, Calendar Years 2015-90.

Q. IF THE COMMISSION WERE TO RELY ON A MULTI-STAGE DCF MODEL IN THIS PROCEEDING, SHOULD IT UTILIZE THE 4.30% LONG-TERM GDP GROWTH RATE THAT YOU PRESENTED?

A. Yes. To quantify the effect of using a 4.30% GDP growth rate, I recalculated Mr. Hevert's Exhibit RBH-4 using the 4.30% GDP growth rate, his 180-day average stock prices, and his earnings growth rates. The results are presented in my Schedule 7. The mean ROE result is 9.50%. This result is 0.58% lower than Mr. Hevert's ROE result using his inflated GDP growth rate.

C. CAPM

Q. BRIEFLY SUMMARIZE THE MAIN ELEMENTS OF MR. HEVERT'S CAPM APPROACH.

A. On pages 32 through 33 of his Direct Testimony, Mr. Hevert testified that he used two different measure of the risk-free interest rate: the current 30-day average yield on the 30-year Treasury bond (2.75%) and a projected 30-year Treasury bond yield (3.13%). Mr. Hevert did not consider any shorter maturity bonds, such as the 5-year Treasury note.

Mr. Hevert then calculated ex-ante measures of total market returns using data from Bloomberg and Value Line. Total market returns from these two sources were 12.94% using Bloomberg data and a 13.96% return using Value Line data.

Mr. Hevert used two different estimates for beta from Bloomberg and Value Line.

Q. IS IT APPROPRIATE TO USE FORECASTED OR PROJECTED BOND YIELDS IN THE CAPM?

A. Definitely not. Current interest rates and bond yields embody all of the relevant market data and expectations of investors, including expectations of changing future interest rates. The forecasted bond yield used by Mr. Hevert is speculative at best and may never come to pass. Current interest rates provide tangible and verifiable market evidence of investor return requirements today, and these are the interest rates and bond yields that should be used in both the CAPM and in the bond yield plus risk premium analyses. To the extent that investors give forecasted interest rates any weight at all, they are already incorporated in current securities prices.

Q. SHOULD MR. HEVERT HAVE CONSIDERED SHORTER-TERM TREASURY YIELDS IN HIS CAPM ANALYSES?

A. Yes. In theory, the risk-free rate should have no interest rate risk. 30-year Treasury Bonds do tend to face this risk, which is the risk that interest rates could rise in the future and lead to a capital loss for the bondholder. Typically, the longer the duration of the bond, the greater the interest rate risk. The 5-year Treasury note has much less interest rate risk than 20-year or 30-year Treasury Bonds and may be considered one reasonable proxy for a risk-free security.

Q. PLEASE COMMENT ON MR. HEVERT'S USE OF BLOOMBERG AND VALUE LINE EARNINGS GROWTH ESTIMATES FOR THE S&P 500.

A. Mr. Hevert used earnings growth estimates from these two sources to estimate the expected market return for his CAPM. According to the data contained in Exhibit RBH-5, the average Value Line growth rate is 10.06% and the average Bloomberg growth rate is 9.71%. These are by no means long-run sustainable growth rates.

They are well over double the long-term GDP forecast of 4.30% that I presented earlier and nearly twice as large as Mr. Hevert's own GDP forecast. If forecasted GDP growth is used, then both Mr. Hevert's and my own market return estimates would fall significantly. Obviously, using 4.30% as a proxy for long-term growth for the S&P 500 companies would reduce Mr. Hevert's market return of 12.94% and 13.96% quite substantially.

D. Risk Premium

Q. PLEASE SUMMARIZE MR. HEVERT'S RISK PREMIUM APPROACH.

A. Mr. Hevert developed a historical risk premium using Commission-allowed returns for regulated electric utility companies and 30-year Treasury bond yields from January 1980 through November 30, 2016. He used regression analysis to estimate the value of the inverse relationship between interest rates and risk premiums during that period. Applying the regression coefficients to the average risk premium and using the projected 30-year Treasury yields I discussed earlier, Mr. Hevert's risk premium ROE estimate range is 10.01%–10.34%.

Q. PLEASE RESPOND TO MR. HEVERT'S RISK PREMIUM ANALYSIS.

A. First, the bond yield plus risk premium approach is imprecise and can only provide very general guidance on the current authorized ROE for a regulated electric utility. Risk premiums can change substantially over time. As such, this approach is a "blunt instrument," if you will, for estimating the ROE in regulated proceedings. In my view, a properly formulated DCF model using current stock prices and growth forecasts is far more reliable and accurate than the bond yield plus risk premium approach, which relies on a historical risk premium analysis over a certain period of time.

Second, I recommend that the Commission reject the use of the forecasted Treasury bond yield for the same reasons I described in my response to Mr. Hevert's CAPM approach.

E. <u>Business Risks and Other Considerations</u>

Q. PLEASE SUMMARIZE THE BUSINESS RISK DISCUSSION CONTAINED IN SECTION VI OF MR. HEVERT'S DIRECT TESTIMONY.

A. Beginning on page 37 of his Direct Testimony, Mr. Hevert presented the risks and other considerations that he believes should be taken into account in setting the allowed cost of equity for SU and SDTS. These considerations include:

- Small size effect and stand-alone risk
- Stand-alone risk associated with the Applicants' assets.
- SU and SDTS capital expenditure programs.

Q. MR. HEVERT PRESENTED A 76 BASIS POINT SMALL SIZE PREMIUM FOR SU AND SDTS ON PAGES 39 AND 40 OF HIS DIRECT TESTIMONY. SHOULD THE COMMISSION CONSIDER ADDING A SMALL SIZE PREMIUM TO SU AND SDTS' ROE?

A. No, definitely not. The data that Mr. Hevert relied on to quantify this adjustment came from the 2016 SBBI Yearbook published by Duff and Phelps. The group of companies from which Mr. Hevert took this significant upward adjustment contains many unregulated companies. Further, the decile group from which this adjustments were taken had an average beta of 1.10, compared to the proxy group beta of 0.72. Mr. Hevert thus assumes, without foundation, that the Applicants' beta would be 1.10, indicating higher risk than the market as a whole. Given the fact that the Applicants engage in low-risk T&D operations, it is highly unlikely that they would be more risky than the stock market as a whole and have a higher beta that is equivalent to more risky unregulated companies. Mr. Hevert's small size premium should be rejected.

Q. DO THE OTHER FACTORS CITED BY MR. HEVERT SUGGEST A HIGHER ROE FOR THE COMPANIES RELATIVE TO THE PROXY GROUP?

A. No. I cited the Moody's Credit Opinion earlier in my testimony, [redacted] This does not support a ROE adjustment for the factors cited by Mr. Hevert. Mr. Hevert did not include a discussion of the Applicants' low-risk T&D operations as a mitigating risk factor. Further, I demonstrated in Table 2 that the interest rate on SDTS' Series A note carried a favorable yield that was in fact lower than the 2015 yields for average public utility bonds. This further strengthens the argument that SU and SDTS should not receive any additional risk premium compared to the ROE results for the proxy group used by Mr. Hevert and myself.

F. <u>Capital Market Environment</u>

Q. BEGINNING ON PAGE 47 OF HIS DIRECT TESTIMONY, MR. HEVERT DISCUSSED CURRENT CAPITAL MARKET CONDITIONS. COULD YOU PLEASE RESPOND TO MR. HEVERT'S DISCUSSION OF THESE CONDITIONS?

A. Yes. As I described in Section II of my testimony, the United States continues to be a low interest rate environment, which suggests lower ROEs for regulated utilities. Referring back to the quote from the Federal Reserve I included in Section II, the stance of the Federal Reserve is one of accommodation, that it decided to maintain short-term interest rates at their present levels, and that future increases would be gradual. There is the risk that utility stock prices will decline with future increases in interest rates, but current market data already includes investors' perceptions and evaluations of this risk.

It is instructive to note the following movements in the Dow Jones Utility Average ("DJU") from August 1, 2016 through January 31, 2017. At the end of August 2016 the DJU stood at 666.87. The DJU reached a low of 616.19 during October 2016, but by the end of January 2017 recovered to close at 668.87. Thus, despite interest rates increasing from November 2016, the DJU closed in January 2017 at about the same level as it did in August 2016.

To conclude, investors continue to view regulated utilities as safe, stable investments compared with the overall stock market. Recent stock market movements underscore my recommendation of 8.90% as reasonable for a low risk utility investment such as SU and SDTS. In my opinion, the Commission does not need to add any additional risk premium for capital market conditions to the 8.90% ROE that I recommend in this proceeding.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes.

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-two years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates: Consultant** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Climax Molybdenum Company
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Evaluation of cost allocation, rate design, rate plan, and carrying charge proposals.
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD & United States	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T Users Group	WV	West Virginia Energy	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-	WV E-42T	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

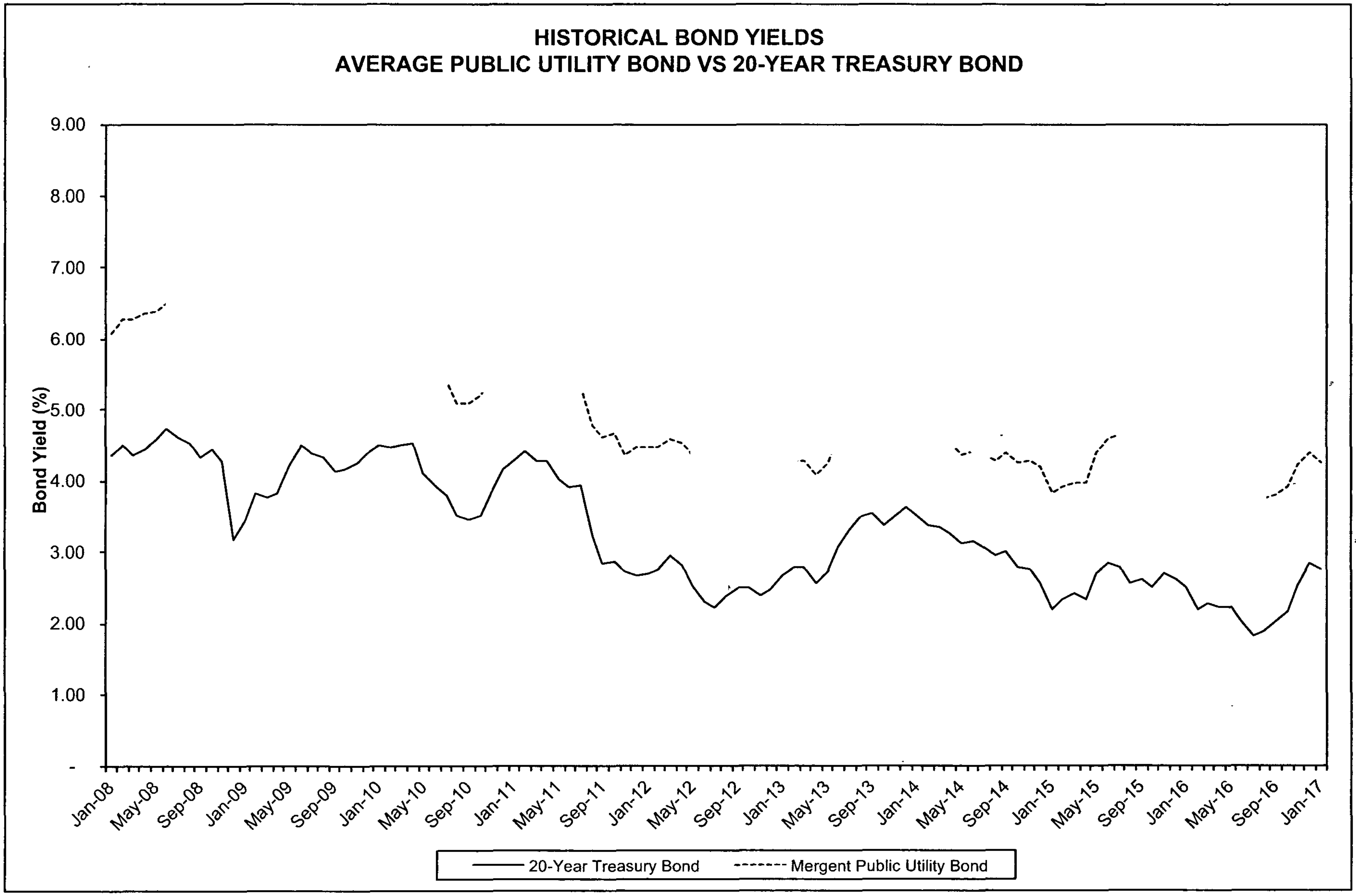
Date	Case	Jurisdict.	Party	Utility	Subject
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co,	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
08/13	P-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CFI Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint; security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP and Sharyland Dist. and Transmission Services, LLC	Return on equity



HISTORICAL BOND YIELDS
AVERAGE PUBLIC UTILITY BOND VS 20-YEAR TREASURY BOND
Bond Yield (%)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
-
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Jan-16
May-16
Sep-16
Jan-17
20-Year Treasury Bond
Mergent Public Utility Bond

PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jan-17	Dec-16	Nov-16	Oct-16	Sep-16	Aug-16
ALLETE	High Price ($)	65.480	66.920	64.570	61.400	62.700	64.460
	Low Price ($)	61.640	60.970	56.480	56.570	58.200	58.600
	Avg. Price ($)	63.560	63.945	60.525	58.985	60.450	61.530
	Dividend ($)	0.520	0.520	0.520	0.520	0.520	0.520
	Mo. Avg. Div.	3.27%	3.25%	3.44%	3.53%	3.44%	3.38%
	6 mos. Avg.	3.38%					
Alliant Energy	High Price ($)	38.290	38.340	38.670	38.330	40.600	40.580
	Low Price ($)	36.560	35.260	34.880	36.310	37.090	37.690
	Avg. Price ($)	37.425	36.800	36.775	37.320	38.845	39.135
	Dividend ($)	0.315	0.294	0.294	0.294	0.294	0.294
	Mo. Avg. Div.	3.37%	3.20%	3.20%	3.15%	3.03%	3.00%
	6 mos. Avg.	3.16%					
Ameren Corp.	High Price ($)	53.400	52.880	51.460	50.250	51.910	52.590
	Low Price ($)	51.350	48.320	46.970	46.840	47.790	49.150
	Avg. Price ($)	52.375	50.600	49.215	48.545	49.850	50.870
	Dividend ($)	0.440	0.440	0.425	0.425	0.425	0.425
	Mo. Avg. Div.	3.36%	3.48%	3.45%	3.50%	3.41%	3.34%
	6 mos. Avg.	3.42%					
American Electric Power	High Price ($)	64.110	63.530	64.900	65.250	66.960	69.480
	Low Price ($)	61.820	57.890	58.160	61.280	63.560	64.070
	Avg. Price ($)	62.965	60.710	61.530	63.265	65.260	66.775
	Dividend ($)	0.590	0.590	0.590	0.560	0.560	0.560
	Mo. Avg. Div.	3.75%	3.89%	3.84%	3.54%	3.43%	3.35%
	6 mos. Avg.	3.63%					
Avista Corp.	High Price ($)	40.170	43.000	42.260	41.740	43.740	43.710
	Low Price ($)	37.880	38.690	39.210	38.990	40.380	40.300
	Avg. Price ($)	39.025	40.845	40.735	40.365	42.060	42.005
	Dividend ($)	0.343	0.343	0.343	0.343	0.343	0.343
	Mo. Avg. Div.	3.52%	3.36%	3.37%	3.40%	3.26%	3.27%
	6 mos. Avg.	3.36%					
Black Hills Corp.	High Price ($)	62.700	62.830	61.900	62.070	63.790	63.870
	Low Price ($)	60.020	57.580	54.760	56.530	57.510	56.860
	Avg. Price ($)	61.360	60.205	58.330	59.300	60.650	60.365
	Dividend ($)	0.420	0.420	0.420	0.420	0.420	0.420
	Mo. Avg. Div.	2.74%	2.79%	2.88%	2.83%	2.77%	2.78%
	6 mos. Avg.	2.80%					

PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jan-17	Dec-16	Nov-16	Oct-16	Sep-16	Aug-16
CenterPoint Energy	High Price ($)	26.230	24.980	24.420	23.180	24.430	24.010
	Low Price ($)	24.450	23.570	21.910	21.830	22.270	21.970
	Avg. Price ($)	25.340	24.275	23.165	22.505	23.350	22.990
	Dividend ($)	0.258	0.258	0.258	0.258	0.258	0.258
	Mo. Avg. Div.	4.07%	4.25%	4.45%	4.59%	4.42%	4.49%
	6 mos. Avg.	4.38%					
CMS Energy Corp.	High Price ($)	42.610	42.000	42.270	42.550	44.440	45.370
	Low Price ($)	41.120	39.420	38.780	40.010	41.140	41.490
	Avg. Price ($)	41.865	40.710	40.525	41.280	42.790	43.430
	Dividend ($)	0.310	0.310	0.310	0.310	0.310	0.310
	Mo. Avg. Div.	2.96%	3.05%	3.06%	3.00%	2.90%	2.86%
	6 mos. Avg.	2.97%					
DTE Energy Co.	High Price ($)	99.490	99.920	96.780	96.540	97.600	98.440
	Low Price ($)	96.580	92.190	89.660	90.750	90.610	92.240
	Avg. Price ($)	98.035	96.055	93.220	93.645	94.105	95.340
	Dividend ($)	0.825	0.825	0.770	0.770	0.770	0.730
	Mo. Avg. Div.	3.37%	3.44%	3.30%	3.29%	3.27%	3.06%
	6 mos. Avg.	3.29%					
El Paso Electric Co.	High Price ($)	47.200	48.350	47.550	47.000	48.750	47.820
	Low Price ($)	44.700	44.550	43.550	42.490	44.070	44.820
	Avg. Price ($)	45.950	46.450	45.550	44.745	46.410	46.320
	Dividend ($)	0.310	0.310	0.310	0.310	0.310	0.310
	Mo. Avg. Div.	2.70%	2.67%	2.72%	2.77%	2.67%	2.68%
	6 mos. Avg.	2.70%					
Eversource Energy	High Price ($)	55.900	55.740	55.330	55.470	56.840	59.280
	Low Price ($)	54.080	50.560	50.990	51.880	53.040	53.580
	Avg. Price ($)	54.990	53.150	53.160	53.675	54.940	56.430
	Dividend ($)	0.445	0.445	0.445	0.445	0.445	0.445
	Mo. Avg. Div.	3.24%	3.35%	3.35%	3.32%	3.24%	3.15%
	6 mos. Avg.	3.27%					
IDACORP	High Price ($)	81.140	81.810	79.430	78.860	81.550	81.710
	Low Price ($)	77.490	75.030	72.930	73.330	75.140	75.460
	Avg. Price ($)	79.315	78.420	76.180	76.095	78.345	78.585
	Dividend ($)	0.550	0.550	0.550	0.510	0.510	0.510
	Mo. Avg. Div.	2.77%	2.81%	2.89%	2.68%	2.60%	2.60%
	6 mos. Avg.	2.72%					

PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jan-17	Dec-16	Nov-16	Oct-16	Sep-16	Aug-16
Northwestern Corp.	High Price ($)	57.880	58.080	59.130	57.760	60.710	61.320
	Low Price ($)	55.990	54.070	54.780	53.850	56.180	57.090
	Avg. Price ($)	56.935	56.075	56.955	55.805	58.445	59.205
	Dividend ($)	0.500	0.500	0.500	0.500	0.500	0.500
	Mo. Avg. Div.	3.51%	3.57%	3.51%	3.58%	3.42%	3.38%
	6 mos. Avg.	3.50%					
OGE Energy	High Price ($)	34.160	34.230	32.480	31.690	33.100	32.290
	Low Price ($)	32.850	31.260	29.570	29.610	30.590	29.910
	Avg. Price ($)	33.505	32.745	31.025	30.650	31.845	31.100
	Dividend ($)	0.303	0.303	0.303	0.303	0.275	0.275
	Mo. Avg. Div.	3.62%	3.70%	3.91%	3.95%	3.45%	3.54%
	6 mos. Avg.	3.70%					
Otter Tail Corp.	High Price ($)	40.800	42.550	39.750	36.500	36.420	35.420
	Low Price ($)	37.050	37.750	33.450	33.080	33.910	32.990
	Avg. Price ($)	38.925	40.150	36.600	34.790	35.165	34.205
	Dividend ($)	0.313	0.313	0.313	0.313	0.313	0.313
	Mo. Avg. Div.	3.22%	3.12%	3.42%	3.60%	3.56%	3.66%
	6 mos. Avg.	3.43%					
Pinnacle West Capital	High Price ($)	78.800	78.970	77.340	76.590	80.190	79.540
	Low Price ($)	75.790	72.610	70.860	72.070	73.940	74.280
	Avg. Price ($)	77.295	75.790	74.100	74.330	77.065	76.910
	Dividend ($)	0.655	0.655	0.655	0.655	0.625	0.625
	Mo. Avg. Div.	3.39%	3.46%	3.54%	3.52%	3.24%	3.25%
	6 mos. Avg.	3.40%					
PNM Resources, Inc.	High Price ($)	34.750	34.530	33.450	33.250	34.910	34.510
	Low Price ($)	33.350	31.000	30.950	30.980	31.200	31.560
	Avg. Price ($)	34.050	32.765	32.200	32.115	33.055	33.035
	Dividend ($)	0.243	0.220	0.220	0.220	0.220	0.220
	Mo. Avg. Div.	2.85%	2.69%	2.73%	2.74%	2.66%	2.66%
	6 mos. Avg.	2.72%					
Portland General Electric	High Price ($)	44.150	44.140	43.910	44.320	44.120	44.460
	Low Price ($)	42.610	40.710	40.870	40.280	41.710	41.510
	Avg. Price ($)	43.380	42.425	42.390	42.300	42.915	42.985
	Dividend ($)	0.320	0.320	0.320	0.320	0.320	0.320
	Mo. Avg. Div.	2.95%	3.02%	3.02%	3.03%	2.98%	2.98%
	6 mos. Avg.	3.00%					

PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jan-17	Dec-16	Nov-16	Oct-16	Sep-16	Aug-16
SCANA Corp.	High Price ($)	74.060	74.990	73.520	73.830	75.920	75.800
	Low Price ($)	67.710	69.710	67.310	67.910	69.040	69.830
	Avg. Price ($)	70.885	72.350	70.415	70.870	72.480	72.815
	Dividend ($)	0.575	0.575	0.575	0.575	0.575	0.575
	Mo. Avg. Div.	3.24%	3.18%	3.27%	3.25%	3.17%	3.16%
	6 mos. Avg.	3.21%					
WEC Energy	High Price ($)	59.630	59.120	59.740	60.130	63.350	65.240
	Low Price ($)	57.630	54.960	53.660	56.460	59.030	59.320
	Avg. Price ($)	58.630	57.040	56.700	58.295	61.190	62.280
	Dividend ($)	0.495	0.495	0.495	0.495	0.495	0.495
	Mo. Avg. Div.	3.38%	3.47%	3.49%	3.40%	3.24%	3.18%
	6 mos. Avg.	3.36%					
Xcel Energy	High Price ($)	41.430	41.200	41.750	41.800	43.490	44.130
	Low Price ($)	40.040	38.220	38.000	39.080	40.340	41.070
	Avg. Price ($)	40.735	39.710	39.875	40.440	41.915	42.600
	Dividend ($)	0.340	0.340	0.340	0.340	0.340	0.340
	Mo. Avg. Div.	3.34%	3.42%	3.41%	3.36%	3.24%	3.19%
	6 mos. Avg.	3.33%					
Monthly Avg. Dividend Yield		3.27%	3.29%	3.35%	3.33%	3.21%	3.19%
6-month Avg. Dividend Yield		3.27%					

Source: Yahoo! Finance

PROXY GROUP
DCF Growth Rate Analysis

Company	(1) Value Line DPS	(2) Value Line EPS	(3) Value Line B x R	(4) Zacks	(5) First Call
ALLETE, Inc.	3.50%	4.00%	3.00%	5.50%	5.00%
Alliant Energy Corporation	4.50%	6.00%	5.50%	5.50%	6.00%
Ameren Corp.	4.00%	6.00%	3.50%	6.50%	5.85%
American Electric Power Co.	5.00%	5.00%	4.00%	5.60%	1.49%
Avista Corporation	3.00%	3.00%	2.50%	N/A	5.65%
Black Hills Corp.	6.00%	7.50%	5.00%	6.20%	7.56%
CenterPoint Energy, Inc.	4.50%	2.00%	2.50%	5.00%	6.63%
CMS Energy Corp.	6.50%	6.00%	5.50%	6.00%	7.60%
DTE Energy Co.	6.50%	6.00%	3.50%	6.00%	5.05%
El Paso Electric Co.	7.00%	4.00%	4.00%	5.50%	6.50%
Eversource Energy	5.50%	7.00%	4.50%	6.30%	5.77%
IDACORP, Inc.	7.50%	3.00%	3.50%	4.30%	4.10%
NorthWestern Corp.	5.50%	6.50%	4.00%	5.00%	4.34%
OGE Energy	9.50%	3.00%	3.00%	5.30%	4.00%
Otter Tail Corp.	1.50%	6.00%	3.50%	N/A	5.20%
Pinnacle West Capital Corp.	5.00%	4.00%	3.50%	4.90%	5.30%
PNM Resources, Inc.	10.00%	9.00%	3.50%	6.50%	6.85%
Portland General Electric Company	6.00%	4.00%	3.50%	6.10%	6.60%
SCANA Corp.	4.50%	4.50%	4.50%	5.70%	5.70%
WEC Energy	7.00%	6.00%	3.50%	6.00%	6.73%
Xcel Energy Inc.	6.00%	5.50%	4.00%	5.40%	5.69%
Averages	5.64%	5.14%	3.81%	5.65%	5.60%
Median Values	5.50%	5.50%	3.50%	5.60%	5.70%

Sources: Value Line Investment Survey, Dec. 16, 2016; Jan. 27 and Feb. 17, 2017
Yahoo! Finance for IBES growth rates retrieved February 14, 2017
Zacks growth rates retrieved February 14, 2017

PROXY GROUP
DCF RETURN ON EQUITY

	(1) Value Line Dividend Gr.	(2) Value Line Earnings Gr.	(3) Zack's Earning Gr.	(4) First Call Earning Gr.	(5) Average of All Gr. Rates
Method 1:					
Dividend Yield	3.27%	3.27%	3.27%	3.27%	3.27%
Average Growth Rate	5.64%	5.14%	5.65%	5.60%	5.51%
Expected Div. Yield	3.37%	3.36%	3.37%	3.36%	3.36%
DCF Return on Equity	***9.01%***	***8.50%***	***9.02%***	***8.96%***	***8.87%***
Method 2:					
Dividend Yield	3.27%	3.27%	3.27%	3.27%	3.27%
Median Growth Rate	5.50%	5.50%	5.60%	5.70%	5.58%
Expected Div. Yield	3.36%	3.36%	3.36%	3.37%	3.36%
DCF Return on Equity	***8.86%***	***8.86%***	***8.96%***	***9.07%***	***8.94%***

PROXY GROUP
Capital Asset Pricing Model Analysis

20-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	9.67%
2	Risk-free Rate of Return, 20-Year Treasury Bond	
3	Average of Last Six Months	2.37%
4	Risk Premium	
5	(Line 1 minus Line 3)	7.30%
6	Comparison Group Beta	0.72
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	5.25%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	7.62%

5-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	9.67%
2	Risk-free Rate of Return, 5-Year Treasury Bond	
3	Average of Last Six Months	1.51%
4	Risk Premium	
5	(Line 1 minus Line 3)	8.16%
6	Comparison Group Beta	0.72
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	5.87%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	7.38%

PROXY GROUP
Capital Asset Pricing Model Analysis

Supporting Data for CAPM Analyses

20 Year Treasury Bond Data	Avg. Yield	5 Year Treasury Bond Data	Avg. Yield
August-16	1.89%	August-16	1.13%
September-16	2.02%	September-16	1.18%
October-16	2.17%	October-16	1.27%
November-16	2.54%	November-16	1.60%
December-16	2.84%	December-16	1.96%
January-17	2.75%	January-17	1.92%
6 month average	2.37%	6 month average	1.51%

Source: www.federalreserve.gov/datadownload/Choose.aspx?rel=H15

Value Line Market Return Data:

Forecasted Data:

Value Line Median Growth Rates:	
Earnings	11.00%
Book Value	7.00%
Average	9.00%
Average Dividend Yield	0.81%
Estimated Market Return	9.85%
Value Line Projected 3-5 Yr. Median Annual Total Return	9.50%
Average of Projected Mkt. Returns	9.67%

Source: Value Line Investment Survey for Windows retreived Feb. 14, 2017

Comparison Group Betas:	Value Line
ALLETE, Inc.	0.75
Alliant Energy Corporation	0.70
Ameren Corp.	0.65
American Electric Power Co.	0.65
Avista Corporation	0.70
Black Hills Corp.	0.90
CenterPoint Energy, Inc.	0.85
CMS Energy Corp.	0.65
DTE Energy Co.	0.65
El Paso Electric Co.	0.70
Eversource Energy	0.70
IDACORP, Inc.	0.75
NorthWestern Corp.	0.70
OGE Energy	0.90
Otter Tail Corp.	0.85
Pinnacle West Capital Corp.	0.70
PNM Resources, Inc.	0.75
Portland General Electric Company	0.70
SCANA Corp.	0.65
WEC Energy	0.60
Xcel Energy Inc.	0.60
Average	0.72

Source: Value Line Investment Survey

PROXY GROUP
Capital Asset Pricing Model Analysis
Historic Market Premium

	Geometric Mean	Arithmetic Mean	Adjusted Arithmetic Mean
Long-Term Annual Return on Stocks	10.00%	12.00%	
Long-Term Annual Income Return on Long-Term Treas. Bonds	5.00%	5.00%	
Historical Market Risk Premium	5.00%	7.00%	6.03%
Comparison Group Beta, Value Line	0.72	0.72	0.72
Beta * Market Premium	3.60%	5.03%	4.34%
Current 20-Year Treasury Bond Yield	2.37%	2.37%	2.37%
CAPM Cost of Equity, Value Line Beta	**5.96%**	**7.40%**	**6.70%**

Source: *2016 SBBI Yearbook, Stocks, Bonds, Bills, and Inflation*, Duff and Phelps; pp. 2-6, 6-17, 10-30

FERC GDP GROWTH RATE

		2020	2050	2070	
Energy Information Administration					
	Real GDP	18,236	33,653		
	GDP Deflator	1.212953	2.25784		
		22,119	75,982		4.20%
SSA Trustees Report		22,948		198,390	4.41%
Average GDP Growth Rate					4.30%

Sources:

Energy Information Administration, *Annual Energy Outlook 2017* (Macroeconomic Indicators).
Social Security Administration, 2016 OASDI Trustees Report (June 22, 2016),
Table VI.G6 - Selected Economic Variables, Calendar Years 2015-90

HEVERT PROXY GROUP - REVISED GDP GROWTH RATE
180-Day Stock Prices - Mean DCF Results

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates					Payout Ratio			Iterative Solution		Terminal	Terminal
					Value		Long-Term							
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$59.57	5.50%	5.00%	4.00%	4.83%	4.30%	66.00%	65.00%	66.88%	($0 00)	10.60%	22.23	5.17
Alliant Energy Corporation	LNT	$37.75	6.10%	6.60%	6.00%	6.23%	4.30%	62.00%	61.00%	66.88%	$0 00	9.09%	22.23	5.17
Ameren Corporation	AEE	$49.74	6.50%	5.60%	6.00%	6.03%	4.30%	66.00%	63.00%	66.88%	($0 00)	9.67%	22.23	5.17
American Electric Power Company, Inc.	AEP	$65.20	5.40%	1.89%	4.00%	3.76%	4.30%	61.00%	67.00%	66.88%	($0.00)	9.63%	22.23	5.17
Avista Corporation	AVA	$41.33	5.30%	5.65%	5.00%	5.32%	4.30%	67.00%	64.00%	66.88%	($0 00)	8.83%	22.23	5.17
Black Hills Corporation	BKH	$60.20	6.00%	7.00%	7.50%	6.83%	4.30%	68.00%	53.00%	66.88%	$0 00	9.81%	22.23	5.17
CenterPoint Energy, Inc.	CNP	$22.65	5.50%	5.73%	2.00%	4.41%	4.30%	86.00%	85.00%	66.88%	$0.00	9.23%	22.23	5.17
CMS Energy Corporation	CMS	$42.29	6.60%	7.27%	6.00%	6.62%	4.30%	64.00%	62.00%	66.88%	$0 01	9.35%	22.23	5.17
DTE Energy Company	DTE	$93.03	5.80%	5.63%	6.00%	5.81%	4.30%	62.00%	60.00%	66.88%	$0.00	9.43%	22.23	5.17
El Paso Electric Company	EE	$45.59	4.40%	7.00%	4.00%	5.13%	4.30%	54.00%	59.00%	66.88%	($0.00)	8.28%	22.23	5.17
Eversource Energy	ES	$55.80	6.10%	5.82%	6.00%	5.97%	4.30%	61.00%	58.00%	66.88%	$0.00	9.80%	22.23	5.17
IDACORP, Inc.	IDA	$76.09	4.30%	4.10%	3.00%	3.80%	4.30%	53.00%	60.00%	66.88%	($0 00)	8.69%	22.23	5.17
NorthWestern Corporation	NWE	$58.74	5.00%	4.50%	6.50%	5.33%	4.30%	59.00%	58.00%	66.88%	($0.01)	9.37%	22.23	5.17
OGE Energy Corp.	OGE	$30.65	5.20%	4.00%	3.00%	4.07%	4.30%	66.00%	74.00%	66.88%	($0.00)	10.03%	22.23	5.17
Otter Tail Corporation	OTTR	$32.86	NA	6.00%	6.00%	6.00%	4.30%	82.00%	64.00%	66.88%	$0.00	9.73%	22.23	5.17
Pinnacle West Capital Corporation	PNW	$75.62	4.70%	4.85%	4.00%	4.52%	4.30%	64.00%	64.00%	66.88%	($0 00)	9.49%	22.23	5.17
PNM Resources, Inc.	PNM	$32.93	6.80%	6.85%	9.00%	7.55%	4.30%	51.00%	55.00%	66.88%	$0 00	10.68%	22.23	5.17
Portland General Electric Company	POR	$41.88	6.30%	6.50%	5.50%	6.10%	4.30%	58.00%	59.00%	66.88%	$0 01	9.73%	22.23	5.17
SCANA Corporation	SCG	$71.16	5.50%	6.33%	4.50%	5.44%	4.30%	57.00%	57.00%	66.88%	$0 00	10.16%	22.23	5.17
WEC Energy Group	WEC	$60.23	6.20%	7.01%	6.00%	6.40%	4.30%	67.00%	67.00%	66.88%	($0.00)	8.04%	22.23	5.17
Xcel Energy Inc.	XEL	$41.53	5.40%	5.72%	5.50%	5.54%	4.30%	62.00%	62.00%	66.88%	($0 00)	9.83%	22.23	5.17
											DCF Result			
											Mean	9.50%	22.23	5.17
											Max	10.68%	22.23	5.17
											Min	8.04%	22.23	5.17

PUC DOCKET NO. 46238

JOINT REPORT AND APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC AND NEXTERA ENERGY, INC. FOR REGULATORY APPROVALS PURSUANT TO PURA §§ 14.101, 39.262 AND 39.915	§ § § § § §	BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS

DIRECT TESTIMONY

OF

RICHARD A. BAUDINO

ON BEHALF OF

THE STEERING COMMITTEE OF CITIES SERVED BY ONCOR

JANUARY 11, 2016

DIRECT TESTIMONY OF
RICHARD A. BAUDINO

TABLE OF CONTENTS

ATTACHMENTS

WORKPAPERS – Provided on CD

I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Richard A. Baudino. I am a Consultant with J. Kennedy and Associates, Inc., an economic consulting firm specializing in utility ratemaking and planning issues. My business address is 570 Colonial Park Drive, Suite 305, Roswell, Georgia.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I provide this information in Attachment A, including a list of my testimony experience.

Q. ON WHOSE BEHALF ARE YOU PROVIDING TESTIMONY IN THIS PROCEEDING?

A. I am providing testimony on behalf of the Steering Committee of Cities Served by Oncor ("Cities").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present my analysis and recommendations regarding the proposed transaction between Oncor Electric Delivery Company, LLC ("Oncor") and NextEra Energy, Inc. ("NextEra").

More specifically, my analysis and evaluation of this proposed transaction includes the following:

1. Review the potential effects of the proposed transaction on Oncor's cost of capital.
2. Review and report on rating agency reports and evaluations of the proposed transaction.
3. Discuss ring fencing as it applies to protection of the regulated rate of return for the combined utilities.

4. Offer recommendations to the Public Utility Commission of Texas ("PUC" or "Commission") with respect to ratepayer protections regarding Oncor's regulated rate of return.

5. Evaluate and discuss issues with respect to reliability and quality of service to Oncor's customers.

6. Offer recommendations to the Commission with respect to conditions relating to reliability and quality of service that should be attached to approval of the proposed transaction.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS FOR THE COMMISSION.

A. My conclusions and recommendations are as follows:

1. NextEra's proposed regulatory and ring fencing commitments with respect to financing and cost of capital are reasonable and should be approved by the Commission. Specifically, these regulatory commitments are found in Exhibit JR-2 attached to Mr. John Reed's Direct Testimony and are numbered 1, 2, 3, 11, 21, 25, and 29.

2. The Commission should require that NextEra and Oncor maintain Oncor's currently approved capital structure consisting of a 40% common equity ratio and a 60% long-term debt ratio.

3. The Commission should adopt an additional condition to its approval of the proposed transaction such that Oncor's cost of equity shall be determined based on a comparison group of electric utilities with bond ratings no lower than A/A by Standard and Poor's and Moody's.

4. The Commission should adopt an additional condition to its approval of the proposed transaction such that the cost of new long-term debt issued by Oncor should be based on the lower of Oncor's actual cost of long-term debt or the cost of A-rated electric utility long-term debt, whichever is lower.

5. The Commission should require that Oncor and NextEra continue to file the Quarterly Performance Reports that Oncor currently files with the Commission on a quarterly basis.

6. With respect to service quality conditions, the Commission should approve Oncor's regulatory commitment No. 4. Oncor's System Average Interruption Duration Index ("SAIDI") shall be set at 94.94 and its System Average Interruption Frequency Index ("SAIFI") shall be set at 0.94. These numbers shall be based on results from 2011, 2013, 2014, and 2015. Oncor should be required to report its actual SAIDI and SAIFI statistics to the Commission in its Quarterly

Performance Reports and yearly Service Quality Reports filed pursuant to 16 Tex. Admin. Code ("TAC") § 25.81.

7. The Commission should further require that if Oncor fails to achieve either of these reliability indices after the consummation of the proposed merger, then the Commission should open an investigation into service quality for purposes of determining whether any penalties should be assessed against Oncor and/or NextEra.

8. The Commission should adopt an additional condition to its approval that requires Oncor to file a plan detailing how it will address its 100 worst performing feeders on its system. This plan should be filed as part of Oncor's annual Service Quality Report pursuant to 16 TAC § 25.81.

II. COST OF CAPITAL ISSUES

Q. BRIEFLY DESCRIBE THE PROPOSED TRANSACTION BETWEEN ONCOR AND NEXTERA ENERGY, INC.

A. Details of the proposed transaction can be found in the Joint Report and Application of Oncor and NextEra for Regulatory Approvals and the Direct Testimonies filed by witnesses Mark Hickson and John Reed. My summary of the major aspects of the transaction is as follows:

- NextEra proposes to acquire 100% ownership of Oncor through the purchase of the 80.03% interest in Oncor indirectly held by of Energy Future Holdings Corp. ("EFH") and the 19.75% interest in Oncor indirectly held by Texas Transmission Holdings Corp. ("TTHC"). NextEra seeks Commission approval for both transactions.

- If NextEra is unable to close its proposed transaction with TTHC, NextEra proposes to conduct an initial public offering ("IPO") of a fraction of its interest in Oncor (approximately 3%). NextEra also seeks permission from the Commission to conduct this IPO if its proposed transaction with TTHC does not close.

- The proposed transactions would extinguish all debt that currently resides above Oncor that is held by EFH and Energy Future Intermediate Holdings LLC ("EFIH").

- After the proposed transactions close, Oncor would be operated by NextEra as a principle operating subsidiary and as a traditional regulated utility.

- The total value of the proposed transactions is $18.7 billion.

Q. PLEASE DESCRIBE HOW THE ACQUISITION OF ONCOR WOULD BE FINANCED BY NEXTERA.

A. The details of how the proposed transactions would be financed are contained in the Direct Testimony of Mr. John Reed. In summary, the transactions would be financed as follows:

- NextEra would use a combination of debt and equity to fund $9.8 billion primarily for the repayment of EFIH debt, including about $5.4 billion of EFIH debt obligations under its first lien debtor-in-possession financing.
- NextEra would also fund $2.4 billion in cash, primarily for the purchase of shares in TTHC with the remainder to repay any existing debt that that currently resides at TTHC and Texas Transmission Investment LLC ("TTI").
- NextEra would rebalance its capital structure after closing the transactions to reflect the inclusion of Oncor and to satisfy rating agencies' guidelines so that its current credit ratings are maintained.

Q. WHAT COMMITMENTS DID NEXTERA PROPOSE WITH RESPECT TO ONCOR'S FINANCING, CAPITAL STRUCTURE, AND RETURN ON EQUITY?

A. Mr. Reed's Exhibit JR-2 contains the regulatory and ring fencing commitments that NextEra proposes be adopted in this proceeding. With respect to financing, capital structure, and cost of equity, NextEra proposed the following commitments:

1. NextEra will extinguish all debt that resides above Oncor at EFH and EFIH.
2. NextEra Energy and its subsidiaries, other than Oncor, will not incur, guarantee, or pledge assets in respect of any new debt that is solely or almost entirely dependent on the revenues of Oncor without first seeking Commission approval. NextEra Energy and its Affiliates (other than Oncor) will provide advance notice to potential lenders of new debt issued pursuant to the Commission approval received under this commitment of its corporate separateness from Oncor and will obtain an acknowledgement of the separateness and non-petition covenants in all such new debt instruments.

3. The current credit issuer/corporate ratings of Oncor will be maintained or improved at the time of Closing. If, at any time from the date of closing through December 31, 2020, Oncor's issuer/corporate rating is not maintained as investment grade by Standard & Poor's, Moody's, or Fitch credit ratings agencies, Oncor shall not use the lower credit rating as a justification for a higher regulatory rate of return.

11. Oncor's debt will be limited so that its regulatory debt-to-equity ratio (as determined by the Commission) is at or below the assumed debt-to-equity ratio established from time to time by the Commission for ratemaking purposes, which is currently set at 60% debt to 40% equity. The calculations of the debt-to-equity ratio for purposes of this commitment will not include goodwill resulting from the Proposed Transactions.

21. Oncor will not incur, guarantee, or pledge assets in respect of any incremental new debt related to the Proposed Transactions at the closing or thereafter. Oncor's assets shall not be pledged for any entity other than Oncor.

25. Oncor will not share any credit facility with NextEra Energy or its Affiliates.

29. Oncor shall not make any distributions, dividends, or other payments to NextEra Energy or its Affiliates without the prior approval of the Commission at any time that two or more of Standard & Poor's, Moody's, or Fitch credit rating agencies determine that Oncor's issuer/corporate credit rating is not investment grade.[1]

Q. EARLIER YOU REFERRED TO RING FENCING COMMITMENTS PROPOSED BY NEXTERA. WHAT IS RING FENCING AND WHAT IS THE PURPOSE OF RING FENCING?

A. In this case, ring fencing refers to protections provided to a regulated utility company that shield that company from risks and potential harm resulting from the activities of its affiliates and/or parent company. These risks may take the form of operational risks and credit risks. With respect to Oncor, a primary goal of ring fencing set up by the Commission is to protect the regulated utility company from harm due to the bankruptcy of its affiliates and/or parent company. Ring fencing also protects the regulated utility from having its assets depleted or compromised by an affiliate. Ring fencing also ensures

[1] Distributions for payment of reasonable and necessary expenses recovered through Oncor's Commission-approved rates are not subject to this commitment.

that customers are not harmed from the results of corporate restructurings, such as the costs that are or may be incurred due to the transaction proposed in this proceeding.

Q. DID THE COMMISSION ESTABLISH RING FENCING CONDITIONS IN DOCKET NO. 34077?[2]

A. Yes. The Commission approved a Stipulation entered into by the parties in that docket that contained numerous ring-fence provisions. Texas Energy Future Holdings Limited Partnership ("TEF") and Oncor made 22 commitments designed to protect Oncor and its ratepayers from adverse effects from the proposed merger between TEF and Oncor's parent company, TXU Corp.

Q. DID THE MAJOR RATING AGENCIES OFFER ANY OPINIONS AND/OR EVALUATIONS OF THE PROPOSED TRANSACTION?

A. Yes. On the whole, the major rating agencies were quite positive with respect to the effects of the proposed merger on Oncor's credit quality. Mr. Reed's Exhibit JR-6 contains announcements from Moody's, Standard and Poor's, and Fitch that discuss these agencies evaluations and potential actions with respect to Oncor's credit quality after the merger announcement.

Moody's raised Oncor's senior secured rating from Baa1 to A3 and placed the rating on review for a further upgrade in an announcement dated July 29, 2016. Moody's stated that the "acquisition by NextEra places Oncor on a path to remove the constraints pressuring Oncor's strong, stand-alone credit profile based on its stable and predictable low risk transmission and distribution (T&D) utility operations."

---

[2] *Joint Report and Application of Oncor Electric Delivery Company and Texas Energy Future Holdings Limited Partnership Pursuant to PURA § 14.101*, Docket No. 34077 (April 24, 2008).

On August 2, 2016, Standard and Poor's placed Oncor's credit ratings on a positive outlook after the announced acquisition by NextEra. Likewise, Fitch placed Oncor's credit ratings on positive watch on August 1, 2016. In its announcement, Fitch noted the following:

> The acquisition, when completed, will finally resolve the drawn-out bankruptcy proceedings for Oncor's indirect parent holding companies as well as eliminate the significant amount of debt above Oncor. Fitch has been constraining Oncor's IDR by one-notch compared to its peer electric T&D utilities in Texas, and the notching of the senior secured debt at Oncor has been further constrained to reflect ownership by a distressed parent. Fitch sees lifting of these constraints under the ownership of NextEra. After the transaction is completed, Oncor will become a subsidiary of NextEra.[3]

Q. LET US RETURN TO THE REGULATORY AND RING FENCE COMMITMENTS INCLUDED IN MR. REED'S DIRECT TESTIMONY. GIVEN THE CREDIT POSITIVE COMMENTS ON THE PROPOSED ACQUISITION BY THE RATING AGENCIES, SHOULD THE COMMISSION APPROVE THESE COMMITMENTS?

A. Yes. I recommend that the Commission approve the proposed regulatory and ring fencing provisions proposed by Oncor and by NextEra with respect to financing and cost of capital. Given the structure of the proposed transaction, the risk of Oncor's bankrupt parent company will no longer be present. The proposed regulatory commitments are an excellent start with respect to holding Oncor and its ratepayers harmless from any potential risks that may arise from the proposed transaction.

However, there are several additional conditions that I recommend the Commission attach to its approval of the proposed transaction.

[3] Direct Testimony of John Reed, Exhibit JR-6 at 28 (Oct. 31, 2016).

Q. PLEASE SUMMARIZE THE ADDITIONAL CONDITIONS THAT THE COMMISSION SHOULD ADOPT WITH RESPECT TO THE COST OF CAPITAL.

A. I recommend that the Commission approve the following additional conditions with respect to the cost of capital for Oncor:

- Oncor's cost of equity shall be determined using a comparison group of A-rated electric utilities.
- Oncor shall utilize its currently approved capital structure consisting of 40% equity and 60% long-term debt in at least its first base rate case after the Transactions close.
- For future issuances of long-term debt, Oncor shall use the lower of the current cost of A-rated long-term debt for regulated electric utilities or Oncor's actual cost of long-term debt.

Q. PLEASE EXPLAIN WHY THE COMMISSION SHOULD SET ONCOR'S RETURN ON EQUITY USING A-RATED ELECTRIC UTILITIES AS A BENCHMARK GROUP.

A. The Commission, Staff, and other parties to future rate cases will not be able to estimate the cost of equity for Oncor on a stand-alone basis since it will not have its own common equity. Therefore, Oncor's cost of equity must be estimated using a comparison, or proxy group of companies with similar risk structures. Other things being equal, A-rated electric utilities will have a lower cost of equity than Baa/BBB-rated companies. Given Oncor's present bond ratings of A/A, I believe it is reasonable for the Commission to determine Oncor's cost of equity using A-rated electric utilities in future proceedings regardless of its actual bond ratings. This condition will protect Oncor's ratepayers from any credit deterioration that may ensue from the proposed Transactions, although it appears at this time that such deterioration is unlikely.

Q. PLEASE EXPLAIN WHY THE COMMISSION SHOULD ORDER ONCOR TO UTILIZE ITS CURRENTLY APPROVED 40% EQUITY AND 60% LONG TERM DEBT IN AT LEAST THE FIRST BASE RATE CASE THAT IT FILES AFTER THE PROPOSED TRANSACTIONS CLOSE.

A. First, none of the rating agencies cited Oncor's currently approved capital structure as being unsupportive of its current or future bond ratings. Oncor's current credit ratings are investment grade and will likely improve with the consummation of the proposed transaction. Thus, for the near future it appears that Oncor's currently approved capital structure is reasonable and supportive of investment grade credit ratings going forward.

Second, it is important that Oncor's Texas ratepayers be protected from increased rates because of the proposed transaction. If Oncor were to file for an increase in Oncor's equity ratio, then ratepayers could be subject to an increased cost of capital and higher rates. Thus, for purposes of its next rate filing at least, I recommend that the Commission require Oncor to continue to utilize the capital structure currently approved by the Commission.

Q. PLEASE EXPLAIN WHY THE COST OF NEW LONG-TERM DEBT SHOULD BE SET AT THE LOWER OF ONCOR'S ACTUAL COST OR THE THEN CURRENT COST OF A-RATED ELECTRIC UTILITY LONG-TERM DEBT.

A. If Oncor issues new debt that reflects a lower rating due to adverse consequences from the proposed transaction, then Texas ratepayers must be protected from any resulting higher cost of debt. Tying the cost of any new debt to the lower of actual debt cost or the then current cost of A/A debt ensures adequate and reasonable protection for ratepayers.

III. SERVICE QUALITY ISSUES

Q. DOES THE COMMISSION PRESENTLY MONITOR THE QUALITY OF SERVICE FOR ONCOR?

A. Yes. Oncor presently submits Annual Service Quality Reports to the Commission pursuant to 16 TAC § 25.81. Oncor also submits Quarterly Performance Measures reports under seal with the Commission.

Q. WHAT ARE THE RELIABILITY MEASURES REPORTED BY ONCOR?

A. Oncor reports two reliability indices in its Annual Service Quality Reports: SAIDI and SAIFI. SAIDI is a measure of the length of time (duration) during a year that the average customer experienced an outage. For 2015, Oncor's SAIDI was 90.84, which means that the average customer on Oncor's system experienced 90.84 minutes of interrupted service during the year. SAIFI is a measure of how frequently customers were interrupted during the year. For 2015, Oncor's SAIFI was 0.94, meaning that the average customer was interrupted slightly less than once during 2015. Lower SAIDI and SAIFI indices indicate interruptions of shorter duration and fewer interruptions, respectively.

Q. PLEASE SUMMARIZE THE SAIDI AND SAIFI RESULTS FOR THE LAST FIVE YEARS.

A. Table 1 presents the SAIDI and SAIFI results from 2011 through 2015 for Oncor.

TABLE 1		
Oncor SAIDI and SAIFI Results		
	SAIDI	SAIFI
2011	98.52	0.89
2012	84.04	0.82
2013	99.30	0.96
2014	91.10	0.97
2015	90.84	0.94
Avg.	92.76	0.92
Avg. w/o 2012	94.94	0.94

Q. PLEASE SUMMARIZE THE REGULATORY COMMITMENT FROM NEXTERA REGARDING ONCOR'S SYSTEM RELIABILITY.

A. Regulatory commitment No. 4 provides that for a period of five (5) years, for purposes of 16 TAC § 25.52, SAIDI and SAIFI standards should be calculated based on Oncor's forced interruption performance for years 2011, 2013, and 2014. Oncor's SAIDI standard would be 96.30667 and its SAIFI standard should be 0.94000.

Q. WHY WAS 2012 EXCLUDED FROM THE AVERAGE?

A. Per Oncor's response to Staff Request for Information ("RFI") 2-01, Staff witness Wyman recommended that 2012 be eliminated from the SAIDI and SAIFI averages in Case No. 45188.[4]

---

[4] Oncor's Response to Staff RFI No. 2-01 (Dec. 9, 2016), Attachment B.

Q. SHOULD THE COMMISSION ADOPT THIS REGULATORY COMMITMENT?

A. Yes, but it should be modified in two important ways.

First, 2015 should be included in the SAIDI and SAIFI averages since this data has been filed by Oncor. The benchmark average SAIDI and SAIFI averages for 2011, 2013, 2014, and 2015 are 94.94 and 0.94, respectively.

Second, if Oncor's SAIDI and SAIFI results decline in any year after the approval of NextEra's acquisition, then the Commission should open an investigation into service quality for purposes of determining whether any penalties should be assessed against Oncor. NextEra must have an incentive to continue to provide ongoing levels of service reliability to Texas customers after its acquisition of Oncor. Likewise, Texas customers should be protected from any adverse service reliability degradation. NextEra's proposed Regulatory Commitment No. 4 has no consequences for the Company if SAIDI and SAIFI standards are not maintained. In order for this commitment to be meaningful, the Commission must include penalties for degradation of service reliability.

The Commission should also require Oncor to continue to file its annual reports pursuant to 16 TAC § 25.81. Oncor should also be required to continue to file its Quarterly Performance Measures reports with the Commission.

Q. DOES ONCOR CURRENTLY REPORT THE PERFORMANCE OF THE DISTRIBUTION FEEDERS ON ITS SYSTEM?

A. Yes. The Annual Service Quality reports filed by Oncor show the SAIFI rankings and values for the distribution feeders on its system. Please refer to Attachment C, which includes page 4 from Oncor's 2015 Service Quality Report.[5] Oncor reports these values for all the feeders on its system with 10 or more customers.

[5] *2015 Electric Service Quality Report Pursuant to Subst. R. §§ 25.52 and 25.81*, Docket No. 45516, Service Quality Report for Oncor Electric Delivery for Reporting Year 2015 at 4 (Feb. 12, 2016), Attachment C.

Q. SHOULD THE COMMISSION REQUIRE ONCOR TO HAVE A PLAN FOR ADDRESSING THE WORST PERFORMING CIRUITS ON ITS SYSTEM?

A. Yes. If the Commission approves NextEra's acquisition of Oncor, I recommend that Oncor be required to include a report on its 100 worst performing distribution feeders and a plan detailing how the Company intends to improve the performance of these feeders.

This requirement is an important additional safeguard to the service quality for Oncor's Texas ratepayers. It will provide the Commission, Staff, and interested parties information on NextEra's and Oncor's ongoing efforts to address and improve its service quality after the proposed acquisition is completed.

Q. HOW SHOULD THE REPORT AND PLAN TO ADDRESS ONCOR'S WORST PERFORMING FEEDERS BE CONSTRUCTED AND PRESENTED?

A. First, Oncor's 100 worst performing feeders should be identified. Attachment C shows that the SAIFI values may vary substantially from year to year. For example, Feeder No. 1501 was rated as the 6th worst performing feeder in 2015, but was ranked 1,100 in 2014, meaning that this feeder performed substantially better in 2014. These yearly variations may be due to a number of different factors, such as weather, animals, and lightning strikes in a given year that would not be a regular yearly occurrence and would not be indicative of consistently poor performance over time. Therefore, I recommend that Oncor's 100 worst performing feeders be identified based on the average SAIFI values for the last 5 calendar years. Five years is a reasonable period of time over which consistent, or inconsistent, performance may be assessed and evaluated.

Second, Oncor should describe the reasons for the feeder's poor performance over time.

Third, Oncor should provide an action plan that describes how the feeder's performance will be improved. This action plan should describe the specific remedies and actions Oncor intends to undertake to address and cure the feeder's poor performance.

Fourth, the information should be provided publicly in Oncor's annual Service Quality Reports. The Commission should not allow the Company to file the information confidentially. The public should be able to review Oncor's commitment to service quality and reliability and ensure that NextEra and Oncor continue to act responsibly after the proposed acquisition is completed.

Q. HAVE THE CITIES ISSUED DISCOVERY SEEKING INFORMATION REGARDING ONCOR'S CURRENT APPROACH TO ADDRESSING THE PERFORMANCE OF THE WORST PERFORMING FEEDERS ON ITS SYSTEM?

A. Yes. The Cities issued a seventh set of data requests seeking such information, but has not yet received responses from Oncor. I reserve the right to supplement my testimony if Oncor's responses to this discovery affect my recommendation regarding Oncor's worst performing feeders.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-two years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates: Consultant** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
CF&I Steel, L.P.
Climax Molybdenum Company
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission for Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania charge proposals.	Evaluation of cost allocation, rate design, rate plan, and carrying
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD & United States	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T Users Group	WV	West Virginia Energy	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-	WV E-42T	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co,	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016

Date	Case	Jurisdict.	Party	Utility	Subject
08/13	P-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CFI Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

**Expert Testimony Appearances
of
Richard A. Baudino
As of September 2016**

Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint; security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability

Request

Refer to the statement on page 13 of the Joint Report and Application stating that, "These measures reflect Oncor's forced interruption performance for the years 2011, 2013, and 2014." Please:
a) Explain the reasons for excluding data from 2012
b) Provide a calculation showing what change in numerical value would result from including data from 2012
c) Provide all service quality metrics related to infrastructure performance and customer service for Oncor as reported to the Texas Public Utility Commission for each of the past ten years.
d) Provide all reports submitted by Oncor to or issued by the Texas Public Utility Commission addressing Oncor infrastructure performance and customer service quality or reliability performance since the beginning of 2011.

Response

The following response was prepared by or under the direct supervision of James A. Greer, the sponsoring witness for this response.

a) The NextEra commitment referenced in the cited portion of the Joint Report and Application is based on the Commission's March 24, 2016 Order in PUC Docket No. 45188. The Direct Testimony of Staff witness Constance McDaniel Wyman submitted in that docket recommended excluding data from 2012. On page 13, lines 3-9, of that testimony, Ms. Wyman explains why she excluded 2012 from her recommendation.

b) The change in numerical value that would result from including data from 2012 is shown on the corrected Attachment CMW-5 to Ms. Wyman's testimony that was submitted by Commission Staff in PUC Docket No. 45188 on December 10, 2015. Please see "Table 1: Selected Three-Year Averages" on page 1 of that Attachment CMW-5.

c) The reports that Oncor has filed with the Public Utility Commission of Texas ("Commission") addressing Oncor's infrastructure performance over the last ten years are publicly available on the PUCT Interchange. Attachment 1 to this response contains a table that shows the docket control numbers for Oncor's Service Quality Reports for the last 10 years.

Oncor's Quarterly Performance Measures Reports are submitted to the Commission as "Confidential" reports under Project No. 36141. In accordance with Oncor's Records Retention Policy, Oncor retains Performance Measures Reports for 5 years and the current year. As a result, Oncor does not have Quarterly Performance Measures reports prior to May 2010. Those confidential reports are voluminous and will be made available in the Austin Voluminous Room only after the execution of the appropriate protective order certification. A voluminous confidential index is provided as Attachment 2.

d) For reports submitted by Oncor to the Commission addressing Oncor's infrastructure

3

performance and customer service, see Oncor's response to subpart (c) above. The reports issued by the Commission addressing Oncor's infrastructure performance and customer service since 2011 are available on the PUCT Interchange in Docket Nos. 40666, 41810, 43571, 45305, and 45900 respectively.

ATTACHMENTS:

ATTACHMENT 1 - Docket table for SQR Reports, 1 page

ATTACHMENT 2 - Voluminous Confidential Index, 1 page

Attachment C

Service Quality Report to the Public Utility Commission of Texas

Distribution Feeder Indices for Forced Interruptions

List all Distribution Feeders on Texas System

With 10 or more Customers

Add or Delete Rows as Necessary

Total Number of Feeders

2986

Oncor Electric Delivery

2015 SAIFI Ranking	2014 SAIFI Ranking	Substation Identification	Feeder Identification	Number of Customers	2015 SAIFI Value
1	269	VESTS	3111	54	13.24
2	63	DHIDE	2821	115	9.95
3	81	BARNW	4511	80	9.30
4	30	MASON	3411	18	8.83
5	37	LOVNG	2511	49	8.41
6	1100	VANSB	1501	796	8.04
7	51	DHIDE	2811	99	7.11
8	893	BKWST	0001	384	7.04
9	245	CANTN	1302	1,348	6.97
10	N/A	GVODS	3052	1,318	6.91
11	1154	WEBBS	8634	1,058	6.49
12	168	PLDAV	4231	71	6.38
13	1579	CHROW	0004	196	6.27
14	1795	BRNAV	0723	1,322	6.19
15	8	BARNW	4521	101	6.13
16	212	JDKNS	0821	36	6.06
17	1773	ODESA	0212	856	6.05
18	N/A	BAKKE	6922	1,445	5.83
19	832	RBNSN	2502	1,202	5.67
20	213	SCHRD	0001	1,463	5.67
21	2725	PRCRK	0001	202	5.57
22	1510	GRLND	1604	1,992	5.54
23	106	ANDRD	0931	191	5.53
24	114	ECTHP	4911	1,155	5.49
25	1166	PRNTH	1404	1,465	5.48
26	689	EMPCT	0003	1,347	5.46
27	1652	MDLNW	1531	1,747	5.44
28	787	LMESA	2833	24	5.38
29	1373	LMESA	2813	116	5.28
30	400	DFWSW	2207	27	5.22
31	7	ELMAR	3212	81	5.20
32	2109	MSLSW	0008	184	5.14
33	196	EDWDS	5921	24	5.08
34	152	COYAN	6311	109	4.86
35	1056	RYLTY	1411	128	4.81
36	1138	TRPMN	4023	420	4.79
37	154	WEBBS	8623	2,785	4.76
38	85	MSTNG	2621	74	4.68
39	290	GVODS	3041	1,474	4.67
40	505	WHOUS	4121	1,336	4.65
41	448	CRNES	2711	144	4.63
42	1813	VLYRN	2952	3,422	4.62
43	1004	BRGPR	1103	887	4.61

BOEHM, KURTZ & LOWRY
ATTORNEYS AT LAW
36 EAST SEVENTH STREET
SUITE 1510
CINCINNATI, OHIO 45202
TELEPHONE (513) 421-2255

TELECOPIER (513) 421-2764

VIA OVERNIGHT MAIL

August 8, 2017

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

Re: Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company
Docket No. R-2017-2595853

Dear Secretary Chiavetta:

Please find enclosed the DIRECT TESTIMONY AND EXHIBITS OF RICHARD A. BAUDINO on behalf of AK STEEL CORPORATION for filing in the above-captioned proceeding.

By copy of this letter, all parties listed on the Certificate of Service have been served.

Respectfully submitted,

David F. Boehm, Esq. (PA Attorney I.D. # 72752)
BOEHM, KURTZ & LOWRY

COUNSEL FOR AK STEEL CORPORATION

DFBkew
Enclosure
cc: Certificate of Service
ALJ Dennis J. Buckley – debuckley@pa.gov
ALJ Benjamin J. Myers – benmyers@pa.gov
VIA EMAIL AND OVERNIGHT MAIL
Pa. Public Utility Commission
400 North Street
Harrisburg, PA 17120

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
V.	:	Docket No. R-2017-2595853
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

DIRECT TESTIMONY

AND EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF

AK STEEL

J. KENNEDY AND ASSOCIATES, INC.

AUGUST 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	**:**	
V.	**:**	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	**:**	

DIRECT TESTIMONY OF RICHARD A. BAUDINO

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant to Kennedy and Associates.

Q. Please describe your education and professional experience.

A. I received my Master of Arts degree with a major in Economics and a minor in Statistics from New Mexico State University in 1982. I also received my Bachelor of Arts Degree with majors in Economics and English from In October 1989, I joined the utility consulting firm of Kennedy and Associates as a Senior Consultant where my duties and responsibilities covered substantially the same areas as those during my tenure with the New Mexico Public Service Commission Staff. I became Manager in July 1992 and was named Director of Consulting in January 1995. Currently, I am a consultant with Kennedy and Associates. New Mexico State in 1979. Exhibit ____(RAB-1) summarizes my expert testimony experience.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of AK Steel.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address revenue allocation and rate design issues for Pennsylvania-American Water Company ("PAWC" or "Company"). Specifically, I will address Mr. Herbert's recommended revenue allocation and rate design for the Industrial class.

Q. Please summarize Mr. Herbert's approach to the Company's proposed class cost of service study ("CCOSS").

A. Mr. Herbert described his approach to the Company's CCOSS beginning on page 5 of his Direct Testimony. Mr. Herbert utilized the base-extra capacity method as described in the 2017 and prior editions of the Water Rates Manual published by the American Water Work Association ("AWWA"). This approach to cost allocation has been accepted by the Pennsylvania Public Utilities Commission ("PPUC" or "Commission") in past PAWC cases.

The extra capacity factors in the 2017 CCOSS were derived from the results of a new customer demand study that the Company performed and submitted to the parties in March 2017. Mr. Herbert also described several additional changes to the 2017 CCOSS on page – of his Direct Testimony. These changes include:

- Exclusion of contract sales under Riders DIS (Demand Industrial Sales) and

DRS (Demand Resale Sales) in developing the allocation factors for the Industrial class and sales for resale – Group A class.

- Exclusion of interruptible curtailment volumes from the extra capacity portion of allocation factors 2, 3, and 4.
- Reallocation of the unrecovered portion of public fire protection costs from the residential, commercial, industrial, and public classes.
- Inclusion of a portion of the wastewater revenue requirement to the water operations revenue requirement.

In this proceeding AK Steel takes no position on the inclusion of wastewater revenue requirement to the water operations revenue requirement. I do agree with the first two adjustment made by Mr. Herbert in the 2017 CCOSS.

Q. What is your recommended class revenue allocation in this proceeding?

A. I recommend that the Residential, Commercial, and Industrial classes receive the same percentage increase in this case. I recommend that the Public class receive 50% of the overall system average increase that the Commission approves in this proceeding. I accept Mr. Herbert's recommended increases to the other customer classes.

Q. Please explain why you recommend that the Residential, Commercial, and Industrial classes received the same percentage increase in this case.

A. I base this recommendation on a comparison of customer class increases from

PAWC's last two rate cases and the current rate case. Table 1 below presents a comparison between the class increases recommended by Mr. Herbert in Docket Nos. R-2011-2232243, R-2013-2355276, and this docket. I also included each class' percentage share of the total cost of service from each CCOSS according to Mr. Herbert's Schedules.[1]

TABLE 1
PAWC Class Increases
and CCOSS Shares
2011, 2013, & 2017

	2011 CCOSS		2013 CCOSS		2017 CCOSS	
	% Increase	% Share CCOSS	% Increase	% Share CCOSS	% Increase	% Share CCOSS
Residential	13.8%	67.2%	10.9%	65.2%	16.5%	65.5%
Commercial	16.8%	22.8%	10.1%	23.6%	19.7%	25.2%
Industrial	14.2%	4.0%	8.2%	3.9%	18.5%	4.2%
Total	14.1%	100.0%	10.3%	100.0%	16.7%	100.0%

Table 1 shows that the CCOSS shares for the Residential, Commercial, and Industrial classes have not varied significantly over the three rate cases. The Residential class' CCOSS share ranged from 65.2% to 67.22%. The Commercial class share ranged from 22.8% to 25.2%. The Industrial class share ranged from 3.9% to 4.2%. In this rate proceeding, the Residential CCOSS share was the lowest

[1] Sources: Herbert Exhibits 10-A, Schedule A, Docket No. R-2011-2232243; 11-A, Schedule A, Docket No. R-2013-2355276; 12-A, Schedule A (Corrected), Docket No. R-2017-2595853.

and the Commercial and Industrial classes' shares were the highest of the three CCOSSs in Table 1. Generally speaking, the CCOSS share for the Residential class has declined slightly since the Company's 2011 CCOSS and the shares for the Commercial and Industrial classes have risen.

Table 1 also shows that in PAWC's 2013 rate case the Company proposed that the Residential class receive a slightly larger than system average increase, whereas the Commercial and Industrial classes would have received increases less than the system average according to the Company's CCOSS. That situation reversed itself in this case, with the Residential class receiving an increase less than system average and the Commercial and Industrial classes receiving increases greater than the system average. It is not clear whether the current CCOSS results are indicative of a trend in cost responsibility for PAWC's customer classes, particularly since the Residential, Commercial, and Industrial classes were close to their allocated cost of service in the Company's last rate case.

Given the CCOSS results summarized in Table 1, I recommend an equal percentage increase for the Residential, Commercial, and Industrial classes in this case. These three classes have all been at or near their allocated cost to serve in the last rate proceeding and an equal percentage increase for each of these three classes is certainly reasonable given these historical cost and revenue relationships shown in the Company's CCOSS studies over time. Therefore, it is not necessary to strictly adhere to the increases shown in the Company's CCOSS in this proceeding.

Nonetheless, I also recommend that the Public class receive an increase that is 50% of the system average since that class is currently significantly above its allocated cost to serve.

Q. **What are the dollar and percentage class increases you recommend in this case?**

A. Table 2 below summarizes the percentage increases for each class that I recommend. This table presents both water operations revenue increases and total revenue increases including wastewater operations. Please refer to Exhibit ____(RAB-2) for the details of my revenue allocation recommendation to the Commission. Exhibit ___(RAB-2) was developed from the spreadsheet that supported Mr. Herbert's Schedule A from his Exhibit 12-A.

TABLE 2
Class Percentage Increases
Water Operations and Total Revenues

	Water Operations Revenues	Total Revenues
Residential	17.87%	17.42%
Commercial	17.87%	17.01%
Industrial	17.87%	16.66%
Public (Municipal)	8.66%	8.78%
Total	17.32%	16.74%

Please refer to Exhibit ___(RAB-3) for the resulting class rates of return and the relative rates of return. I utilized the spreadsheet that supported Mr. Herbert's

Exhibit 12-A, Schedule B for my calculations. The relative rate of return ("RROR") indicates how close or how far each class is from the system average rate of return. For example, a customer class that has a RROR of 1.0 is earning a return equal to the system average return. A customer class with a 0.95 RROR is earning a return that is 95% of the system average return, which indicates that its return is less than the system average. A RROR greater than 1.0 indicates a class return that is greater than the system average. Note that the relative rates of return for the major rate classes fall within a range of 0.94 – 1.02. Given my prior discussion of historical CCOSS results, this is a reasonable range of results for the Commission to adopt in this proceeding. However, it would also be reasonable for the Commission to consider raising the Commercial class increase and lowering the Residential class increase given the relative rate of return of 0.94 for the Commercial class and the 1.02 relative rate of return for the Residential class.

Q. Do you agree with the Company's proposed rate design for the Industrial class?

A. Yes, I agree with the structure of the increases to the rate components of the Industrial class rates as proposed by Mr. Herbert. Specifically, Mr. Herbert proposed a lower percentage increase to the tail block rate of the Industrial class. This is appropriate given that Mr. Herbert excluded curtailable consumption from the maximum hour allocations in the Company's CCOSS. It is also quite appropriate given the lower quality and reliability of service that PAWC's curtailable customer has accepted as part of its water service. Finally, PAWC's other customers benefit from the Company being able to curtail a high-volume user during periods when system capacity may be constrained, thus increasing system reliability and potentially avoiding higher costs of adding capacity.

Q. How should Mr. Herbert's proposed rate design be modified for the class increases you recommend?

A. Mr. Herbert's proposed Industrial class rate design should be scaled back proportionately to preserve the proposed rate structure that includes the lower increase to Block 4, which is the curtailable consumption block. This means that the percentage increases to the Industrial consumption blocks proposed by Mr. Herbert should be scaled back by an equal percentage to achieve the lower total revenue requirement for the Industrial class.

Q. Mr. Baudino, do you support PAWC's requested total revenue increase in this proceeding?

A. No. AK Steel takes no position with respect to the Company's requested rate increase. The percentages contained in Table 2 are illustrative only based on the Company's request. If the Commission reduces PAWC's rate increase request, then the percentage increase shown in Table 2 should be adjusted downward in proportion to the Commission's reduction in total revenue requirement.

Q. Does this conclude your Direct Testimony?

A. Yes.

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

RICHARD A. BAUDINO, 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.

Richard A. Baudino

Sworn to and subscribed before me on this
8th day of August 2017.

Notary Public

JESSICA K INMAN
MY COMMISSION EXPIRES
NOTARY
PUBLIC
JULY 31, 2019
CHEROKEE COUNTY, GEORGIA

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
V.	:	Docket No. R-2017-2595853
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF

AK STEEL

J. KENNEDY AND ASSOCIATES, INC.

AUGUST 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
V.	:	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

EXHIBIT __ (RAB-1)

OF

RICHARD A. BAUDINO

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-two years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: <u>Kennedy and Associates</u>: **Consultant** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: <u>New Mexico Public Service Commission Staff</u>: **Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
Atmos Cities Steering Committee
Canadian Federation of Independent Businesses
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Climax Molybdenum Company
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania charge proposals.	Evaluation of cost allocation, rate design, rate plan, and carrying
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

**Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD & United States	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T Users Group	WV	West Virginia Energy	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-	WV E-42T	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

**Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co,	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
08/13	P-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CFI Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint; security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP and Sharyland Dist. and Transmission Services, LLC	Return on equity
02/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
03/17	10580	TX	Atmos Cities Steering Committee	Atmos Pipeline Texas	Return on equity, capital structure, weighted cost of capital
03/17	R-3867-2013	Quebec, Canada	Canadian Federation of Independent Businesses	Gaz Metro	Marginal Cost of Service Study

Expert Testimony Appearances
of
Richard A. Baudino
As of August 2017

Date	Case	Jurisdict.	Party	Utility	Subject
05/17	R-2017-2586783	PA	Philadelphia Industrial and Commercial Gas Users Gp.	Philadelphia Gas Works	Cost and revenue allocation, rate design, Interruptible tariffs
08/17	R-2017-2595853	PA	AK Steel	Pennsylvania American Water Co.	Cost and revenue allocation, rate design

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
V.	:	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	:	

EXHIBIT __ (RAB-2)

OF

RICHARD A. BAUDINO

AK STEEL RECOMMENDED REVENUE ALLOCATION

COMPARISON OF PRO FORMA COST OF SERVICE WITH REVENUES UNDER PRESENT AND AK STEEL PROPOSED RATES
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2018

Customer Classification	Pro Forma Cost of Service, as of December 31, 2018				Pro Forma Revenues Under Present Rates as of December 31, 2018				Pro Forma Revenues Under Proposed Rates as of December 31, 2018				Proposed Increase/(Decrease) as of December 31, 2018			
	Water COS	WW COS*	Total Amount	Percent of Total	Water Revenue	Wastewater Revenue	Total Amount	Percent of Total	Water Revenue	Wastewater Revenue	Total Amount	Percent of Total	Water Revenue	Wastewater Revenue	Total Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Residential	$ 449,063,560	$ 40,223,443	$ 489,287,003	65.5%	$ 391,680,390	$ 27,541,462	$ 419,221,852	65.5%	$ 461,661,533.02	$30,594,632	$ 492,256,165	65.9%	$ 69,981,144	$ 3,053,169	$ 73,034,313	17.42%
Commercial	174,298,088	$ 13,979,571	188,277,659	25.2%	146,051,454	9,807,890	155,859,344	24.4%	$ 172,146,321.22	10,223,346	182,369,668	24.4%	26,094,867	415,456	26,510,324	17.01%
Industrial	28,717,591	$ 3,030,180	31,747,771	4.2%	24,374,710	2,392,827	26,767,538	4.2%	$ 28,729,715.41	2,496,432	31,226,147	4.2%	4,355,005	103,604	4,458,609	16.66%
Public (Municipal)	18,218,303	$ 1,377,061	19,595,364	2.6%	19,756,771	977,347	20,734,118	3.2%	21,468,140	1,087,248	22,555,388	3.0%	1,711,369	109,901	1,821,270	8.78%
Other Water Utilities:																
Group A	813,482	4,163,674	4,977,156	0.7%	717,324	4,310,091	5,027,414	0.8%	813,499	4,686,194	5,499,693	0.7%	96,175	376,103	472,279	9.39%
Group B	69,946		69,946	0.0%	38,877		38,877	0.0%	47,930		47,930	0.0%	9,053	-	9,053	23.29%
Private Fire Protection	4,428,790		4,428,790	0.6%	3,825,469		3,825,469	0.6%	4,428,222		4,428,222	0.6%	602,753	-	602,753	15.76%
Public Fire Protection	8,679,321		8,679,321	1.2%	8,465,136		8,465,136	1.3%	8,679,321		8,679,321	1.2%	214,186	-	214,186	2.53%
Total Sales of Water	684,289,081	62,773,929	747,063,010	100.0%	594,910,130	45,029,618	639,939,748	100.0%	697,974,682	49,087,852	747,062,534	100.0%	103,064,551	4,058,234	107,122,786	16.74%
		4.83%				5.31%				5.09%						
OtherRevenues	12,521,147	1,117,178	13,638,325		11,918,965	962,004	12,880,969		12,640,571	997,754	13,638,325		721,606	35,750	757,356	5.9%
Contract Sales - Industrial	2,867,888	-	2,867,888		2,839,461	-	2,839,461		2,867,888	0	2,867,888		28,427	-	28,427	1.0%
Contract Sales - Resale	1,652,978	-	1,652,978		1,636,216	-	1,636,216		1,652,978	0	1,652,978		16,762	-	16,762	1.0%
Total	$ 701,331,093	$ 63,891,107	$ 765,222,200		$ 611,304,771	$ 45,991,622	$ 657,296,393		$ 715,136,118	$ 50,085,606	$ 765,221,724		$ 103,831,347	$ 4,093,984	$ 107,925,331	

* Reflects total wastewater cost of service from Exhibits 12-F and 12-G.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	**:**	
V.	**:**	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	**:**	

EXHIBIT __ (RAB-3)

OF

RICHARD A. BAUDINO

Exhibit ____(RAB-3)

CLASS RETURNS AND RELATIVE RATES OF RETURN UNDER AK STEEL RECOMMENDED REVENUE ALLOCATION

ITEM	COST OF SERVICE	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	PUBLIC	OTHER WATER UTILITIES GROUP A	OTHER WATER UTILITIES GROUP B	FIRE PROTECTION PRIVATE	FIRE PROTECTION PUBLIC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. REVENUES FROM SALES	$ 697,974,622	$ 461,661,533	$ 172,146,321	$ 28,729,715	$ 21,468,140	$ 813,499	$ 47,930	$ 4,428,222	$ 8,679,321
2. OTHER REVENUES	17,042,012	12,942,026	2,884,949	404,265	273,188	11,812	1,045	105,589	419,139
3. TOTAL OPERATING REVENUES	715,016,635	474,603,559	175,031,270	29,133,980	21,741,328	825,311	48,975	4,533,811	9,098,460
4. LESS: OPERATING EXPENSES (INCLUDES REALLOCATION OF FIRE & WW ALLOC.)	353,206,389	250,487,856	88,099,924	14,203,493	9,150,403	391,121	34,810	1,748,439	(10,909,659)
5. RETURN AND INCOME TAXES	361,810,246	224,115,703	86,931,347	14,930,487	12,590,925	434,190	14,165	2,785,372	20,008,119
6. LESS: TAXABLE EXCLUSIONS (FACTOR 19)	-	-	-	-	-	-	-	-	-
7. TAXABLE INCOME	361,810,246	224,115,703	86,931,347	14,930,487	12,590,925	434,190	14,165	2,785,372	20,008,119
8. LESS: INCOME TAXES (TAX. INC.)	123,016,547	76,199,998	29,556,913	5,076,410	4,280,951	147,626	4,816	947,035	6,802,819
9. NET RETURN (Line 5 - Line 8)	238,793,699	147,915,705	57,374,433	9,854,078	8,309,973	286,564	9,349	1,838,337	13,205,300
10. ORIGINAL COSTS MEASURE OF VALUE	2,877,035,197	1,754,335,498	738,335,841	122,812,717	76,655,820	3,315,489	240,816	22,264,472	159,074,524
11. RATE OF RETURN, PERCENT	8.30	8.43	7.77	8.02	10.84	8.64	3.88	8.26	8.30
12. RELATIVE RATE OF RETURN	1.00	1.02	0.94	0.97	1.31	1.04	0.47	0.99	1.00

CERTIFICATE OF SERVICE

I hereby certify that on this 8th day of August, 2017 I served a true copy of the DIRECT TESTIMONY AND EXHIBITS OF RICHARD A. BAUDINO on behalf of AK STEEL CORPORATION on the following persons listed on the attached Certificate of Service in the matter specified in accordance with the requirements of 52 Pa. Code §1.54:

David F. Boehm, Esq. (PA Attorney I.D. # 72752)
COUNSEL FOR AK STEEL CORPORATION

Thomas P. Gadsden
Anthony C. DeCusatis
Catherine G. Vasudevan
Brooke E. McGlinn
Morgan, Lewis & Bockius LLP
1701 Market Street
Philadelphia, PA 19103-2921
thomas.gadsden@morganlewis.com
anthony.decusatis@morganlewis.com
catherine.vasudevan@morganlewis.com
brooke.mcglinn@morganlewis.com

Susan Simms Marsh
Pennsylvania-American Water Company
800 West Hersheypark Drive
Hershey, P A 17033
susan.marsh@amwater.com

David P. Zambito
Cozen O'Connor
17 North Second Street, Suite 1410
Harrisburg, PA 17101
dzambito@cozen.com

Christine Maloni Hoover
Erin L. Gannon
Christy M. Appleby
Lauren M. Burge
Office of Consumer Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101-1923
choover@paoca.org
egannon@paoca.org
cappleby@paoca.org
lburge@paoca.org

Ralph Smith
Larkin & Associates
15728 Farmington Road
Livonia, MI 48154
rsmithla@aol.com
Consultant for OCA

Elizabeth Rose Triscari
Deputy Small Business Advocate
Office of Small Business Advocate
Suite 202, Commerce Building
300 North Second Street
Harrisburg, PA 17101
etriscari@pa.gov

Scott J. Rubin
333 Oak Lane
Bloomsburg, PA 17815-2036
scott.j.rubin@gmail.com

Brian Kalcic
Excel Consulting
Suite 702-T
225 South Meramec Avenue
St. Louis, MO 63105
excel.consulting@sbcglobal.net
Consultant for OSBA

Teny L. Fought
780 Cardinal Drive
Harrisburg, PA 17111
tlfengr@aol.com

Charis Mincavage
Adeolu A. Bakare
Matthew L. Garber
McNees Wallace & Nurick LLC
100 Pine Street
Harrisburg,PA 17108-1166
cmincavage@mcneeslaw.com
abakare@mcneeslaw.com
mgarber@mcneeslaw.com
Counsel for PAWLUG

Glen Watkins
Suite 130
1503 Santa Rosa Road
Richmond, VA 23229
watkinsg@tai-econ.com

Gina L. Miller
Pennsylvania Public Utility Commission
Bureau of Investigation & Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
ginmiller@pa.gov
VIA E-MAIL AND REGULAR U.S. MAIL

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 17-3112-INV

Investigation into Green Mountain Power Corporation's tariff filing requesting an overall rate increase in the amount of 4.98%, to take effect January 1, 2018

PREFILED SURREBUTTAL TESTIMONY OF
RICHARD A. BAUDINO
J. KENNEDY AND ASSOCIATES, INC.

ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE

October 4, 2017

Summary: Mr. Baudino responds to the Rebuttal Testimony of Mr. James Coyne, witness for Green Mountain Power Corp ("GMP"). Mr. Baudino also provides an update to the return on equity ("ROE") analyses filed in his Direct Testimony. Mr. Baudino continues to recommend that the Commission approve an 8.75% ROE for GMP.

List of Exhibits Sponsored by Mr. Baudino

EXHIBIT DPS-RAB-7	Proxy Group - Dividend Yields
EXHIBIT DPS-RAB-8	Proxy Group - Growth Rate Analysis and DCF Return on Equity Calculation
EXHIBIT DPS-RAB-9	Capital Asset Pricing Model (CAPM) - Expected Market Premium
EXHIBIT DPS-RAB-10	CAPM Analysis - Historic Market Premium

Q1. Please state your name and business address.

A1. My name is Richard A. Baudino. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q2. Did you submit direct testimony in this proceeding?

A2. Yes. I submitted direct testimony on behalf of the Vermont Department of Public Service ("DPS").

Q3. What is the purpose of your surrebuttal testimony?

A3. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of Mr. James Coyne, witness for Green Mountain Power Corporation ("GMP" or "Company"). I will also provide an update to my return on equity analyses that I filed in my direct testimony.

Update to ROE Analyses

Q4. Did you perform an update to the ROE analyses that you presented to the Commission in your Direct Testimony?

A4. Yes. Exhibits DPS-RAB-7 through DPS-RAB-10 provide updates to my Discounted Cash Flow ("DCF") and Capital Asset Pricing Model ("CAPM") analyses that I presented in my direct testimony. Surrebuttal Table 1 presents a summary of the results.

SURREBUTTAL TABLE 1
SUMMARY OF ROE ESTIMATES

Baudino DCF Methodology:	
Average Growth Rates	
- High	9.04%
- Low	7.89%
- Average	8.59%
- Average excl. First Call	8.82%
Median Growth Rates:	
- High	9.13%
- Low	8.32%
- Average	8.63%
CAPM:	
- 5-Year Treasury Bond	7.08%
- 20-Year Treasury Bond	7.33%
- Historical Returns	6.09% - 7.47%

The results of my updated analyses continue to support my recommended 8.75% ROE for GMP. I note that the ROE results using median growth rates is little changed from the results in my direct testimony. However, the ROE results from the average growth rates declined from 8.77% in my direct testimony to 8.59% in my updated analyses. This was mostly related to a drop in the First Call growth rate for the proxy group caused in large measure by a drop in the expected growth rate for PPL Corporation. The decline in the First Call growth rates dropped the proxy group average DCF result to 7.90% using the First Call earnings forecasts. If this result is excluded from the overall average results, then the average DCF result for the proxy group is 8.82%, which is shown in Surrebuttal Table 1 above.

There have been no significant changes in interest rates or other capital market conditions that suggest that the investor required ROE for GMP or for regulated electric utilities in general has dropped since I filed my direct testimony in this proceeding. My recommended ROE of 8.75% falls reasonably within the range of 8.63% (using median growth rates) to 8.82% (excluding First Call). Therefore, I recommend the Commission authorize an 8.75% ROE for GMP.

Q5. In your direct testimony you noted that Yahoo! Finance did not have an updated earnings growth forecast for Xcel Energy, Inc. Please update your discussion regarding the First Call estimate for Xcel Energy.

A5. Yahoo! Finance still did not have an updated earnings growth forecast for Xcel Energy when I performed my update. Therefore, I've used the Zacks earnings growth forecast in place of the First Call estimate for purposes of my update.

Q6. Did Mr. Coyne provide an update to the return on equity ("ROE") analyses he provided in his direct testimony?

A6. No. In his rebuttal testimony, Mr. Coyne continued to base his recommended 9.50% ROE on the analysis he provided in his direct testimony.

The stock prices in Mr. Coyne's DCF models reflect average prices for historical periods through February 28, 2017. At the time of the filing of my surrebuttal testimony, Mr. Coyne's stock prices will be more than seven months out of date. If we consider Mr. Coyne's 180 trading day period, his analyses contain stock prices reaching back to September, 2016. Clearly, this is stale data and does not reflect current stock market prices. Because of a lack of updated stock prices, the Commission should not rely upon Mr. Coyne's DCF analyses for guidance in its determination of a fair return on equity for GMP.

Q7. What recent statements has the Federal Reserve made regarding interest rates?

A7. On September 20, 2017 the Federal Reserve decided to maintain the federal funds rate at current levels. In its press release on that date, the Fed noted the following:

> Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. Hurricanes Harvey, Irma, and Maria have devastated many communities, inflicting severe hardship. Storm-related disruptions and rebuilding will affect economic activity in the near term, but past experience suggests that the storms are unlikely to materially alter the course of the national economy over the medium term. Consequently, the Committee continues to expect that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, and labor market conditions will strengthen somewhat further. Higher prices for gasoline and some other items in the aftermath of the hurricanes will likely boost inflation temporarily; apart from that effect, inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.
>
> In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the

> federal funds rate at 1 to 1-1/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation.
>
> In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its objectives of maximum employment and 2 percent inflation. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. *The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.*[1] (italics added)

The Federal Reserve's monetary policy remains accommodative for the economy and future interest rate increases, if any, are expected to be gradual. Interest rates have not changed significantly since the filing of my direct testimony, supporting my continued ROE recommendation of 8.75% for GMP.

Q8. Beginning on page 6, line 3 of his rebuttal testimony Mr. Coyne criticized your recommended 8.75% ROE as being inconsistent with authorized returns in other jurisdictions. Please address this criticism.

A8. I recommend the Commission base its ROE decision on the evidence presented in this proceeding, not on the ROE awards in other state jurisdictions. My DCF and CAPM

1. Federal Reserve, *Federal Reserve Issues FOMC Statement*, September 20, 2017, full statement available at https://www.federalreserve.gov/newsevents/pressreleases/monetary20170920a.htm

results effectively demonstrate that Mr. Coyne's recommended ROE of 9.50% is not supported by current market evidence.

Furthermore, Mr. Coyne failed to point out that GMP's ROE was recently adjusted to 9.02% in connection with its alternative regulation plan.[2] Thus, if state-allowed ROE awards are to be considered in this docket, GMP's Vermont-approved ROE of 9.02% should also be considered.

The analyses I presented in my direct testimony and the update I present in my surrebuttal testimony represent an objective evaluation of current market data covering stock prices and interest rates. Neither the DCF model nor the CAPM support a return on equity of 9.50%.

Q9. On page 9, lines 8 through 9 of his direct testimony Mr. Coyne testified that you did not provide a risk analysis other than a high-level credit rating comparison to the proxy companies. Please respond to Mr. Coyne on this point.

A9. Standard and Poor's, Moody's, and Fitch all perform detailed risk analyses before they assign credit ratings to their subject companies. These analyses evaluate many aspects of the business and financial risks faced by each company. The credit rating comparison I presented in Table 2 of my direct testimony certainly provides the

---

2. See *Tariff filing of GMP*, Tariff No. 8618, Order of 9/26/16 GMP. See also Letter of Robert A. Bingle to Judith Whitney, Clerk of the Commission, 08/1/16 and Attachments for Tariff No. 8618.

Commission a sound and reasonable basis for comparing GMP's risks with those of the companies in the proxy group and I stand by that presentation.

Q10. On page 34, lines 6 through 9 of her rebuttal testimony GMP witness Charlotte Ancel expressed concern regarding the "adverse regulatory signal" that would be sent if the Commission adopted your recommended 8.75% ROE recommendation. Please address Ms. Ancel's concern in this regard.

A10. Ms. Ancel provided no analysis that an 8.75% ROE would result in a credit downgrade or otherwise harm GMP's credit rating. I recognize that the Commission must balance the interests of shareholders and ratepayers in setting the Company's allowed ROE as well as its revenue requirement. However, by setting GMP's allowed ROE at 8.75% based on current market evidence the Commission will effectively balance these interests. The 8.75% ROE fairly compensates investors for their market required return and will be reflected in a revenue requirement supported by ratepayers at a just and reasonable level.

Primary Reliance on the DCF Model

Q11. On page 12, lines 13 - 14 of his rebuttal testimony, Mr. Coyne referred to FERC findings that expressed concerns with respect to the current level of interest rates, its effect on the DCF model, and to "anomalous" conditions in current capital markets. Please respond to this portion of Mr. Coyne's testimony.

A11. Current financial market conditions are not "anomalous." As I stated in my direct testimony, the Federal Reserve has been pursuing an accommodative monetary policy since the severe recession of 2008–09. All indications suggest that, although the Fed will increase interest rates at some point in the future, such increases will be gradual. Low interest rates have been the norm for several years and, if anything, rates have declined since the beginning of 2016. Required ROEs have declined since 2008 and are reflective of this low interest rate environment, which is completely expected and rational.

Q12. Would it make sense for an investor in bonds or utility stocks to be buying these securities at their current prices if that investor expected a significant increase in interest rates in the near term?

A12. No, it would make no sense whatsoever. A significant increase in current interest rates would cause investors to suffer losses in their investments as the prices of utility stocks and government bonds move inversely to interest rates. Therefore, the Commission can rely on current stock prices and bond yields as accurate barometers of investors' expectations with regards to future movements in interest rates.

Q13. On page 14 of his rebuttal testimony, Mr. Coyne presented Figure 4, which plots the average proxy group dividend yield and the yield on U.S. Treasury Bond from 2006 through July 2017. Does this graph prove that the DCF Model is unreliable for purposes of estimating the ROE for GMP and other regulated utilities?

A13. No. The relationship shown in Mr. Coyne's Figure 4 is exactly what one would expect between utility dividend yields and Treasury Bond yields. The common stocks of regulated utilities are interest rate sensitive, meaning that as interest rates fall, the prices of utility stocks rise and dividend yields fall. Likewise, as interest rates rise, utility stock prices will fall and dividend yields will increase. With low interest rates prevailing in today's markets, we would expect the dividend yields of utility stocks to be low as well.

Moreover, it is important to keep in mind that the economy has low overall capital costs due to lower interest rates. Of course, this has also affected utility bond yields. The Mergent average utility bond yield for August 2017 was 3.92%, underscoring the fact that both the cost of equity and the cost of debt have declined significantly since 2006. The DCF model, therefore, is tracking the lower level of capital costs in the economy. This is not "abnormal" or "anomalous" behavior.

Current and Forecasted Bond Yields

Q14. On page 21, line 6 through page 22, line 2 of his rebuttal testimony, Mr. Coyne took issue with your citation from Dr. Morin's book regarding the efficiency of capital markets. Please respond to Mr. Coyne's criticism of your direct testimony on this point.

A14. In citing Dr. Morin on Page 9 of my direct testimony, I referred to expectations of higher interest rates, if any, already being embedded in current securities prices based on the efficiency of U.S. capital markets. This includes both stock and bond prices, as I stated on Page 9 of my direct testimony.

With respect to the efficiency of bond markets specifically, Dr. Morin also noted the following:

> There is extensive literature concerning the prediction of interest rates. From this evidence, it appears that the no-change model of interest rates frequently provides the most accurate forecasts of future interest rates while at other times, the experts are more accurate. Naïve extrapolations of current interest rates frequently outperform published forecasts. *The literature suggests that on balance, the bond market is very efficient in that it is difficult to consistently forecast interest rates with greater accuracy than a no-change model.* (italics added) The latter model provides similar, and some cases, superior accuracy than professional forecasts.[3]

Dr. Morin also noted that in using actual and forecasted interest rates, each "offers distinct advantages and disadvantages." However, I acknowledge that Dr. Morin prefers using forecasted interest rates.

3. Morin, Roger A., *New Regulatory Finance,* Roger A. Morin, PhD, page 172.

Q15. Mr. Coyne testified that "the consensus view is that interest rates and bond yields will increase substantially over the next few years and these expectations must be reflected in the required investor return." Coyne rebuttal at Page 17, lines 13 through 15. Please respond to Mr. Coyne's testimony on this point.

A15. As I stated in my direct testimony, current interest rates embody investor expectations based on assessments of all available market information. This includes interest rate forecasts cited by Mr. Coyne as well as statements from the Federal Reserve. The Commission should not invest in the interest rate forecasts cited by Mr. Coyne in determining a fair rate of return for GMP.

Recently, there has been evidence that economists have systematically overestimated interest rates in recent years. Jared Bernstein wrote the following in a recent article in the New York Times[4]:

> In the early 1980s, forecasters did a good job of predicting the path of bond rates, though their job was a bit easier than usual because rates were so highly elevated that it was a pretty sure bet they'd be headed back down. ("Regression to the mean," for all you statistics fans).
>
> But since the mid-1990s, government forecasters have consistently overestimated this critical variable.
>
> This "consistently" point is essential. Most economic forecasts are off one way or the other — too high or too low, but they tend to be pretty much balanced in either direction. But on the 10-year bond rate, the errors are systemic.

4. Jared Bernstein, *We Keep Flunking Forecasts on Interest Rates, Distorting the Budget Outlook*, New York Times, Feb. 23, 2015.

> Forecasters are regularly overestimating and thus regularly overstating, all else being equal, future interest payments on the debt.

Another article by Akin Oyedele entitled "Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time"[5] showed that from June 2010 through June 2015 interest rate forecasts were wrong most of the time. Mr. Oyedele noted that 2014 "was particularly bad, when strategists became too optimistic that the Federal Reserve would hike rates."

These articles highlight the consistent upward bias that is likely embodied in the interest rate forecasts presented by Mr. Coyne.

CAPM and Its Inputs

Q16. On Page 18, lines 10 through 11 of his rebuttal testimony, Mr. Coyne testified that the primary difference between his approach and your approach to the CAPM is your use of historical government bond yields and shorter-term yields. Please respond to this portion of Mr. Coyne's rebuttal testimony.

A16. These certainly are two major areas of disagreement between Mr. Coyne and myself regarding our formulations of the CAPM. In addition, our forward-looking market return estimates are substantially different and Mr. Coyne also discussed this difference beginning on Page 24 of his rebuttal testimony.

---

5. Akin Oyedele, *Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time*, *Business Insider,* July 18, 2015.

Mr. Coyne defended his forward-looking market return estimates by once again citing FERC findings and the approach of the Staff of the New York Public Service Commission. However, he did not dispute the two forward-looking market returns I used from the Value Line Investment Survey, which I have updated in my surrebuttal testimony. The expected market returns from Value Line are certainly valid to use in the CAPM and Mr. Coyne presented no additional evidence arguing against their use by the Commission. I continue to stand by the criticisms of Mr. Coyne's formulation of his expected market return for the CAPM and recommend the Value Line Investment Survey expected market returns upon which I rely.

Variability of Returns for Smaller Companies

Q17. On Page 33 of his rebuttal testimony, Mr. Coyne presented Figure 5, which shows higher standard deviations of returns for smaller companies. Mr. Coyne concluded from this that smaller sized companies should have higher expected returns from investors. Please address this portion of Mr. Coyne's rebuttal testimony.

A17. I agree that smaller sized companies tend to have more variable returns and higher required ROEs. However, the Morningstar data presented by Mr. Coyne includes all companies, most of which are unregulated. Mr. Coyne presented no evidence that smaller *regulated utility companies* have higher variability of returns than larger utilities or that they have higher required returns. Regulation tends to eliminate many of the risks that smaller unregulated companies face, particularly with respect to having a service territory that is protected from competitors. Smaller regulated utilities may also file for higher rates to cover increased costs, something that smaller unregulated companies cannot do. In conclusion, Mr. Coyne's Figure 5 does not provide any basis for increasing GMP's ROE based on its size.

Q18. Does this complete your surrebuttal testimony?

A18. Yes.

PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17
ALLETE	High Price ($)	68.380	72.050	73.520	74.590	73.760	77.440
	Low Price ($)	64.560	66.810	68.070	71.600	69.790	72.400
	Avg. Price ($)	66.470	69.430	70.795	73.095	71.775	74.920
	Dividend ($)	0.535	0.535	0.535	0.535	0.535	0.535
	Mo. Avg. Div.	3.22%	3.08%	3.02%	2.93%	2.98%	2.86%
	6 mos. Avg.	3.02%					
Alliant Energy	High Price ($)	40.320	40.220	41.710	42.190	41.660	43.230
	Low Price ($)	38.240	39.210	38.950	40.160	39.360	40.500
	Avg. Price ($)	39.280	39.715	40.330	41.175	40.510	41.865
	Dividend ($)	0.315	0.315	0.315	0.315	0.315	0.315
	Mo. Avg. Div.	3.21%	3.17%	3.12%	3.06%	3.11%	3.01%
	6 mos. Avg.	3.11%					
Ameren Corp.	High Price ($)	56.570	55.680	57.090	57.210	56.670	60.790
	Low Price ($)	53.480	54.030	53.720	54.380	53.540	56.160
	Avg. Price ($)	55.025	54.855	55.405	55.795	55.105	58.475
	Dividend ($)	0.440	0.440	0.440	0.440	0.440	0.440
	Mo. Avg. Div.	3.20%	3.21%	3.18%	3.15%	3.19%	3.01%
	6 mos. Avg.	3.16%					
American Electric Power	High Price ($)	68.250	68.460	71.910	72.970	70.810	74.290
	Low Price ($)	64.810	66.500	66.930	69.190	68.110	70.080
	Avg. Price ($)	66.530	67.480	69.420	71.080	69.460	72.185
	Dividend ($)	0.590	0.590	0.590	0.590	0.590	0.590
	Mo. Avg. Div.	3.55%	3.50%	3.40%	3.32%	3.40%	3.27%
	6 mos. Avg.	3.41%					
El Paso Electric Co.	High Price ($)	50.750	52.500	54.100	55.450	53.350	55.650
	Low Price ($)	47.350	49.950	48.810	51.150	50.250	52.000
	Avg. Price ($)	49.050	51.225	51.455	53.300	51.800	53.825
	Dividend ($)	0.310	0.310	0.310	0.335	0.335	0.335
	Mo. Avg. Div.	2.53%	2.42%	2.41%	2.51%	2.59%	2.49%
	6 mos. Avg.	2.49%					
IDACORP	High Price ($)	83.950	86.460	87.500	90.670	87.900	89.940
	Low Price ($)	79.900	82.080	82.520	85.200	83.460	85.310
	Avg. Price ($)	81.925	84.270	85.010	87.935	85.680	87.625
	Dividend ($)	0.550	0.550	0.550	0.550	0.550	0.550
	Mo. Avg. Div.	2.69%	2.61%	2.59%	2.50%	2.57%	2.51%
	6 mos. Avg.	2.58%					
PG&E Corporation	High Price ($)	68.290	67.830	68.480	70.320	68.280	70.580
	Low Price ($)	65.020	65.800	65.140	65.430	64.840	67.410
	Avg. Price ($)	66.655	66.815	66.810	67.875	66.560	68.995
	Dividend ($)	0.490	0.490	0.490	0.530	0.530	0.530
	Mo. Avg. Div.	2.94%	2.93%	2.93%	3.12%	3.19%	3.07%
	6 mos. Avg.	3.03%					

PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17
Pinnacle West Capital	High Price ($)	84.720	86.630	88.650	89.560	87.380	90.870
	Low Price ($)	80.600	82.620	83.520	84.930	83.950	85.350
	Avg. Price ($)	82.660	84.625	86.085	87.245	85.665	88.110
	Dividend ($)	0.655	0.655	0.655	0.655	0.655	0.655
	Mo. Avg. Div.	3.17%	3.10%	3.04%	3.00%	3.06%	2.97%
	6 mos. Avg.	3.06%					
PNM Resources, Inc.	High Price ($)	37.900	38.390	38.500	40.100	39.900	42.950
	Low Price ($)	35.650	36.700	36.000	38.100	37.230	39.850
	Avg. Price ($)	36.775	37.545	37.250	39.100	38.565	41.400
	Dividend ($)	0.243	0.243	0.243	0.243	0.243	0.243
	Mo. Avg. Div.	2.64%	2.59%	2.61%	2.49%	2.52%	2.35%
	6 mos. Avg.	2.53%					
Portland General Electric	High Price ($)	46.050	46.870	47.430	48.060	46.350	47.520
	Low Price ($)	43.830	44.040	44.300	45.170	44.200	44.690
	Avg. Price ($)	44.940	45.455	45.865	46.615	45.275	46.105
	Dividend ($)	0.320	0.320	0.320	0.340	0.340	0.340
	Mo. Avg. Div.	2.85%	2.82%	2.79%	2.92%	3.00%	2.95%
	6 mos. Avg.	2.89%					
PPL Corporation	High Price ($)	37.950	38.320	40.100	40.200	38.840	39.810
	Low Price ($)	35.820	36.910	37.400	38.440	37.190	38.350
	Avg. Price ($)	36.885	37.615	38.750	39.320	38.015	39.080
	Dividend ($)	0.395	0.395	0.395	0.395	0.395	0.395
	Mo. Avg. Div.	4.28%	4.20%	4.08%	4.02%	4.16%	4.04%
	6 mos. Avg.	4.13%					
Xcel Energy	High Price ($)	45.060	45.440	48.010	48.500	47.700	49.700
	Low Price ($)	42.930	44.000	44.470	45.790	45.180	47.180
	Avg. Price ($)	43.995	44.720	46.240	47.145	46.440	48.440
	Dividend ($)	0.360	0.360	0.360	0.360	0.360	0.360
	Mo. Avg. Div.	3.27%	3.22%	3.11%	3.05%	3.10%	2.97%
	6 mos. Avg.	3.12%					
Monthly Avg. Dividend Yield		3.13%	3.07%	3.02%	3.01%	3.07%	2.96%
6-month Avg. Dividend Yield		3.04%					

Source: Yahoo! Finance

PROXY GROUP
DCF Growth Rate Analysis

Company	(1) Value Line DPS	(2) Value Line EPS	(3) Value Line B x R	(4) Zacks	(5) First Call
ALLETE, Inc.	4.00%	6.00%	3.50%	6.10%	5.00%
Alliant Energy Corporation	4.50%	6.00%	5.00%	5.50%	6.90%
Ameren Corp.	4.50%	6.00%	4.00%	6.50%	6.10%
American Electric Power Co.	5.00%	4.00%	4.50%	5.40%	2.87%
El Paso Electric Co.	7.00%	5.00%	4.00%	7.20%	6.50%
IDACORP, Inc.	7.00%	3.50%	3.50%	4.50%	4.00%
PG&E Corporation	7.50%	9.50%	3.50%	5.00%	2.08%
Pinnacle West Capital Corp.	5.00%	5.50%	4.00%	5.20%	6.04%
PNM Resources, Inc.	10.00%	9.00%	3.50%	4.70%	7.35%
Portland General Electric Company	6.00%	6.00%	4.00%	3.50%	4.90%
PPL Corporation	3.50%	NMF	4.00%	5.00%	0.04%
Xcel Energy Inc.	6.00%	4.50%	3.50%	5.40%	5.40%
Averages	5.83%	5.91%	3.92%	5.33%	4.77%
Median Values	5.50%	6.00%	4.00%	5.30%	5.20%

Sources: Value Line Investment Survey, July 28, August 18, and Sept. 15 2017
Yahoo! Finance for First Call/IBES growth rates retrieved September 26, 2017
Zacks growth rates retrieved September 26, 2017

PROXY GROUP
DCF RETURN ON EQUITY

	(1) Value Line Dividend Gr.	(2) Value Line Earnings Gr.	(3) Zack's Earning Gr.	(4) First Call Earning Gr.	(5) Average of All Gr. Rates
Method 1:					
Dividend Yield	3.04%	3.04%	3.04%	3.04%	3.04%
Average Growth Rate	5.83%	5.91%	5.33%	4.77%	5.46%
Expected Div. Yield	3.13%	3.13%	3.12%	3.12%	3.13%
DCF Return on Equity	***8.96%***	***9.04%***	***8.45%***	***7.89%***	***8.59%***
Average Excluding First Call/IBES					***8.82%***
Method 2:					
Dividend Yield	3.04%	3.04%	3.04%	3.04%	3.04%
Median Growth Rate	5.50%	6.00%	5.30%	5.20%	5.50%
Expected Div. Yield	3.13%	3.13%	3.12%	3.12%	3.13%
DCF Return on Equity	***8.63%***	***9.13%***	***8.42%***	***8.32%***	***8.63%***

PROXY GROUP
Capital Asset Pricing Model Analysis

20-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	9.45%
2	Risk-free Rate of Return, 20-Year Treasury Bond	
3	Average of Last Six Months	2.66%
4	Risk Premium	
5	(Line 1 minus Line 3)	6.80%
6	Comparison Group Beta	0.69
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	4.67%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	7.33%

5-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	9.45%
2	Risk-free Rate of Return, 5-Year Treasury Bond	
3	Average of Last Six Months	1.85%
4	Risk Premium	
5	(Line 1 minus Line 3)	7.61%
6	Comparison Group Beta	0.69
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	5.23%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	7.08%

PROXY GROUP
Capital Asset Pricing Model Analysis

Supporting Data for CAPM Analyses

20 Year Treasury Bond Data

	Avg. Yield
March-17	2.83%
April-17	2.67%
May-17	2.70%
June-17	2.54%
July-17	2.65%
August-17	2.55%
6 month average	2.66%

5 Year Treasury Bond Data

	Avg. Yield
March-17	2.01%
April-17	1.82%
May-17	1.84%
June-17	1.77%
July-17	1.87%
August-17	1.78%
6 month average	1.85%

Source: www.federalreserve.gov/datadownload/Choose.aspx?rel=H15

Value Line Market Return Data:

Forecasted Data:

Value Line Median Growth Rates:	
Earnings	10.50%
Book Value	7.50%
Average	9.00%
Average Dividend Yield	0.87%
Estimated Market Return	9.91%
Value Line Projected 3-5 Yr. Median Annual Total Return	9.00%
Average of Projected Mkt. Returns	9.45%

Source: Value Line Investment Survey for Windows retreived Sept. 21, 2017

Comparison Group Betas:	Value Line
ALLETE, Inc.	0.75
Alliant Energy Corporation	0.70
Ameren Corp.	0.65
American Electric Power Co.	0.65
El Paso Electric Co.	0.75
IDACORP, Inc.	0.70
PG&E Corporation	0.65
Pinnacle West Capital Corp.	0.65
PNM Resources, Inc.	0.75
Portland General Electric Company	0.70
PPL Corporation	0.70
Xcel Energy Inc.	0.60
Average	0.69

Source: Value Line Investment Survey

PROXY GROUP
Capital Asset Pricing Model Analysis
Historic Market Premium

	Geometric Mean	Arithmetic Mean	Adjusted Arithmetic Mean
Long-Term Annual Return on Stocks	10.00%	12.00%	
Long-Term Annual Income Return on Long-Term Treas. Bonds	5.00%	5.00%	
Historical Market Risk Premium	5.00%	7.00%	5.97%
Comparison Group Beta, Value Line	0.69	0.69	0.69
Beta * Market Premium	3.44%	4.81%	4.10%
Current 20-Year Treasury Bond Yield	2.66%	2.66%	2.66%
CAPM Cost of Equity, Value Line Beta	**6.09%**	**7.47%**	**6.76%**

Source: *2017 SBBI Yearbook, Stocks, Bonds, Bills, and Inflation*, Duff and Phelps; pp. 2-6, 6-17, 10-30

spilman
thomas & battle

Susan J. Riggs
304.340.3867
sriggs@spilmanlaw.com

October 13, 2017

VIA HAND DELIVERY
Ms. Ingrid Ferrell
Executive Secretary
Public Service Commission of West Virginia
201 Brooks Street
Charleston, WV 25301

03:28 PM OCT 13 2017 PSC EXEC SEC DIV

Re: CASE NO. 17-1066-G-390P
MOUNTAINEER GAS COMPANY
Infrastructure Replacement and Expansion
Program filing for 2018.

Dear Ms. Ferrell:

Please find enclosed for filing on behalf of the West Virginia Energy Users Group an original and twelve (12) copies of the "*Direct Testimony and Exhibits of Richard A. Baudino*" being filed in the above-referenced case.

Please contact me if you have any questions concerning this filing.

Sincerely,

Susan J. Riggs

Lara R. Brandfass (WV State Bar #12962)
Susan J. Riggs (WV State Bar #5246
lbrandfass@spilmanlaw.com
sriggs@spilmanlaw.com

Barry A. Naum (WV State Bar #12791)
Derrick Price Williamson
bnaum@spilmanlaw.com
dwilliamson@spilmanlaw.com

LRB:sds:10245701
Enclosures
c: Certificate of Service

CERTIFICATE OF SERVICE

I, Susan J. Riggs, counsel to the West Virginia Energy Users Group, do hereby certify that on this 13th day of October, 2017, a copy of the foregoing *"Direct Testimony and Exhibits of Richard A. Baudino"* was served upon the parties and/or counsel of record in this proceeding as follows:

VIA HAND DELIVERY

Linda Bouvette, Esquire
Staff Attorney
Public Service Commission of West Virginia
201 Brooks Street
Charleston, WV 25301
Counsel for Commission Staff

03:28 PM OCT 13 2017 PSC EXEC SEC DIV

VIA U.S. MAIL

Christopher L. Callas, Esquire
Stephen N. Chambers, Esquire
Nicklaus A. Presley, Esquire
Jackson Kelly PLLC
P.O. Box 553
Charleston, WV 25322-0553
Counsel for Mountaineer Gas Company

Tom White, Esquire
Consumer Advocate Division
700 Union Building
723 Kanawha Boulevard, East
Charleston, WV 25301
Counsel for Consumer Advocate Division

Susan J. Riggs

Susan J. Riggs (WV State Bar #5246)

WVEUG Exhibit RAB-D

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 17-1066-G-390P

03:29 PM OCT 13 2017 PSC EXEC SEC DIV

MOUNTAINEER GAS COMPANY

Infrastructure Replacement and Expansion Program
Filing for 2018.

DIRECT TESTIMONY

AND EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF

THE WEST VIRGINIA ENERGY USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

OCTOBER 13, 2017

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

03:29 PM OCT 13 2017 PSC EXEC SEC DIV

CASE NO. 17-1066-G-390P
MOUNTAINEER GAS COMPANY
Infrastructure Replacement and Expansion Program Filing for 2018.

DIRECT TESTIMONY OF RICHARD A. BAUDINO

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant to J. Kennedy and Associates.

Q. Please describe your education and professional experience.

A. I received my Master of Arts degree with a major in Economics and a minor in Statistics from New Mexico State University in 1982. I also received my Bachelor of Arts Degree with majors in Economics and English from New Mexico State in 1979. I began my professional career with the New Mexico Public Service Commission Staff in October 1982 and was employed there as a Utility Economist. During my employment with the Staff, my responsibilities included the analysis of a broad range of issues in the ratemaking field. Areas in which I testified included cost of service, rate of return, rate design, revenue requirements, analysis of sale/leasebacks of generating plants, utility finance issues, and generating plant phase-ins.

In October 1989, I joined the utility consulting firm of Kennedy and Associates as a Senior Consultant where my duties and responsibilities covered substantially the same areas as those during my tenure with the New Mexico Public Service Commission Staff. I became Manager in July 1992 and was named Director of Consulting in January 1995. Currently, I am a consultant with Kennedy and Associates.

Exhibit___(RAB-1) summarizes my expert testimony experience.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the West Virginia Energy Users Group ("WVEUG").

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to recommend that the Public Service Commission of West Virginia ("PSC" or "Commission") adopt certain consumer protections as part of its decision regarding approval of Mountaineer Gas Company's ("Mountaineer" or "Company") proposed Infrastructure Replacement and Expansion Program ("IREP").

Q. What are the consumer protections that you recommend be adopted by the Commission in this proceeding?

A. I recommend that the following protections be adopted by the Commission for implementation in the Company's IREP:

1. The yearly cap on IREP-related rate increases from current authorized tariff rates should be limited to 3.75% of the Company's total revenues authorized in the last base rate case.

2. The cumulative cap on customer IREP-related rate increases over currently authorized tariff rates should be limited to 7.5% of the Company's total revenues authorized in the last base rate case.

3. The Company should not be permitted to implement an IREP Rate Component after an IREP investment base reset following a base rate case order or, if an annual IREP Rate Component is already in place, to increase the existing IREP Rate Component with a subsequent calendar year's incremental projected investment in IREP Facilities, if the Company's achieved return on average equity investment, as reflected in its audited financial statements for the preceding calendar year prepared using generally accepted accounting principles and measured on a calendar year basis, exceeds the authorized return on common equity set in the Company's most recent base rate case. If one of these situations occurs, then the Company could still make its IREP filing for purposes of

maintaining the existing IREP Rate Component (if any) and addressing any needed reconciliations of costs and revenues from previous years.

Q. Did the Commission adopt these consumer protections in another proceeding?

A. Yes. In its Order in Case No. 16-0550-W-DSIC involving West-Virginia American Water Company ("WVAWC"), the Commission approved a Joint Stipulation and Agreement for Settlement ("Settlement") that enabled WVAWC to implement a Distribution System Improvement Charge ("DSIC") as an infrastructure replacement cost recovery mechanism similar to those authorized for natural gas utilities under Senate Bill 390 ("S.B. 390"). WVEUG participated in that proceeding and joined the settlement and believes that those customer protections are important components and principles of not only the DSIC but of any of infrastructure replacement charges. The Settlement in the WVAWC case is attached to my Direct Testimony as Exhibit___(RAB-2). The consumer protections that were approved by the Commission begin in paragraph 9(g) on page 6 and continue through page 8.

Q. Please provide the basis for your recommendation of yearly and cumulative rate caps associated with the IREP.

A. In order to mitigate future rate impacts on West Virginia ratepayers from Mountaineer's IREP, I recommend that the yearly increase to the Company's tariff rates be limited to 3.75% of the Company's authorized revenues and that the total cumulative increase be limited to 7.5% of those authorized revenues. Given the expedited cost recovery treatment afforded investments that flow through Mountaineer's IREP, it is a just and reasonable quid pro quo that customers receive some form of protection from excessive future rate increases that may flow through Mountaineer's IREP.

Furthermore, I am concerned that without such caps, the Company could continue to increase IREP investments to the degree that a base rate case filing becomes unnecessary from the Company's perspective, or at least would be delayed indefinitely. I believe that traditional base rate cases are important components of the regulatory process by reconciling all of a utility's costs and revenues, moving surcharge investments into rate base, and also providing additional assurances of both reasonable returns on equity ("ROE") and just and reasonable allocation of costs among customers. For that reason, I believe that caps on IREP charges may provide an additional incentive for the Company to continue to seek base rate adjustments when necessary without placing any undue burdens on the Company in the meantime.

Q. Why should an earnings test be approved by the Commission?

A. One of the purposes of infrastructure recovery plans is to help prevent significant earnings erosion to the utility company from ongoing investments in non-revenue producing infrastructure replacement between rate cases. If Mountaineer's actual earned ROE is equal to or greater than its last authorized return on equity before the implementation of an IREP-related revenue increase, then there is no good reason for the Company to increase its charges to West Virginia ratepayers in order to shore up its earnings due to infrastructure replacement investments. Such rate increases would actually cause Mountaineer to earn an excessive ROE.

Q. The consumer protections you recommend were approved for a water utility (WVAWC). Are these protections appropriate for a gas distribution utility like Mountaineer?

A. Yes, most definitely. The fundamental reasons for programs like Mountaineer's IREP and WVAWC's DSIC are basically the same. For gas distributors, the IREP was created by the passage of S.B. 390, which enabled West Virginia gas companies to receive expedited cost recovery of infrastructure replacement, upgrade, and expansion project deemed just and reasonable by the PSC. Therefore, customer protections for West Virginia water customers subject to a DSIC should also be afforded to gas customers subject to an IREP. Given that West Virginia now has two separate mechanisms for infrastructure investments and surcharges (*i.e.*, the S.B. 390 mechanisms for the gas utilities and a DSIC mechanism for WVAWC), I believe that these additional customer protections advance an important policy goal of uniformity among these state-wide infrastructure programs.

Q. Is there an alternative that the Commission could pursue to achieve the objectives that you have outlined?

A. Yes. The Commission could also institute a rulemaking proceeding. While I understand from counsel that the Commission has previously denied a petition for a rulemaking proceeding, the current status of varying infrastructure programs and charges may make a rulemaking proceeding more relevant and desirable from the Commission's perspective. Additionally, a rulemaking proceeding could give the Commission and parties the opportunity to fully resolve other questions that have been contested in these proceedings, such as the classification of costs and expenses that can be included in the programs, base rate treatment of completed and ongoing infrastructure investments, depreciation offsets, etc.

Q. Does this conclude your Direct Testimony?

A. Yes.

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 17-1066-G-390P

MOUNTAINEER GAS COMPANY
Infrastructure Replacement and Expansion Program
Filing for 2018.

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF

THE WEST VIRGINIA ENERGY USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

OCTOBER 13, 2017

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 17-1066-G-390P

MOUNTAINEER GAS COMPANY
Infrastructure Replacement and Expansion Program
Filing for 2018.

EXHIBIT___(RAB-1)

OF

RICHARD A. BAUDINO

ON BEHALF OF

THE WEST VIRGINIA ENERGY USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

OCTOBER 13, 2017

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-two years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates: Director of Consulting, Consultant** - Responsible for consulting assignments in revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
Atmos Cities Steering Committee
Canadian Federation of Independent Businesses
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Climax Molybdenum Company
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

**Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania charge proposals.	Evaluation of cost allocation, rate design, rate plan, and carrying
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD & United States	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

**Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T Users Group	WV	West Virginia Energy	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

**Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-	WV E-42T	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co,	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
08/13	P-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CFI Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

**Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint; security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP and Sharyland Dist. and Transmission Services, LLC	Return on equity
02/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
03/17	10580	TX	Atmos Cities Steering Committee	Atmos Pipeline Texas	Return on equity, capital structure, weighted cost of capital
03/17	R-3867-2013	Quebec, Canada	Canadian Federation of Independent Businesses	Gaz Metro	Marginal Cost of Service Study

Expert Testimony Appearances
of
Richard A. Baudino
As of October 2017

Date	Case	Jurisdict.	Party	Utility	Subject
05/17	R-2017-2586783	PA	Philadelphia Industrial and Commercial Gas Users Gp.	Philadelphia Gas Works	Cost and revenue allocation, rate design, Interruptible tariffs
08/17	R-2017-2595853	PA	AK Steel	Pennsylvania American Water Co.	Cost and revenue allocation, rate design
8/17	17-3112-INV	VT	Vt. Dept. of Pubic Service	Green Mountain Power	Return on equity, cost of debt, weighted cost of capital
9/17	4220-UR-123	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
10/17	2017-00179	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity, cost of short-term debt
10/17	17-1066-G-390P	WV	West Va. Energy Users Gp.	Mountaineer Gas. Co.	Infrastructure Replacement and Expansion Program

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 17-1066-G-390P

MOUNTAINEER GAS COMPANY
Infrastructure Replacement and Expansion Program
Filing for 2018.

EXHIBIT___(RAB-2)

OF

RICHARD A. BAUDINO

ON BEHALF OF

THE WEST VIRGINIA ENERGY USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

OCTOBER 13, 2017

**PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON**

At as session of the PUBLIC SERVICE COMMISSION OF WEST VIRGINIA in the City of Charleston on the 13th day of October 2015.

CASE NO. 15-0003-G-42T

MOUNTAINEER GAS COMPANY
Rule 42T tariff filing to increase rates and charges.

and

CASE NO. 15-0048-G-D

MOUNTAINEER GAS COMPANY
Application to change depreciation rates.

COMMISSION ORDER

The Commission approves a Joint Stipulation and Agreement for Settlement that provides an increase in base rates of $7.7 million of the $12.2 million requested by the Mountaineer Gas Company in these cases.

BACKGROUND

On January 5, 2015, Mountaineer Gas Company (Mountaineer) made a tariff filing under Rule 42 of the Commission Rules for the Construction and Filing of Tariffs (Tariff Rules), 150 C.S.R. 2, to increase gas rates and charges by an additional $12.2 million in annual revenue, or an approximate 4.7 percent increase on a total-Company basis over current rates (based on a future test year) for furnishing natural gas service to approximately 221,000 customers in Barbour, Berkeley, Boone, Braxton, Brooke, Cabell, Calhoun, Clay, Doddridge, Fayette, Gilmer, Grant, Greenbrier, Hancock, Hardy, Harrison, Jackson, Jefferson, Kanawha, Lewis, Lincoln, Logan, Marion, Marshall, Mason, McDowell, Mercer, Mineral, Mingo, Monongalia, Monroe, Nicholas, Ohio, Pendleton, Preston. Putnam, Raleigh, Randolph, Ritchie, Rome, Summers, Tucker, Tyler, Upshur, Wayne, Wetzel, Wirt, Wood, and Wyoming Counties in West Virginia.

Mountaineer included with its filing a supporting Tariff Rule 42 Exhibit for the historical test year (HTY) ending September 30, 2014, and a revised tariff showing an effective date of February 4, 2015. Mountaineer also filed an addendum to its Tariff

Rule 42 Exhibit reflecting December 31, 2014 forecasted balances for rate base and depreciation expenses and adjustments for incremental revenues and gas costs, a Bridge Year presentation (October 1, 2014 - September 30, 2015), and a Future Test Year (FTY) filing reflecting forecasted rate base, capital structure, revenues, and expenses for the twelve month period immediately following the Bridge Year (October 1, 2015 - September 30, 2016). The difference in rate relief requests between the HTY and FTY presentations was approximately $3 million. Mountaineer advised that it intended to file an application for revised depreciation rates under the Commission Rules of Practice and Procedure (Procedural Rules) 150 C.S.R. 1, Rule 20, and requested that the two cases be consolidated.

Mountaineer also filed a motion for limited waiver of that portion of Tariff Rule 23, requiring a public utility to give its customers separate written notice of a rate filing no later than fifteen days prior to its proposed effective date.

On January 8, 2015, Commission Staff filed motions to suspend the requested rates and extend the protest and intervention periods so that customers receiving individual notice would have sufficient time to file a protest. On January 12, 2015, Mountaineer filed a response to the Staff motions. Mountaineer did not oppose the extension of the protest and intervention periods, but explained that it had already sent to newspapers for publication Tariff Form 8 that included a protest and intervention date of February 5, 2015.

On January 14, 2015, the Commission issued an Order granting the Mountaineer motion to waive the requirement that Mountaineer give its customers separate written notice of its rate filing no later than fifteen days prior to its proposed effective date. The Commission required Mountaineer to use the notice included with the Order to provide separate written notice to customers with an extended protest period.

On January 15, 2015, Staff filed a Motion to Dismiss the Case or, in the Alternative, Require a Tolling of the Case. On January 20, 2015, Mountaineer filed a response in opposition to the Motion. The Commission denied the Staff Motion to Dismiss. Commission Order, January 21, 2015.

On January 20, 2015, Mountaineer requested revised depreciation rates pursuant to Procedural Rule 20. Mountaineer stated that the revised depreciation rates reflect approximately an $800,000 decrease in annual depreciation expense that is incorporated as an adjustment in the overall $12.2 million increase in base rates requested by Mountaineer in Case No. 15-0003-G-42T. Mountaineer recommended that the Commission suspend the proposed revision of its depreciation rates until the conclusion of the associated base rate proceeding and consolidate the two cases.

On January 28, 2015, Staff filed a Motion to Enforce Procedural Rules. In support of its motion, Staff noted that Mountaineer failed to file with its documents filed under seal a statement that a motion for protective treatment would be filed within one week as required by Procedural Rule 4.1.f. Additionally, Mountaineer failed to file a redacted version of the confidential filing as required by Procedural Rule 4.1.e. Staff requested that the Commission require Mountaineer to file a motion requesting confidential treatment and a redacted version of its confidential material.

By Order issued January 30, 2015, the Commission suspended the proposed rates and charges in Case No. 15-0003-G-42T and the revised depreciation rates in Case No. 15-0048-G-D until 12:01 a.m. on November 2, 2015. The Commission declined to consolidate the depreciation matter fully with the associated base rate proceeding, but it adopted the same procedural deadlines for both cases. An evidentiary hearing was scheduled to begin July 15, 2015 in Case No. 15-0003-G-42T with the evidentiary hearing in the depreciation case immediately following the rate case hearing. The Commission also granted CAD's request to intervene in the rate proceeding.

The Commission granted intervenor status in both cases to the Consumer Advocate Division (CAD) and the Independent Oil and Gas Association of West Virginia, Inc. (IOGA). The Commission granted intervenor status to the West Virginia Energy Users Group (WVEUG) in Case No. 15-0003-G-42T. See Orders entered in these cases on January 30, 2015, February 6, 2015, and March 9 and 16, 2015.

Also on January 30, 2015, Mountaineer filed a Motion for Protective Order, requesting that the Commission grant permanent confidential treatment of certain labor cost information, an internal budget analysis of employee benefits costs and available plans, and customer-specific data comparing actual billings rendered during the test year with what bills would have been if a special contract with a transportation customer had been in place during the test year. Mountaineer argued that it is unnecessary to file a public version of the documents filed under seal because very little information would be left after redaction. Mountaineer also filed a confidential version of supporting document SD G-9.1, inadvertently omitted from its initial confidential filing on January 15, 2015.

On February 4, 2015, Mountaineer withdrew its request for confidential treatment of the internal budget analysis of employee benefits costs and available plans except for two columns of estimated employee salaries found on page twenty-four of the document. Mountaineer released a public, redacted version of the document.

On March 3, 2015, Mountaineer filed affidavits demonstrating publication of its rate request in newspapers throughout its service territory. It also filed a completed Tariff Form 6 on March 19, 2015, stating that it had provided the required notice of the proposed rates to customers.

On March 27, 2015, the Commission scheduled public comment hearings and reiterated the procedural schedule set by the January 30, 2015 Order. A corrective order was issued on March 30, 2015 to correct a typographical error in the Order.

On April 7, 2015, the Commission entered an Order partially granting Staff's Motion to Enforce Procedural Rules and ordering Mountaineer to file public redacted versions of all the documents filed under seal. Pursuant to the Order, Mountaineer filed public redacted versions of the documents on April 20, 2015.

On April 24, 2015, Staff filed a Motion to Extend Discovery Period. Mountaineer did not oppose the motion. On May 4, 2015, the Commission entered an Order granting Staff's Motion to Extend Discovery Period and extending the discovery period until June 29, 2015 as reflected in a revised procedural schedule included in the Order.

On June 10, 2015, Staff filed a Motion to Deny Use of Future Test Year. On June 22, 2015, Mountaineer filed a Response to Staff's Motion. On June 25, 2015, the Commission issued an Order denying the Staff Motion.

On June 15-17 and July 14, 2015, the Commission conducted public comment hearings in Mountaineer's service territory. The Commission received comments from customers expressing concern about the proposed rates and other issues.

On July 13, 2015, Mountaineer filed a First Amendment to its Motion for Protective Order, requesting protective treatment for additional information.

Eighty-six individuals filed electronic or written comments expressing concern regarding the proposed rates.

On July 14, 2015, Mountaineer, Staff, and Intervenors CAD and WVEUG (Stipulating Parties) filed a Joint Stipulation and Agreement for Settlement (Joint Stipulation) attached hereto as Appendix A and incorporated in this Order. The Joint Stipulation included revenue requirement presentations from Mountaineer and Staff. IOGA did not join in the Joint Stipulation, but indicated that it will not oppose the Joint Stipulation should the Commission adopt it. Joint Stipulation at ¶ 1. The Stipulating Parties represented that they would sponsor the Joint Stipulation at the evidentiary hearing scheduled for July 15, 2015. On July 15, 2015, CAD filed its revenue requirement presentation.

The Commission admitted the pre-filed testimony filed by the parties at the July 15, 2015 Hearing. Transcript of the July 15, 2015 Commission Hearing (Tr.) at 44.

On July 17, 2015, Mountaineer filed a response to the Commission request of the parties at the July 15, 2015 evidentiary hearing to consider whether any materials covered in the Motion for Protective Order might be publicly disclosed. Mountaineer stated that in consultations with the parties on this issue, none identified any material it questioned or wished to challenge as ineligible for permanent protection from disclosure.

DISCUSSION

Joint Stipulation

The substantive provisions of the agreement of the Stipulating Parties are set forth in Paragraph 11 of the Joint Stipulation settlement. The Stipulating Parties agreed that Mountaineer should receive a base rate increase of $7.7 million based on a return on equity of 9.75 percent, resulting in an overall increase in base rates of three percent. The Stipulating Parties attached a financial schedule depicting the proposed rates and charges associated with the base rate increase as Exhibit 1 to the Joint Stipulation. Exhibit 1a shows the agreed allocation of additional revenue to customer classes, and Exhibit 2 shows Mountaineer's revenue requirement calculation. Staff filed a separate revenue requirement calculation on July 14, 2015, the same date that the Joint Stipulation was filed and on July 15, 2015, CAD filed its revenue requirement presentation.

As noted in Subparagraph 11(b) of the Joint Stipulation and at the July 15, 2015 hearing, Mountaineer will propose a decrease in its PGA, to be effective November 1, 2015, in its upcoming Tariff Rule 30-C filing. Tr. at 29, 32. This decrease will more than offset the increase in base rates addressed in the Stipulation, resulting in a net decrease in overall rates and charges. The Stipulating Parties requested that the Commission shorten the original suspension period by one day, to November 1, from November 2, 2015, in order to permit the simultaneous implementation of the two rate changes. Id.

The Stipulating Parties recommended the depreciation rates shown in Exhibit 3 of the Joint Stipulation as a reasonable resolution of all depreciation issues and requested the Commission authorize Mountaineer's use of those rates on and after November 1, 2015. Subparagraph 11(c) of Joint Stipulation.

As discussed in Subparagraph 11(d) of the Joint Stipulation, Mountaineer plans to file an application seeking approval for a multi-year comprehensive plan for infrastructure replacements, upgrades, and extensions that will include an Infrastructure Replacement Cost Recovery Rate (IRCR Rate) pursuant to Senate Bill 390 (W.Va Code §24-2-1k). The IRCR Rate would permit Mountaineer to recover an allowance for return on the net incremental rate base, related income taxes, depreciation expense and property taxes associated with the eligible components included in Mountaineer's Infrastructure Replacement Program (IRP). Mountaineer agreed that the incremental rate base amount on which the allowance for return is to be calculated will include a separate rate base deduction related to the level of annual depreciation expense reflected in current base rates and corresponding to the type of capital investment provided for in its plan. Subparagraph 11(d) of Joint Stipulation. Exhibit 4 to the Joint Stipulation shows an example of a depreciation offset, and Exhibit 5 shows a schedule of the agreed-upon depreciation amounts for transmission and distribution assets to be used in calculating the rate base deduction. Id.

As indicated in Subparagraph 11(e) of the Joint Stipulation and at the hearing, Mountaineer withdrew its request to have the Commission determine its revenue requirement on the basis of a future test year presentation, but without prejudice to its ability to seek such a determination in a future case. Tr. at 34.

The Stipulating Parties recommended that the Commission defer a ruling on the Motion for Protective Order. Subparagraph 11(f) of Joint Stipulation.

The Stipulating Parties asserted that each had compromised its initial positions on a number of issues in ultimately reaching the Joint Stipulation.

Each of the Stipulating Parties, however, supported and recommended approval of the substantive provisions set forth in Paragraph 11 of the Joint Stipulation, without agreeing to a specific calculation of the $7.7 million rate increase, as a reasonable resolution of the issues raised in this proceeding, within the overall context of the settlement. Tr. at 36, 46, 47, 50; Joint Stipulation at ¶12. Therefore, they recommended that the Commission accept the Joint Stipulation in complete resolution of these cases.

The parties jointly acknowledged and represented that the pre-filed direct and rebuttal testimonies and exhibits filed in this case, and the testimony offered in sponsorship of the Joint Stipulation, adequately supports the Joint Stipulation despite disputes among the parties on a wide range of ratemaking issues. They also recommended that the Commission admit their respective pre-filed testimony and exhibits into the evidentiary record without the necessity of each witness sponsoring the testimony at hearing. Joint Stipulation at ¶13.

The Stipulation discusses the components of rate base to be included in the Mountaineer filing for an IRCR Rate pursuant to Senate Bill 390, including a separate rate base deduction related to the level of annual depreciation expense reflected in current base rates and corresponding to the proposed type of capital investment provided for in its plan.

Subsection (f)(1) of Senate Bill 390, specifies that: "An allowance for return shall be calculated by applying a rate of return to the average planned net incremental increase to rate base attributable to the infrastructure program." (Emphasis added.) We determine that the stipulated treatment of annual depreciation expense built into base rates comports with the Subsection (f)(1) reference to an increase to rate base.

The annual depreciation expense corresponding to the proposed type of capital investment provided for in Mountaineer's IRP is included in customer rates and is accounted for as an increase in the Accumulated Reserve for Depreciation specific to the utility plant accounts use for the IRP plant additions. This increased Accumulated Reserve for Depreciation reduces rate base. To increase net rate base in Mountaineer's IRP accounts, as provided for in subsection (f)(1), the utility must make annual capital expenditures in excess of the annual depreciation credits to the Accumulated Reserve for Depreciation. Therefore, the Commission agrees that the determination of the net incremental rate base attributable to Mountaineer's IRP should be net of annual depreciation expense reflected in current base rates and determines that this is consistent with subsection (f)(1) of Senate Bill 390.

There is another expense built into base rates that results in an increase in a balance sheet account that is also used as a rate base deduction. That expense is the amount allowed for Deferred Income Taxes. Just as depreciation expense related to IRP plant accounts results in an increased rate base deduction, Deferred Income Tax expense related to IRP plant accounts also results in an increased rate base deduction. To increase net rate base in IRP accounts, the utility must make annual capital expenditures in excess of both the annual depreciation credits and annual Deferred Income Tax credits accumulated on the balance sheet.

The Joint Stipulation does not specifically address the base rate level of annual Deferred Income Tax expense associated with Mountaineer's IRP accounts. The Commission does not interpret that omission as a determination that the annual Deferred Income Tax expense built into base rates should be disregarded in the development of the net incremental increase to rate base attributable to Mountaineer's IRP. In the upcoming Senate Bill 390 filing by Mountaineer, we will consider treating the annual Deferred Income Tax expense built into base rates in the same way as the Joint Stipulation described the offset for annual depreciation expense. Because this issue has not been addressed in any prior case, this is not a final ruling by the Commission on annual Deferred Income Tax expense as it relates to the Senate Bill 390 allowance for return on net infrastructure investment. If there is dispute regarding this treatment of annual Deferred Income Tax expense to determine the net incremental increase to rate base attributable to the IRP, we will consider the arguments in the Mountaineer Senate Bill 390 filing.

The Commission appreciates the significant efforts of the parties to reach a reasonable and just settlement in these proceedings. Stipulations are a significant assistance to the Commission in carrying out its statutory duties and frequently resolve cases in a prompt, fair, reasonable, cost effective, and expedited fashion based on armslength negotiations. Settlements can significantly reduce litigation costs for the benefit of all parties and the ratepayers.

It is evident that the parties have engaged in substantial compromise. The Joint Stipulation reflects substantial compromises of the positions of all parties to this case.

The Joint Stipulation represents a substantial, diligent and good faith effort to reach an agreement. The testimony supporting the Joint Stipulation, the pre-filed testimony, and other evidence demonstrate that the cost of service and rate design recommendations in the Joint Stipulation are fair and reasonable.

The obligation of the Commission in rate proceedings is to balance the interests of the parties, ratepayers and the State based on a review of all of the evidence, not just evidence submitted in favor of the Joint Stipulation. The full record in this case, however, supports the agreed revenue requirement and resolution of the other issues. The revenue allocation and rate design are appropriate given the cost of service study evidence, and Mountaineer's pending Tariff Rule 30-C filing (Case No. 15-1134-G-30C). Accordingly, the Commission will adopt the Joint Stipulation attached to this Order in resolution of the issues presented in these cases. The rates and charges set forth in the Joint Stipulation are fair and reasonable and should be approved.

Effective Date of Revised Rates

The Stipulating Parties requested that the effective date of the rates approved in this case be changed from November 2, 2015, to November 1, 2015, to coincide with the date interim rates will go into effect in Case No. 15-1134-G-30C. Joint Stipulation at ¶11(b). Given the relatively short period of time between the requested date of November 1, 2015, and the suspension date of November 2, 2015, and the confusion that would likely be caused by two rate changes within one week, the Commission finds that it is in the public interest to revise the suspension date in these cases. The rates approved in Attachment A will go into effect for all services rendered on or after November 1, 2015.

Protective Treatment Requests

In the January 30, 2015 Motion for Protective Order, Mountaineer requested permanent protective treatment of certain labor cost information, an internal budget analysis of employee benefits costs and available plans, and customer-specific data comparing actual billings rendered during the test year with what bills would have been if a special contract with a transportation customer had been in place during the test year. On July 13, 2015, Mountaineer filed the First Amendment to Motion for Protective Order, requesting protection for additional materials that can be classified with, and share the same bases for protection as, the information described in the January 30, 2015

Motion. Mountaineer also sought to protect three new categories of confidential information not initially addressed in the Motion: Tax Data, Compensation Data, and Debt Placement Data.

Mountaineer asserted that the information filed under seal is exempt from the West Virginia Freedom of Information Act and meets the criteria adopted by the Supreme Court of Appeals of West Virginia in State ex rel. Johnson v. Tsapis, 187 W.Va. 337,419 S.E. 2d 1 (1992), for determining the need for permanent protective treatment. No other party or individual has opposed the relief requested in the protective treatment requests.

The parties recommended that the Commission defer a ruling on all matters raised in the protective treatment requests in their Joint Stipulation. Subparagraph 11(f) of Joint Stipulation.

The Commission concludes that it is not necessary to resolve the issue of confidential treatment at this time. No entity has requested that the Commission provide copies of any information subject to a protective treatment request. The Commission will continue to segregate and maintain the documents subject to the requests under seal until the future time, if any, that the Commission receives a Freedom of Information Act request for them. On receipt of that filing, the Commission will notify Mountaineer and provide them with an opportunity to argue whether the documents are entitled to permanent protective treatment. West Virginia-American Water Company, Case No. 10-0920-W-42T (Commission Order, April 18, 2011) at 48, 66.

FINDINGS OF FACT

1. Mountaineer filed revised tariffs reflecting increased base rates and charges amounting to approximately $12.2 million annually. January 5, 2015 Filings.

2. Separately, Mountaineer requested revised depreciation rates under Procedural Rule 20, resulting in an $800,000 decrease in annual depreciation expense that Mountaineer incorporated as an adjustment in the overall $12.2 million base rate increase. January 20, 2015 Filing.

3. Mountaineer published a proper filing notice in each of the counties where it provides service, satisfied all publication requirements, and provided evidence of proper notice to the Commission. March 3, 2015, May 22, 2015, June 17, 2015, and June 30, 2015 Affidavits of Production.

4. The Stipulating Parties filed the Joint Stipulation with the Commission. July 14, 2015 Filing.

5. As a part of the Joint Stipulation, Mountaineer has withdrawn its request to have the Commission determine its revenue requirement on the basis of a future test year. Joint Stipulation at ¶11(e).

6. The material terms of the settlement are outlined in Paragraph 11 of the Joint Stipulation. The Stipulating Parties agree and recommend that the increase in revenue requirement should be $7,700,000, and that it should be based on a return on equity of 9.75%. Id. at ¶11(a).

7. The Stipulating Parties recommended that the Commission admit their respective pre-filed testimony and exhibits into the evidentiary record. Id.

8. The Stipulating Parties support the Joint Stipulation as a reasonable resolution of the cases and represent that each and every one of the provisions set forth in the Joint Stipulation acceptably resolves or defers each issue raised in this matter. Joint Exhibit 1.

9. The Joint Stipulation does not specifically address the base rate level of annual Deferred Income Tax expense associated with Mountaineer's IRP accounts.

10. Mountaineer requested permanent protective treatment of the information filed under seal in this proceeding including material produced in discovery and testimony. January 30, 2015 Motion for Protective Order, July 12, 2015 First Amendment to Motion for Protective Oder.

11. The Stipulating Parties request that the effective date for the implementation of revised rates be moved from November 2, 2015, to November 1, 2015, to coincide with the date interim rates will go into effect in Case No. 15-1134-G-30C.

CONCLUSIONS OF LAW

1. The terms and conditions of the Joint Stipulation are just and reasonable. W. Va. Code §24-2-4a.

2. The Joint Stipulation properly balances the interests of Mountaineer, its customers, and the State as required under W. Va. Code §24-1-1(b).

3. The Joint Stipulation will produce adequate revenue for Mountaineer to be able to operate and raise needed capital but will not produce more than adequate revenue for its operations.

4. The rates set forth within Exhibit 1 to the Joint Stipulation are just and reasonable.

5. The depreciation rates set forth within Exhibit 3 to the Joint Stipulation are just and reasonable.

6. In light of Mountaineer's withdrawal of its request to have the Commission determine its revenue requirement on the basis of a future test year, the Commission makes no determinations relative to the use of a future test year in this proceeding.

7. The pre-filed testimony, associated exhibits filed in these cases, and the testimony offered in sponsorship of the Joint Stipulation support the reasonableness of the Joint Stipulation.

8. If there is dispute regarding this treatment of annual Deferred Income Tax expense to determine the net incremental increase to rate base attributable to the IRP, we will consider the arguments in the Mountaineer Senate Bill 390 filing.

9. It is not necessary to resolve the issue of confidential treatment at this time. Case No. 10-0920-W-42T (Commission Order, April 18, 2011) at 48, 66.

10. Given the relatively short period of time between the requested date of November 1, 2015, and the suspension date of November 2, 2015, and the confusion that would likely be caused by two rate changes within one week, it is in the public interest to revise the suspension date in these cases.

ORDER

IT IS THEREFORE ORDERED that the Joint Stipulation attached hereto as Appendix A is approved and adopted in full resolution of these cases.

IT IS FURTHER ORDERED that Mountaineer shall prepare and file, within fifteen calendar days of the date of this Order, an original and six copies of appropriately notated revised tariff sheets, to be effective for all services rendered on and after November 1, 2015, reflecting the approved $7.7 million base rate increase and the base rate components of each tariff schedule as summarized in Exhibit 1 to the Joint Stipulation.

IT IS FURTHER ORDERED that the request for permanent protective treatment of the material filed under seal in this proceeding is deferred pending a request for that information.

IT IS FURTHER ORDERED that the Executive Secretary maintain the information filed under seal in these proceedings separate and apart from the remnants of the case files pending a further Commission Order issued after review of any request to inspect or copy the sealed information.

IT IS FURTHER ORDERED that these proceedings be removed from the Commission docket of active cases on entry of this Order.

IT IS FURTHER ORDERED that the Executive Secretary of the Commission serve a copy of this Order by electronic service on all parties of record who have filed an e-service agreement, by United States First Class Mail on all parties of record who have not filed an e-service agreement, and on Staff by hand delivery.

A True Copy, Teste,

Ingrid Ferrell

Ingrid Ferrell
Executive Secretary

SMS/sm
150003cl.docx

Appendix A

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

Case No. 15-0003-G-42T

MOUNTAINEER GAS COMPANY
Rule 42T Tariff Filing to Increase Rates and Charges

Case No. 15-0048-G-D

MOUNTAINEER GAS COMPANY
Application to Change Depreciation Rates

JOINT STIPULATION AND AGREEMENT FOR SETTLEMENT

Pursuant to W. Va. Code § 24-1-9(f) and Procedural Rule 13(d), Mountaineer Gas Company ("Company"), the Staff of the Public Service Commission of West Virginia ("Staff"); the Consumer Advocate Division of the Commission (the "CAD"), and selected commercial customers of the Company that have collectively intervened as the West Virginia Energy Users Group ("WVEUG")[1] (collectively, the "Parties") join in this Joint Stipulation and Agreement for Settlement ("Joint Stipulation'). The Independent Oil and Gas Association of West Virginia ("IOGA") does not join in the Joint Stipulation, but has indicated it will not oppose the Joint Stipulation should the Commission adopt it.

In this Joint Stipulation, the Parties propose to the Commission a comprehensive settlement of the Company's pending general rate and depreciation cases. The Parties recommend that the Commission approve the Joint Stipulation without modification and thereby establish rates to meet the Company's revenue requirement set forth herein.

[1] WVEUG members for purposes of these cases are ArcelorMittal Weirton LLC, Constellium Inc., and QuadGraphics, Inc.

Introduction and Procedural History

1. On January 5, 2015, the Company filed proposed revisions to its tariffs reflecting increased rates and charges amounting to approximately $12.2 million annually, or an overall increase of 4.7% on a total-Company basis over then-existing rates, for furnishing gas service to approximately 221,000 customers. On January 20, 2015, the Company requested revised depreciation rates under Rule 20, the application of which resulted in a decrease of approximately $800,000 in annual revenues, which had been incorporated into the base rate request.

2. By order entered January 30, 2015, the Commission suspended the proposed base rate increase and the implementation of new depreciation rates until 12:01 a.m. on November 2, 2015, established a procedural schedule, and required public notice, among other things.

3. The Commission instituted a formal investigation into the reasonableness of the revised rates and charges and the supporting data filed by the Company.

4. During the course of this proceeding, the CAD, WVEUG, and IOGA filed petitions to intervene, each of which the Commission granted through subsequent orders.

5. In accordance with the procedural schedule, the Parties filed the testimonial and documentary evidence of these witnesses:

Company:	Scott F. Klemm, C. David Lokant, Adrien M. McKenzie, Dale L. Parris, and Tom M. Taylor
CAD:	Ralph C. Smith, Suzanne O. Akers, and James S. Garren
Staff:	Edwin L. Oxley, David L. Pauley, Terry R. Eads, Dixie L.

Kellmeyer, Eric F. deGruyter, and Joshua Allen

WVEUG: Richard A. Baudino

6. The Parties undertook extensive formal and informal discovery, including an examination of the Company's books and records and a review of extensive data responses and other documents provided by the Company.

7. Six public comment hearings were conducted (and two more are scheduled for July 14, 2015) in different areas of the Company's service territory to obtain customer input.

8. The Company represents that it has satisfied all posting and publication requirements and provided evidence thereof to the Commission.

9. The Company filed a Motion for Protective Order on January 30, 2015, as amended ("Motion for Protective Order") seeking permanent confidential treatment of certain information it had filed with the Commission and provided to other Parties under interim protective agreements.

10. To avoid the additional expense that will result from litigating these cases, and in an attempt to achieve certainty in the outcome, the Parties have endeavored to address or eliminate all issues in the general rate and depreciation cases and to reach a recommended comprehensive resolution of those cases.

The Settlement Terms

11. The Parties agree and recommend that the Commission adopt the Joint Stipulation as the basis for its resolution of these cases. The terms and conditions of the Joint Stipulation, each of which is an essential and integral element of a fair and reasonable resolution in the public interest, are set forth below.

(a) The Company will implement an increase of $7,700,000 in base rate revenues, which is expected to result in an overall increase in rates of approximately 3 percent ("Rate Increase"), to be effective on November 1, 2015. A schedule setting forth the proposed rates and charges is attached as Exhibit 1, and Exhibit 1a shows the agreed allocation of additional revenue to customer classes. The Company's sample revenue requirement presentation supporting the Rate Increase is attached as Exhibit 2; the CAD and Staff anticipate providing their presentations at or before hearing. The Parties stipulate that the Rate Increase is premised on a return on equity of 9.75%.

(b) In its upcoming 30-C filing, the Company will propose a decrease in its PGA rate, to be effective November 1, 2015, that will more than offset the Rate Increase, resulting in a net decrease in overall rates and charges on that date. To permit the simultaneous implementation of the two rate changes, the Parties request that the Commission shorten the current suspension period by one day, to November 1 from November 2, 2015.

(c) The Rate Increase includes the impact on depreciation expense of the depreciation accrual rates shown in Exhibit 3. The Parties recommend this set of accrual rates as a reasonable resolution of all depreciation issues and ask the Commission to authorize the Company to use those rates on and after November 1, 2015.

(d) The Company anticipates filing an application under SB 390 (W.Va. Code §24-2-1k) for approval of a multi-year comprehensive plan for infrastructure replacements, upgrades and extensions to its system. Under §24-2-1k, the Company will be permitted to recover an allowance for return on the net incremental rate base, related income taxes, depreciation expense and property taxes associated with its approved infrastructure program. In determining the rate increment for the infrastructure program, MGC agrees that the net incremental rate base amount on which the allowance for return is to be calculated will, in addition to the traditional components of rate base, include a separate rate base deduction related to the level of annual depreciation expense reflected in current base rates and corresponding to the proposed type of capital investment provided for in its plan (see example of depreciation offset in Exhibit 4). Exhibit 5 is a schedule of the agreed-upon depreciation amounts for transmission and distribution assets to be used in calculating the rate base deduction.

(e) In consideration for the other components of the Joint Stipulation and in recognition of the 2015 SB 390 filing, the Company withdraws its request to have the Commission determine its revenue requirement on the basis of a future test year presentation, without prejudice to its ability to seek such a determination in a future case.

(f) The Parties recommend that the Commission defer a ruling on the Motion for Protective Order.

General Provisions

12. The Parties support this Joint Stipulation and represent that each of its provisions acceptably resolves all issues raised in these cases. Based on the record, the Parties recommend that the Commission accept this Joint Stipulation in complete resolution of these cases.

13. The Parties support the Joint Stipulation without agreeing specifically on the exact methods used to arrive at the Rate Increase. The Parties represent that the Parties' pre-filed direct and rebuttal evidence and exhibits, as well as the testimony to be offered in sponsorship of this Joint Stipulation, even though it reflects significant areas of dispute among the Parties on a wide range of ratemaking issues, is adequate to support the Joint Stipulation. The Parties ask that their respective pre-filed testimony and exhibits be admitted into the evidentiary record without the necessity of each witness's sponsorship or attendance at hearing.

14. This Joint Stipulation results from a review of all evidence and filings in these cases, the Parties' analyses of the existing and foreseeable financial condition of the Company, the existing statutory and regulatory framework, and extensive, good faith negotiation. The Joint Stipulation embodies substantial compromises and modifications by the Parties of their respective positions, and is proposed to expedite and simplify the resolution of these cases in the context of an overall settlement.

15. The Parties recommend that the Commission adopt this Joint Stipulation as being in the public interest, without adopting or recommending the adoption of any of the compromise positions set forth herein as ratemaking principles applicable to future regulatory proceedings, except as may otherwise be provided herein. Each component of the Joint

Stipulation (including this paragraph) is integral to and inseparable from the others, and no Party advocates the Commission's resolution of any issue proposed in this Joint Stipulation other than in the context of its support for the Joint Stipulation as a whole.

16. This Joint Stipulation is subject to the Commission's acceptance and approval. It will be ineffective until and unless approved by the Commission in all of its material terms and without modification. If the Commission does not grant that approval, then the Parties reserve their rights to fully advocate their positions, unlimited by the terms of the Joint Stipulation.

[Signature pages follow]

WHEREFORE, the Parties respectfully recommend and request that the Commission make appropriate findings of fact and conclusions of law adopting and approving the Joint Stipulation in its entirety, including the attached exhibits.

Dated and effective this 13th day of July, 2015.

MOUNTAINEER GAS COMPANY

By Counsel

Christopher L. Callas, Esq.
John Philip Melick, Esq.
JACKSON KELLY PLLC
1600 Laidley Tower
Post Office Box 553
Charleston, West Virginia 25322
(304) 340-1000

THE STAFF OF THE PUBLIC SERVICE COMMISSION OF WEST VIRGINIA

By Counsel

Linda S. Bouvette, Esq.
Lucas Head, Esq.
Public Service Commission
201 Brooks Street,
P O Box 812
Charleston, WV 25323

CONSUMER ADVOCATE DIVISION

By Counsel

Thomas White, Esq.
Consumer Advocate Division
700 Union Building
723 Kanawha Boulevard, East
Charleston, WV 25301

WHEREFORE, the Parties respectfully recommend and request that the Commission make appropriate findings of fact and conclusions of law adopting and approving the Joint Stipulation in its entirety, including the attached exhibits.

Dated and effective this 13th day of July, 2015.

MOUNTAINEER GAS COMPANY

By Counsel

Christopher L. Callas, Esq.
John Philip Melick, Esq.
JACKSON KELLY PLLC
1600 Laidley Tower
Post Office Box 553
Charleston, West Virginia 25322
(304) 340-1000

THE STAFF OF THE PUBLIC SERVICE COMMISSION OF WEST VIRGINIA

By Counsel

Linda S. Bouvette, Esq.
Lucas Head, Esq.
Public Service Commission
201 Brooks Street,
P O Box 812
Charleston, WV 25323

CONSUMER ADVOCATE DIVISION

By Counsel

Thomas White / Jr.

Thomas White, Esq.
Consumer Advocate Division
700 Union Building
723 Kanawha Boulevard, East
Charleston, WV 25301

WEST VIRGINIA ENERGY USERS GROUP

By Counsel

Lee F. Feinberg, Esq.
Spilman Thomas & Battle, PLLC
PO Box 273
Charleston, WV 25321-0273

Barry A. Naum, Esq.
Spilman Thomas & Battle, PLLC
1100 Bent Creek Blvd., Suite 101
Mechanicsburg, PA 17050

Mountaineer Gas Company
Case No. 15-0003-G-42T
Summary of Revenue by Rate Schedule
Effective November 1, 2015

Rate	Design Increase		Customer Charge				Commodity Rate				Transportation Rate (non-WV)				Transportation Rate (WV)			
Schedule	Revenue	Percent	Current	Proposed	Increase	Increase	Current	Proposed	Increase	Increase	Current	Proposed	Increase	Increase	Current	Proposed	Increase	Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
	$	%	$	$	$	%	$	$	$	%	$	$	%	%	$	$	$	%
RS	5,714,778	3.50	10.10	10.10	-	0.00	3.024	3.405	0.381	12.60	3.024	3.405	0.381	12.60	2.827	3.225	0.398	14.08
GS	1,890,808	2.43	31.75	31.75	-	0.00	2.213	2.390	0.177	8.00	2.213	2.390	0.177	8.00	2.068	2.250	0.182	8.80
GS - SPC	223	0.03	31.75	31.75	-	0.00	2.213	2.390	0.177	8.00								
LGS	34,432	1.72	460.90	485.00	24.10	5.23	1.690	1.720	0.030	1.78	1.690	1.720	0.030	1.78	1.537	1.570	0.033	2.15
LGS - SPC	9,378	0.29	460.90	485.00	24.10	5.23	1.690	1.720	0.030	1.78								
IS	21,253	4.96	978.50	985.00	6.50	0.66	0.195	0.206	0.011	5.64	0.195	0.206	0.011	5.64	0.195	0.206	0.011	5.64
IS - SPC	720	0.11	978.50	985.00	6.50	0.66	0.195	0.206	0.011	5.64								
LIS	-	0.00	978.50	985.00	6.50	0.66	0.118	0.122	0.004	3.39	0.118	0.122	0.004	3.39	0.118	0.122	0.004	3.39
LIS - SPC	-	0.00	575.00	575.00	-	0.00	0.118	0.118	-	0.00								
NGV	33,245	1.36	10.10	10.10	-	0.00	3.024	3.405	0.381	12.60	3.024	3.405	0.381	12.60	2.827	3.225	0.398	14.08
WS	221	1.63	83.40	95.00	11.60	13.91	1.097	1.180	0.083	7.57	1.097	1.180	0.083	7.57	0.616	0.620	0.004	0.65
WS - SPC	-	0.00	83.40	95.00	11.60	13.91	1.097	1.180	0.083	7.57	1.097	1.180	0.083	7.57				
Subtotal	7,705,058																	

NOTE: *Above revenues are before consideration of the correction factors included for each respective customer class.*

NOTE: No specific rates are reflected for tranportation customers who are under a special contract since rates vary customer-by-customer.

Exhibit 1
Page 1 of 1

MOUNTAINEER GAS COMPANY
Case No. 15-0003-G-42T
Revenue Apportionment

			Customer Charge Impact					Volume Impact								
Rate Schedule	Apportionment in Case No. 11-1627-G-42T	% of Inc.	Customer Units	Proposed Customer Charge	Current Customer Charge	Proposed Increase in Charge	Revenue Impact	Volumes	Proposed Rate	Current Rate	Proposed Increase in Rate	Revenue Impact	Total Revenue Increase	Calculated Current Revenues (A)	Percentage Increase	
Tariff:																
RS	$ 4,670,359	74.5418%	2,344,688	$ 10.10	$ 10.10	$ -	$ -	14,999,417	$ 3.4050	$ 3.0240	$ 0.3810	$ 5,714,778	$ 5,714,778	$ 163,430,917	3.50%	
GS	1,530,319	24.4248%	242,155	31.75	31.75	-	-	7,452,584	2.3900	2.2130	0.1770	1,319,109	1,319,109	71,080,186	1.86%	
GS - SPC			0	31.75	31.75	-	-	1,260	2.3900	2.2130	0.1770	223	223	10,717	2.08%	
LGS	32,040	0.5114%	0	485.00	460.90	24.10	-	94,803	1.7200	1.6900	0.0300	2,844	2,844	640,773	0.44%	
LGS - SPC			0	485.00	460.90	24.10	-	129,439	1.7200	1.6900	0.0300	3,883	3,883	874,878	0.44%	
WS	10,626	0.1696%	456	95.00	83.40	11.60	5,290	336,802	1.1800	1.0970	0.0830	27,956	33,245	2,436,080	1.36%	
WS - SPC (None)			0	95.00	83.40	11.60	-	0	1.1800	1.0970	0.0830	-	-	-	0.00%	
IS (None)	20,401	0.3256%	0	985.00	978.50	6.50	-	0	0.2060	0.1950	0.0110	-	-	-	0.00%	
IS - SPC			0	985.00	978.50	6.50	-	30,027	0.2060	0.1950	0.0110	330	330	158,062	0.21%	
LIS (None)			0	985.00	978.50	6.50	-	0	0.1220	0.1180	0.0040	-	-	-	0.00%	
LIS - SPC	1,682	0.0268%	0	575.00	575.00	-	-	73,000	0.1180	0.1180	-	-	-	378,651	0.00%	
	$ 6,265,427	100.0000%	2,587,299				$ 5,290	23,117,342				$ 7,069,122	$ 7,074,412	$ 239,010,244	2.96%	
Transport																
RS (None)			0	$ 10.10	$ 10.10	$ -	$ -					$ -	$ -	$ -	0.00%	
WV								-	3.2250	2.8270	$ 0.3980	-	-	-	0.00%	
Non-WV								-	3.4050	3.0240	$ 0.3810	-	-	-	0.00%	
GS			7,460	31.75	31.75	-	-						-	236,855	0.00%	
WV								2,984,996	2.2500	2.0680	0.1820	543,269	543,269	8,172,972	6.60%	
Non-WV								160,619	2.3900	2.2130	0.1770	28,430	28,430	355,430	8.00%	
GS - SPC			205	31.75	31.75	-	-						-	6,509	0.00%	
WV								756,492	0.6237	0.6237	0.0000	-	-	473,098	0.00%	
Non-WV								247,361	0.8483	0.8485	0.0000	-	-	209,895	0.00%	
LGS			174	485.00	460.90	24.10	4,193						4,193	80,197	5.23%	
WV								825,632	1.5700	1.5370	0.0330	27,247	27,247	1,269,027	2.15%	
Non-WV								4,937	1.7200	1.6900	0.0300	148	148	8,344	1.77%	
LGS - SPC			226	485.00	460.90	24.10	5,495						5,495	105,065	5.23%	
WV								1,230,956	0.7000	0.7000	0.0000	-	-	861,669	0.00%	
Non-WV								3,135,825	0.4546	0.4546	0.0000	-	-	1,425,627	0.00%	
WS (None)			0	95.00	83.40	11.60	-	-					-	-	0.00%	
WS - SPC			12	95.00	83.40	11.60	139				0.0000	-	139	1,001	13.89%	
WV								20,400	0.6200	0.6160	0.0040	82	82	12,566	0.65%	
Non-WV								-					-	-	0.00%	
IS			60	985.00	978.50	6.50	390						390	58,710	0.66%	
WV								358,277	0.2060	0.1950	0.0110	3,952	3,952	70,059	5.64%	
Non-WV								1,537,373	0.2060	0.1950	0.0110	16,911	16,911	299,768	5.64%	
IS - SPC			60	985.00	978.50	6.50	390						390	58,710	0.66%	
WV								1,688,684	0.0718	0.0718	0.0000	-	-	135,606	0.00%	
Non-WV								5,391,746	0.0569	0.0569	0.0000	-	-	317,574	0.00%	
LIS (None)			0	985.00	978.50	6.50	-	-						-	0.00%	
LIS - SPC			12	575.00	575.00	-	-	3,447,754	0.0302	0.0302	0.0000	-	-	111,022	0.00%	
			8,211				$ 10,607	21,994,072				$ 620,039	$ 630,646	$ 12,209,784		
			2,595,510				$ 15,897	45,111,414				$ 7,689,161	$ 7,705,058	$ 251,280,008		
RS			2,344,688				$ -	14,999,417				$ 5,714,778	$ 5,714,778	$ 163,430,917	3.50%	74.169%
GS			248,615				0	10,598,209				1,890,808	1,890,808	77,845,463	2.43%	24.543%
GS - SPC			205				0	1,007,133				223	223	700,219	0.03%	
LGS			174				4,193	925,382				30,239	34,432	1,998,341	1.72%	0.569%
LGS - SPC			226				5,495	4,496,220				3,883	9,378	3,267,258	0.29%	
IS			60				390	1,896,650				20,863	21,253	428,557	4.96%	0.285%
IS - SPC			60				390	7,310,437				330	720	669,952	0.11%	
LIS			0				0	0				0	-	0	0.00%	0.000%
LIS - SPC			12				0	3,520,754				0	-	489,673	0.00%	
WS			456				5,290	336,802				27,956	33,245	2,436,080	1.36%	0.434%
WS - SPC			12				139	20,400				82	221	13,567	1.63%	
			2,595,510				$ 15,897	45,111,414				$ 7,689,161	$ 7,705,058	$ 251,280,008		100.000%

(A) - For tariff sales customers, revenues include purchased gas cost amounts that are expected to decrease effective November 1, 2015.

$7,700,000 Revenue Requirement

Exhibit 1a

Exhibit 2
Page 1 of 1

MOUNTAINEER GAS COMPANY
Case No. 15-0003-G-42T
Company's Sample Revenue Requirement

Rate Base	$	198,127,642
Rate of Return		8.238%
Return on Rate Base	$	16,321,755
Gas Cost		140,754,538
O&M Expense		70,950,951
Depreciation		11,361,192
Other taxes		20,026,252
Federal Income Tax		5,218,082
State Income Tax		927,630
Revenue Required	$	265,560,400
Going Level Revenue		258,273,204
Subtotal	$	7,287,196
Additional B&O taxes		326,633
Additional Uncollectibles		86,171
Gross Revenue Increase	**$**	**7,700,000**

Exhibit 3
Page 1 of 1

MOUNTAINEER GAS COMPANY
Case No. 15-0003-42T
Stipulated Depreciation Rates

Line	Plant Account (1)		Depreciation Rate (2) %
		Intangible Plant	
1	301	Organization	n/a
2	302	Franchises and Consents	2.69%
3	303	Miscellaneous Intangible Plant	14.36%
		Transmission Plant	
4	365.10	Land and Land Rights	n/a
5	365.20	Rights-of-Way	0.00%
6	366	Structures & Improvements	4.12%
7	367	Mains	1.84%
8	369	Measuring & Reg. Station Equip	4.96%
		Distribution Plant	
9	374.190	Land and Land Rights	n/a
10	374.292	Rights-of-Way	0.00%
11	375	Structures & Improvements	5.71%
12	376	Mains	1.84%
13	377	Compressor Station Equipment	6.67%
14	378	Meas. & Reg. Stat. Eq - General	4.28%
15	379	Meas. & Reg. Stat. Eq - City Gate	4.10%
16	380	Services	3.00%
17	381	Meters	4.00%
18	381.1	ERTs	6.67%
19	382	Meter Installations	4.00%
20	382.1	ERT Installation	6.67%
20	383	House Regulators	4.00%
21	384	House Regulator Installation	4.00%
22	385	Measuring & Reg. Station Equip	3.00%
23	386	Other Property on Customers' Premises	4.00%
24	387	Other Equipment	10.00%
		General Plant	
25	389	Land and Land Rights	n/a
26	390	Structures & Improvements	2.50%
27	391	Office Furniture & Equipment	6.50%
28	391.1	Office Furniture & Equipment - Data Handling	16.67%
29	391.401	Computer Hardware - PC's, Etc.	20.00%
30	391.402	Computer Hardware - Mainframe	16.67%
31	391.405	Computer Software - Accounting	14.36%
32	391.406	Computer Software - Materials Management	14.36%
33	391.408	Computer Software - License	14.36%
34	391.409	Computer Software - Engineering	14.36%
35	392.001	Transportation Equipment - Small Trucks	16.67%
36	392.411	Transportation Equipment - Med Trucks	16.67%
37	392.411.1	Trans. Equipment - Med. Trucks (Used)	33.34%
38	392.412	Transportation Equipment - Hvy Trucks	7.10%
39	392.413	Transportation Equipment - Trailers	4.88%
40	392.414	Transportation Equipment - ATVs	12.50%
41	393	Stores Equipment	5.00%
42	394	Tools, Shop & Garage Equipment	8.12%
43	395	Laboratory Equipment	10.00%
44	396	Power Operated Equipment	7.10%
45	396.415	Trenchers and Backhoes	7.10%
46	397	Communications Equipment	9.61%
47	398	Miscellaneous Equipment	7.60%
48	490	Leasehold Improvement	10.00%

Example SB 390 Application

Calculation of Incremental Rate Base and Calculation of Depreciation Expense

Year 1

		Annual	13-Month Average	Source:
Account 376 Mains				
Proposed Incremental Investment under SB 390		$ 12,000,000	$ 6,000,000	Example
I. Calculation of Return on Incremental Rate Base				
	Proposed Incremental Investment (Rate Base)	$ 12,000,000	$ 6,000,000	Example
	Less:			
	Depreciation Expense on SB390 Investment	(220,800)	(110,400)	
	Traditional Rate Base Calculation (taxes not included)	11,779,200	5,889,600	Calculate
	Less:			
	Depreciation Offset per paragraph 11.d of stipulation	(5,136,536)	(2,568,268)	Joint Stipulation, Exhibit 5
	SB390 Rate Base	$ 6,642,664	$ 3,321,332	
II. Calculation of Depreciation Expense				
	Proposed Incremental Investment (Rate Base)	$ 12,000,000	$ 6,000,000	Example
	Depreciation Expense	1.84%	1.84%	
	Total Depreciation Expense (Accumulated Depreciation)	$ 220,800	$ 110,400	

Exhibit 4
Page 1 of 1

Exhibit 5
Page 1 of 1

MOUNTAINEER GAS COMPANY

Case No. 15-0003-G-42T
Stipulated Transmission & Distribution
Depreciation Expense Amount Included in Cost of Service

Line	Plant Account (1)			Depreciation Expense (2) $
		Transmission Plant		
1	365.10	Land and Land Rights		-
2	365.20	Rights-of-Way		-
3	366	Structures & Improvements		241
4	367	Mains		39,331
5	369	Measuring & Reg. Station Equip		-
6	Total			39,572
		Distribution Plant		
7	374.190	Land and Land Rights		-
8	374.292	Rights-of-Way		-
9	375	Structures & Improvements		2,188
10	376	Mains	(A)	5,136,536
11	377	Compressor Station Equipment		-
12	378	Meas. & Reg. Stat. Eq - General		420,873
13	379	Meas. & Reg. Stat. Eq - City Gate		-
14	380	Services		2,898,399
15	381	Meters		745,209
16	381.1	ERTs		19,396
17	382	Meter Installations		337,191
18	382.1	ERT Installation		15,502
18	383	House Regulators		-
19	384	House Regulator Installation		18,838
20	385	Measuring & Reg. Station Equip		138,694
21	386	Other Property on Customers' Premises		-
22	387	Other Equipment		10,709
23	Total			9,743,535
24	**Total Transmission & Distribution Depreciation Expense**			9,783,107

(A) - Amount excludes the deprecation associated with the assets excluded in rate base in accordance with Case No. 06-1838-G-PC.

BOEHM, KURTZ & LOWRY
ATTORNEYS AT LAW
36 EAST SEVENTH STREET
SUITE 1510
CINCINNATI, OHIO 45202
TELEPHONE (513) 421-2255

TELECOPIER (513) 421-2764

VIA OVERNIGHT MAIL

August 30, 2017

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

Re: Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company
Docket No. R-2017-2595853

Dear Secretary Chiavetta:

Please find enclosed the REBUTTAL TESTIMONY OF RICHARD A. BAUDINO on behalf of AK STEEL CORPORATION for filing in the above-captioned proceeding.

By copy of this letter, all parties listed on the Certificate of Service have been served.

Respectfully submitted,

David F. Boehm, Esq. (PA Attorney I.D. # 72752)
BOEHM, KURTZ & LOWRY

COUNSEL FOR AK STEEL CORPORATION

DFBkew
Enclosure
cc: Certificate of Service
ALJ Dennis J. Buckley – debuckley@pa.gov
ALJ Benjamin J. Myers – benmyers@pa.gov
VIA EMAIL AND OVERNIGHT MAIL
Pa. Public Utility Commission
400 North Street
Harrisburg, PA 17120

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	**:**	
V.	**:**	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	**:**	

REBUTTAL TESTIMONY

OF

RICHARD A. BAUDINO

ON BEHALF OF

AK STEEL CORPORATION

J. KENNEDY AND ASSOCIATES, INC.

AUGUST 31, 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	**:**	
V.	**:**	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	**:**	

REBUTTAL TESTIMONY OF RICHARD A. BAUDINO

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant to Kennedy and Associates.

Q. Did you submit Direct Testimony in this proceeding?

A. Yes. I submitted Direct Testimony on behalf of AK Steel.

Q. What is the purpose of your Rebuttal Testimony?

A. I will address the revenue allocation proposals sponsored by Mr. Brian Kalcic, witness for the Office of Small Business Advocate ("OSBA"), Mr. Scott Rubin, witness for the Office of Consumer Advocate ("OCA"), and Mr. Ethan Cline, witness for the Bureau of Investigation and Enforcement ("I&E"). I will also respond to Mr. Cline's proposed rate design for the Industrial class.

Q. Did Mr. Kalcic, Mr. Rubin, and Mr. Cline agree with the class cost of service study ("CCOSS") and proposed revenue allocation proposed by Mr. Herbert, witness for Pennsylvania American Water Company ("PAWC")?

A. My understanding from reviewing their Direct Testimonies is that all three witnesses accepted the CCOSS approach used by Mr. Herbert. Mr. Kalcic submitted testimony regarding the Company's demand study and recommended that PAWC continue to gather class demand data for the next three years, or until its next base rate case and then update the class extra capacity factors in its next CCOSS.

Both Mr. Kalcic and Mr. Cline did not agree with the amount of wastewater revenue requirement to be included in water operations revenues and adjusted their proposed revenue allocations accordingly. Mr. Kalcic also recommended a revised allocation of wastewater revenues, which he described beginning on page 14 of his Direct Testimony.

Mr. Rubin disagreed with the increases to certain rate zones, which he presented on page 29 of his Direct Testimony. He recommended that the overall increase to customers in these rate zones be limited to 1.5 times the overall system average residential percentage increase. Rubin Direct Testimony, pp. 29 – 30. Mr. Rubin also recommended that the Scranton-area storm water control costs be charged directly to the City of Scranton and the Borough of Dunmore. On page 49 of his Direct Testimony, Mr. Rubin estimated that his proposal would reduce the subsidy required from statewide water customers by $7.889 million. On page 50, Mr. Rubin also recommended that the Commission increase Scranton-area wastewater rates by the amount sufficient to recover the cost of serving those customers.

Q. Are you taking a position with respect to how wastewater and storm water costs should be collected from PAWC's water customers?

A. No, I am not. My position in this case relates to how any increase in water operations revenues should be collected from PAWC's water customers.

Q. Does the Direct Testimony filed by Mr. Cline, Mr. Kalcic, and Mr. Rubin alter your position with respect to how any revenue increase should be allocation in this case?

A. No. For the reasons stated in my Direct Testimony, I continue to recommend the reasonableness of an across-the-board increase in PAWC's customer class water revenues in this proceeding.

Q. Please summarize Mr. Cline's recommendation for the design of customer charges for the Industrial rate class.

A. Mr. Cline presented his recommended customer charges for the Zone 1 industrial class on pages 35 and 36 of his Direct Testimony. Mr. Cline recommended a 4% increase to Industrial class customer charges based on the customer charge analysis he presented on page 20 of his Direct Testimony.

Mr. Cline disagreed with the approach taken by Mr. Herbert and offered an alternative approach that he described on pages 23 through 28 of his Direct Testimony. Mr. Cline's recommended Zone 1 Industrial customer charges are presented on I&E Exhibit No. 3, Schedule 15.

Q. Do you continue to support Mr. Herbert's proposed customer charges for the Industrial class?

A. Yes. On page 33 of his Direct Testimony, Mr. Herbert explained that customer costs should be determined based on all costs properly allocated to the customer function and that these costs are the appropriate basis for determining customer charges. His approach is supported and recommended by the American Water Works Association's ("AWWA") Water Rate Manual.

Further, the clear majority of PAWC's costs are fixed and do not vary with changes in water consumption. As such, a fixed customer-type charge is an appropriate means by which to collect fixed costs, rather than a consumption charge applied to water consumption. The Commission should approve Mr. Herbert's proposed customer charges for the Industrial rate class.

Q. Does this conclude your Direct Testimony?

A. Yes

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

RICHARD A. BAUDINO, 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.

Richard A. Baudino

Richard A. Baudino

Sworn to and subscribed before me on this
30th day of August 2017.

Jessica K. I

Notary Public

JESSICA K INMAN
MY COMMISSION EXPIRES
NOTARY
PUBLIC
JULY 31, 2019
CHEROKEE COUNTY, GEORGIA

CERTIFICATE OF SERVICE

I hereby certify that on this 31ST day of August, 2017 I served a true copy of the REBUTTAL TESTIMONY OF RICHARD A. BAUDINO on behalf of AK STEEL CORPORATION on the following persons listed on the attached Certificate of Service in the matter specified in accordance with the requirements of 52 Pa. Code §1.54:

David F. Boehm, Esq. (PA Attorney I.D. # 72752)
COUNSEL FOR AK STEEL CORPORATION

Thomas P. Gadsden
Anthony C. DeCusatis
Catherine G. Vasudevan
Brooke E. McGlinn
Morgan, Lewis & Bockius LLP
1701 Market Street
Philadelphia, PA 19103-2921
thomas.gadsden@morganlewis.com
anthony.decusatis@morganlewis.com
catherine.vasudevan@morganlewis.com
brooke.mcglinn@morganlewis.com

Susan Simms Marsh
Pennsylvania-American Water Company
800 West Hersheypark Drive
Hershey, P A 17033
susan.marsh@amwater.com

David P. Zambito
Cozen O'Connor
17 North Second Street, Suite 1410
Harrisburg, PA 17101
dzambito@cozen.com

Christine Maloni Hoover
Erin L. Gannon
Christy M. Appleby
Lauren M. Burge
Office of Consumer Advocate
555 Walnut Street, 5th Floor, Forum Place
Harrisburg, PA 17101-1923
choover@paoca.org
egannon@paoca.org
cappleby@paoca.org
lburge@paoca.org

Ralph Smith
Larkin & Associates
15728 Farmington Road
Livonia, MI 48154
rsmithla@aol.com
Consultant for OCA

Elizabeth Rose Triscari, Deputy Small Business Advocate
Office of Small Business Advocate
Suite 202, Commerce Building
300 North Second Street
Harrisburg, PA 17101
etriscari@pa.gov

Scott J. Rubin
333 Oak Lane
Bloomsburg, PA 17815-2036
scott.j.rubin@gmail.com

Brian Kalcic
Excel Consulting
Suite 702-T, 225 South Meramec Avenue
St. Louis, MO 63105
excel.consulting@sbcglobal.net
Consultant for OSBA

Teny L. Fought
780 Cardinal Drive
Harrisburg, PA 17111
tlfengr@aol.com

Charis Mincavage
Adeolu A. Bakare
Matthew L. Garber
McNees Wallace & Nurick LLC
100 Pine Street
Harrisburg,PA 17108-1166
cmincavage@mcneeslaw.com
abakare@mcneeslaw.com
mgarber@mcneeslaw.com
Counsel for PAWLUG

Glen Watkins
Suite 130, 1503 Santa Rosa Road
Richmond, VA 23229
watkinsg@tai-econ.com

Gina L. Miller
Pennsylvania Public Utility Commission
Bureau of Investigation & Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
ginmiller@pa.gov
VIA E-MAIL AND REGULAR U.S. MAIL

BOEHM, KURTZ & LOWRY
ATTORNEYS AT LAW
36 EAST SEVENTH STREET
SUITE 1510
CINCINNATI, OHIO 45202
TELEPHONE (513) 421-2255

TELECOPIER (513) 421-2764

VIA OVERNIGHT MAIL

September 15, 2017

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

Re: Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company
Docket No. R-2017-2595853

Dear Secretary Chiavetta:

Please find enclosed the SURREBUTTAL TESTIMONY OF RICHARD A. BAUDINO on behalf of AK STEEL CORPORATION for filing in the above-captioned proceeding.

By copy of this letter, all parties listed on the Certificate of Service have been served.

Respectfully submitted,

David F. Boehm, Esq. (PA Attorney I.D. # 72752)
BOEHM, KURTZ & LOWRY

COUNSEL FOR AK STEEL CORPORATION

DFBkew
Enclosure
cc: Certificate of Service
ALJ Dennis J. Buckley – debuckley@pa.gov
ALJ Benjamin J. Myers – benmyers@pa.gov
VIA EMAIL AND OVERNIGHT MAIL
Pa. Public Utility Commission
400 North Street
Harrisburg, PA 17120

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	**:**	
V.	**:**	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	**:**	

SURREBUTTAL TESTIMONY

OF

RICHARD A. BAUDINO

ON BEHALF OF

AK STEEL

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GA

SEPTEMBER 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	**:**	
V.	**:**	**Docket No. R-2017-2595853**
PENNSYLVANIA-AMERICAN WATER COMPANY	**:**	

SURREBUTTAL TESTIMONY OF RICHARD A. BAUDINO

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant to Kennedy and Associates.

Q. Did you submit Direct and Rebuttal Testimony in this proceeding?

A. Yes. I submitted Direct and Rebuttal Testimony on behalf of AK Steel.

Q. What is the purpose of your Rebuttal Testimony?

A. I will address the Rebuttal Testimony of Mr. Scott Rubin, witness for the Office of Consumer Advocate ("OCA").

Q. On page 2, line 6 of his Rebuttal Testimony Mr. Rubin testified that you made "factual errors" in your Direct Testimony by (1) relying on historic class cost of service studies and (2) looking only at the 2011 and 2013 rate cases for Pennsylvania American Water Company ("PAWC"). Did you make the factual errors that Mr. Rubin claimed?

A. No, I did not. The analysis I presented in Table 1 in my Direct Testimony is a completely valid means to portray class cost responsibility since 2011, a period covering about six years. It was not necessary, as Mr. Rubin suggests, to show each class' actual Commission-allowed revenue increase since that was not what I was trying to show in my Direct Testimony. My Direct Testimony on page 5 explains why this historical cost responsibility is an appropriate basis for an across the board increase that I continue to recommend be adopted by the Commission.

Furthermore, my Exhibit ___(RAB-3) demonstrates the reasonableness of resulting class rates of return from my revenue allocation recommendation. Mr. Rubin failed to address the reasonableness of these class rates of return in his Rebuttal Testimony.

Q. On page 4, lines 2 through 3 of his Rebuttal Testimony Mr. Rubin claimed that the industrial class received "favorable treatment" compared to the other major rate classes since the 2007 rate case. Please address Mr. Rubin's testimony on this point.

A. I disagree with Mr. Rubin.

First, Mr. Rubin's basis for his claim of so-called favorable treatment appears to be that the Commission approved a lower total percentage increase for the Industrial class than the Residential and Commercial classes per his Schedule SJR-R1. However, Mr. Rubin failed to explain whether the Commission based these decisions on the allocated cost to serve. If the Commission-allowed increases were based on the results of PAWC's CCOSS, then there was no favorable treatment of the Industrial class compared to the other rate classes. Secondly, one may reasonably assume that the Commission found these class revenue increases to be just and reasonable and in the public interest in order to approve them. In conclusion, Mr. Rubin failed to demonstrate any so-called favorable treatment of the Industrial class compared to PAWC's other rate classes.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes.

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

RICHARD A. BAUDINO, 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.

Richard A. Baudino

Richard A. Baudino

Sworn to and subscribed before me on this 15th day of September 2017.

Jessica K. I

Notary Public

JESSICA K INMAN
MY COMMISSION EXPIRES
NOTARY
PUBLIC
JULY 31, 2019
CHEROKEE COUNTY, GEORGIA

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of September, 2017 I served a true copy of the SURREBUTTAL TESTIMONY OF RICHARD A. BAUDINO on behalf of AK STEEL CORPORATION on the following persons listed on the attached Certificate of Service in the matter specified in accordance with the requirements of 52 Pa. Code §1.54:

David F. Boehm, Esq. (PA Attorney I.D. # 72752)
COUNSEL FOR AK STEEL CORPORATION

Thomas P. Gadsden
Anthony C. DeCusatis
Catherine G. Vasudevan
Brooke E. McGlinn
Morgan, Lewis & Bockius LLP
1701 Market Street
Philadelphia, PA 19103-2921
thomas.gadsden@morganlewis.com
anthony.decusatis@morganlewis.com
catherine.vasudevan@morganlewis.com
brooke.mcglinn@morganlewis.com

Susan Simms Marsh
Pennsylvania-American Water Company
800 West Hersheypark Drive
Hershey, P A 17033
susan.marsh@amwater.com

David P. Zambito
Cozen O'Connor
17 North Second Street, Suite 1410
Harrisburg, PA 17101
dzambito@cozen.com

Christine Maloni Hoover
Erin L. Gannon
Christy M. Appleby
Lauren M. Burge
Office of Consumer Advocate
555 Walnut Street, 5th Floor, Forum Place
Harrisburg, PA 17101-1923
choover@paoca.org
egannon@paoca.org
cappleby@paoca.org
lburge@paoca.org

Ralph Smith
Larkin & Associates
15728 Farmington Road
Livonia, MI 48154
rsmithla@aol.com
Consultant for OCA

Elizabeth Rose Triscari, Deputy Small Business Advocate
Office of Small Business Advocate
Suite 202, Commerce Building
300 North Second Street
Harrisburg, PA 17101
etriscari@pa.gov

Scott J. Rubin
333 Oak Lane
Bloomsburg, PA 17815-2036
scott.j.rubin@gmail.com

Brian Kalcic
Excel Consulting
Suite 702-T, 225 South Meramec Avenue
St. Louis, MO 63105
excel.consulting@sbcglobal.net
Consultant for OSBA

Teny L. Fought
780 Cardinal Drive
Harrisburg, PA 17111
tlfengr@aol.com

Charis Mincavage
Adeolu A. Bakare
Matthew L. Garber
McNees Wallace & Nurick LLC
100 Pine Street
Harrisburg,PA 17108-1166
cmincavage@mcneeslaw.com
abakare@mcneeslaw.com
mgarber@mcneeslaw.com
Counsel for PAWLUG

Glen Watkins
Suite 130, 1503 Santa Rosa Road
Richmond, VA 23229
watkinsg@tai-econ.com

Gina L. Miller
Pennsylvania Public Utility Commission
Bureau of Investigation & Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
ginmiller@pa.gov
VIA E-MAIL AND REGULAR U.S. MAIL

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY	) CASE NO. 2016-00370

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY	) CASE NO. 2016-00371

DIRECT TESTIMONY

AND EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF

KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

MARCH 3, 2017

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY	**) CASE NO. 2016-00370**

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY	**) CASE NO. 2016-00371**

TABLE OF CONTENTS

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY	)	**CASE NO. 2016-00370**

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY	)	**CASE NO. 2016-00371**

DIRECT TESTIMONY OF RICHARD A. BAUDINO

I. QUALIFICATIONS AND SUMMARY

Q. Please state your name and business address.

A. My name is Richard A. Baudino. 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 whom are you employed?

A. I am a consultant with Kennedy and Associates.

Q. Please describe your education and professional experience.

A. I received my Master of Arts degree with a major in Economics and a minor in Statistics from New Mexico State University in 1982. I also received my Bachelor of Arts Degree with majors in Economics and English from New Mexico State in 1979.

I began my professional career with the New Mexico Public Service Commission Staff in October 1982 and was employed there as a Utility Economist. During my employment with the Staff, my responsibilities included the analysis of a broad range of issues in the ratemaking field. Areas in which I testified included cost of service, rate of return, rate design, revenue requirements, analysis of sale/leasebacks of generating plants, utility finance issues, and generating plant phase-ins.

In October 1989, I joined the utility consulting firm of Kennedy and Associates as a Senior Consultant where my duties and responsibilities covered substantially the same areas as those during my tenure with the New Mexico Public Service Commission Staff. I became Manager in July 1992 and was named Director of Consulting in January 1995. Currently, I am a consultant with Kennedy and Associates.

Exhibit No. ___(RAB-1) summarizes my expert testimony experience.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Kentucky Industrial Utility Customers, Inc. ("KIUC").

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to address the allowed return on equity for regulated electric operations for Louisville Gas and Electric Company and Kentucky Utilities ("LGE", "KU", or "Companies"). I will also respond to the Direct Testimony of Mr. Adrien McKenzie, witness for the Companies.

Q. Please summarize your conclusions and recommendations.

A. Based on current financial market conditions, I recommend that the Kentucky Public Service Commission ("KPSC" or "Commission") adopt a 9.0% return on equity for LGE and KU in this proceeding. My recommendation is based on the results of a Discounted Cash Flow ("DCF") model analysis. My DCF analysis incorporates my standard approach to estimating the investor required return on equity and employs a group of 19 proxy companies and dividend and earnings growth forecasts from the Value Line Investment Survey, First Call/IBES, and Zacks.

I also included two Capital Asset Pricing Model ("CAPM") analyses for additional information. I did not incorporate the results of the CAPM in my recommendation, however the results from the CAPM support my 9.0% ROE recommendation for LGE and KU. In fact, my CAPM results are lower than my DCF results.

In Section IV, I respond to the testimony and ROE recommendation of the Companies' witness Mr. McKenzie. I will demonstrate that his recommended ROE of 10.23% significantly overstates the current investor required return for the Companies. The current financial environment of low interest rates has been deliberately and methodically supported by Federal Reserve policy actions since

2009 and is ongoing, even considering recent increases in the federal funds rate and in interest rates generally. A 10.23% ROE for regulated electric utilities such as LGE and KU simply cannot be supported in the current financial market environment and would contribute to a burdensome rate increase for Kentucky ratepayers. I strongly recommend that the KPSC reject the Companies' requested ROE in this proceeding.

The ROE numbers I mentioned are stated on an after tax basis; however, they must be grossed-up for income taxes in order to calculate the revenue requirement impacts. In fact, a ROE of 10.23% on an after-tax basis, as requested by the Companies, is equivalent to a return of 16.80% for KU and 16.79% for LGE when grossed up for federal and state income taxes, bad debt expense, and Commission assessment. Similarly, my recommended ROE of 9.0% on an after-tax basis is equivalent to a return of 14.78% for KU and 14.77% for LG&E when grossed-up for federal and state income taxes, bad debt expense, and Commission assessment. Each 1.0% return on equity is equivalent to $31.207 million in revenue requirements for KU and $20.788 million in revenue requirements for LGE, per calculations made by my colleague, Mr. Lane Kollen. ***In total, my recommended ROE of 9.0% results in revenue reductions of $38.508 million for KU and $25.570 million for LGE.*** Please refer to Mr. Kollen's Direct Testimony for the detailed calculations.

II. REVIEW OF ECONOMIC AND FINANCIAL CONDITIONS

Q. Mr. Baudino, what has the trend been in long-term capital costs over the last few years?

A. Generally speaking, interest rates have declined over the last few years, though they have increased since the November 2016 election. Exhibit No. ___(RAB-2) presents a graphic depiction of the trend in interest rates from January 2008 through January 2017. The interest rates shown in this exhibit are for the 20-year U.S. Treasury Bond and the average public utility bond from the Mergent Bond Record. In January 2008, the average public utility bond yield was 6.08% and the 20-year Treasury Bond yield was 4.35%. As of January 2017, the average public utility bond yield was 4.24%, representing a decline of 184 basis points, or 1.84 percentage points, from January 2008. Likewise, the 20-year Treasury bond stood at 2.75% in January 2017, a decline of 1.60 percentage points (160 basis points) from January 2008.

Q. Was there a significant change in Federal Reserve policy during the historical period shown in Exhibit No. ___(RAB-2)?

A. Yes. In response to the 2007 financial crisis and severe recession that followed in December 2007, the Federal Reserve ("Fed") undertook a series of steps to stabilize the economy, ease credit conditions, and lower unemployment and interest rates. These steps are commonly known as Quantitative Easing ("QE") and were implemented in three distinct stages: QE1, QE2, and QE3. The Fed's stated purpose of QE was "to support the liquidity of financial institutions and foster improved conditions in financial markets."[1]

QE1 was implemented from November 2008 through approximately March 2010. During this time, the Fed cut its key Federal Funds Rate to nearly 0% and purchased $1.25 trillion of mortgage-backed securities and $175 billion of agency debt purchases.

QE2 was implemented in November 2010 with the Fed announcing that it would purchase an additional $600 billion of Treasury securities by the second quarter of 2011.[2]

Beginning in September 2011, the Fed initiated a "maturity extension program" in which it sold or redeemed $667 billion of shorter-term Treasury securities and used the proceeds to buy longer-term Treasury securities. This program, also known as "Operation Twist," was designed by the Fed to lower long-term interest rates and support the economic recovery.

QE3 began in September 2012 with the Fed announcing an additional bond purchasing program of $40 billion per month of agency mortgage backed securities.

---

1 (http://www.federalreserve.gov/monetarypolicy/bst_crisisresponse.htm).

2 (http://www.federalreserve.gov/newsevents/press/monetary/20101103a.htm)

More recently, the Fed began to pare back its purchases of securities. For example, on January 29, 2014 the Fed stated that beginning in February 2014 it would reduce its purchases of long-term Treasury securities to $35 billion per month. The Fed continued to reduce these purchases throughout the year and in a press release issued October 29, 2014 announced that it decided to close this asset purchase program in October.[3]

Q. Has the Fed recently indicated any important changes to its monetary policy?

A. Yes. In March 2016, the Fed raised its target range for the federal funds rate to 1/4% to 1/2% from 0% to 1/4%. The Fed further increased the target range to 1/2% to 3/4% in a press release dated December 14, 2016. In its press release dated February 1, 2017, the Fed held the federal funds rate steady and stated:

"Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will rise to 2 percent over the medium term. Near-term risks to the economic outlook appear roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.

In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1/2 to 3/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a return to 2 percent inflation."

Q. Mr. Baudino, why is it important to understand the Fed's actions since 2007?

---

[3] (http://www.federalreserve.gov/newsevents/press/monetary/20141029a.htm)

A. The Fed's monetary policy actions since 2007 were deliberately undertaken to lower interest rates and support economic recovery. The Fed's actions have been quite successful in lowering interest rates given that the 20-year Treasury Bond yield in June 2007 was 5.29% and the public utility bond yield was 6.34%. The U.S. economy is currently in a low interest rate environment. As I will demonstrate later in my testimony, low interest rates have also significantly lowered investors' required return on equity for the stocks of regulated utilities.

Q. Are current interest rates indicative of investor expectations regarding the future direction of interest rates?

A. Yes. Securities markets are efficient and most likely reflect investors' expectations about future interest rates. As Dr. Roger Morin pointed out in *New Regulatory Finance:*

> "A considerable body of empirical evidence indicates that U.S. capital markets are efficient with respect to a broad set of information, including historical and publicly available information."[4]

Despite recent increases in interest rates, including long-term Treasury Bonds and average utility bonds, the U.S. economy continues to operate in a low interest rate environment. It is likely at some point this year that the Federal Reserve will once again raise short-term interest rates. However, the timing and the level of any such move are not known now. It is important to realize that investor expectations of higher interest rates, if any, are already embodied in current securities prices, which include debt securities and stock prices.

---

4 Morin, Roger A., *New Regulatory Finance,* Public Utilities Reports, Inc. (2006) at 279.

The current low interest rate environment favors lower risk regulated utilities. It would not be advisable for utility regulators to raise ROEs in anticipation of higher interest rates that may or may not occur.

Q. How does the investment community regard the electric utility industry currently?

A. The Value Line Investment Survey issued its report on the Electric Utility (West) Industry dated January 27, 2017. I have taken the following excerpts from that report, which I believe will be helpful in providing a broader perspective on how the current economic environment is affecting the regulated utility industry.

"The year that just ended was an excellent one for most electric utility equities. In the first half, most stocks performed tremendously as interest rates declined from an already-low level and many investors sought a (relatively) safe haven in an increasingly volatile market. These issues gave back some of their first-half gains in the final six months of 2016, but the industry posted a total return of 17.4%. This topped the total return of the Standard and Poor's 500, which was 12.0%.

* * *

In early 2017, most electric utility stocks have not moved significantly. Thus, they retain their high valuation. In 2016, most traded at a price-earnings ratio in the high teens—about the same as the overall market—and the dividend yields of most issues were below 4%. These measures indicate a high valuation, by historical standards. The industry's current average dividend yield is 3.5%. Investors should note, too, that the recent quotations of some electric utility issues are near the upper end or even above their 2019-2021 Target Price Range."

Value Line's remarks with respect to the electric utility industry indicate that despite the recent increase in interest rates, utility stocks continue to be highly valued investments for their stability in today's volatile marketplace for stocks. The safety and relatively high dividend yields for regulated utilities are attractive to investors, although Value Line recommended caution due to the group's currently high price valuation.

Q. What are the current credit ratings and bond ratings for LGE and KU?

A. Standard and Poor's ("S&P") current credit rating for the Companies is A- and their first mortgage bond rating is A. Moody's current long-term issuer rating for the Companies is A3, with a rating of A1 for their first mortgage bonds.

Q. Has LGE's and KU's parent company, PPL Corporation, made recent statements regarding the operations and risks of its Kentucky electric utility companies?

A. Yes. In a recent presentation[5], PPL Corp. noted the following about its operations (page 13):

- Growing, pure-play regulated business operating in premium jurisdictions
- 5-6% projected earnings growth from 2017 – 2020, with above-average dividend yield
- Strong dividend growth potential
- Targeting 8 – 10% annual returns
- Investing in the future and improving efficiency
- Confident in our ability to deliver on commitments to shareowners and customers

In the same presentation, PPL stated the following about its Kentucky operations (pg. 28):

- Constructive jurisdiction provides a timely return on planned Cap Ex
- Environmental Cost Recovery (ECR) with "virtually no regulatory lag"

---

[5] *PPL Corporation Poised for Growth. Investing in our future.* Evercore ISI Utility CEO Retreat, Palm Beach, FL, January 12 – 13, 2017.

- Return mechanisms include CWIP for ECR and Gas Line Tracker
- Pass through clauses include Purchased Power, Fuel and Gas Supply Adjustment and Energy Efficiency/Demand Side Management recovery
- Cap Ex plans exclude spending that may be required under the Clean Power Plan

Please refer to Exhibit No. ___(RAB-3) for selected pages from this presentation.

III. DETERMINATION OF FAIR RATE OF RETURN

Q. Please describe the methods you employed in estimating a fair rate of return for the electric operations of LGE and KU.

A. I employed a Discounted Cash Flow ("DCF") analysis using a group of 19 regulated electric and gas utilities. My DCF analysis is my standard constant growth form of the model that employs four different growth rate forecasts from the Value Line Investment Survey, First Call/IBES, and Zacks. I also employed Capital Asset Pricing Model ("CAPM") analyses using both historical and forward-looking data. Although I did not rely on the CAPM for my recommended ROE for LGE and KU, the results from the CAPM tend to support the reasonableness of my recommendation.

Q. What are the main guidelines to which you adhere in estimating the cost of equity for a firm?

A. The estimated cost of equity should be comparable to the returns of other firms with similar risk structures and should be sufficient for the firm to attract capital. These are the basic standards set out by the United States Supreme Court in Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) and Bluefield W.W. & Improv. Co. v. Public Service Comm'n, 262 U.S. 679 (1922).

From an economist's perspective, the notion of "opportunity cost" plays a vital role in estimating the return on equity. One measures the opportunity cost of an investment equal to what one would have obtained in the next best alternative. For example, let us suppose that an investor decides to purchase the stock of a publicly traded electric utility. That investor made the decision based on the expectation of dividend payments and perhaps some appreciation in the stock's value over time; however, that investor's opportunity cost is measured by what she or he could have invested in as the next best alternative. That alternative could have been another utility stock, a utility bond, a mutual fund, a money market fund, or any other number of investment vehicles.

The key determinant in deciding whether to invest, however, is based on comparative levels of risk. Our hypothetical investor would not invest in a particular electric company stock if it offered a return lower than other investments of similar risk. The opportunity cost simply would not justify such an investment. Thus, the task for the rate of return analyst is to estimate a return that is equal to the return being offered by other risk-comparable firms.

Q. What are the major types of risk faced by utility companies?

A. In general, risk associated with the holding of common stock can be separated into three major categories: business risk, financial risk, and liquidity risk. Business risk refers to risks inherent in the operation of the business. Volatility of the firm's sales, long-term demand for its product(s), the amount of operating leverage, and quality of management are all factors that affect business risk. The quality of regulation at the state and federal levels also plays an important role in business risk for regulated utility companies.

Financial risk refers to the impact on a firm's future cash flows from the use of debt in the capital structure. Interest payments to bondholders represent a prior call on the firm's cash flows and must be met before income is available to the common shareholders. Additional debt means additional variability in the firm's earnings, leading to additional risk.

Liquidity risk refers to the ability of an investor to quickly sell an investment without a substantial price concession. The easier it is for an investor to sell an investment for cash, the lower the liquidity risk will be. Stock markets, such as the New York and American Stock Exchanges, help ease liquidity risk substantially. Investors who own stocks that are traded in these markets know on a daily basis what the market prices of their investments are and that they can sell these investments fairly quickly. Many electric utility stocks are traded on the New York Stock Exchange and are considered liquid investments.

Q. Are there any sources available to investors that quantify the total risk of a company?

A. Bond and credit ratings are tools that investors use to assess the risk comparability of firms. Bond rating agencies such as Moody's and Standard and Poor's perform detailed analyses of factors that contribute to the risk of an investment. The result of their analyses is a bond and/or credit rating that reflect these risks.

<u>Discounted Cash Flow ("DCF") Model</u>

Q. Please describe the basic DCF approach.

A. The basic DCF approach is rooted in valuation theory. It is based on the premise that the value of a financial asset is determined by its ability to generate future net cash flows. In the case of a common stock, those future cash flows generally take the form of dividends and appreciation in stock price. The value of the stock to investors is the discounted present value of future cash flows. The general equation then is:

$$V = \frac{R}{(1+r)} + \frac{R}{(1+r)^2} + \frac{R}{(1+r)^3} + \cdots \frac{R}{(1+r)^n}$$

Where: V = *asset value*
R = *yearly cash flows*
r = *discount rate*

This is no different from determining the value of any asset from an economic point of view; however, the commonly employed DCF model makes certain simplifying assumptions. One is that the stream of income from the equity share is assumed to be perpetual; that is, there is no salvage or residual value at the end of some maturity date (as is the case with a bond). Another important assumption is that financial markets are reasonably efficient; that is, they correctly evaluate the cash flows relative to the appropriate discount rate, thus rendering the stock price efficient relative to other alternatives. Finally, the model I typically employ also assumes a constant growth rate in dividends. The fundamental relationship employed in the DCF method is described by the formula:

$$k = {}^{D_1}/_{P_0} + g$$

Where: D_1 = *the next period dividend*
P_0 = *current stock price*
g = *expected growth rate*
k = *investor-required return*

Under the formula, it is apparent that "k" must reflect the investors' expected return. Use of the DCF method to determine an investor-required return is complicated by the need to express investors' expectations relative to dividends, earnings, and book value over an infinite time horizon. Financial theory suggests that stockholders purchase common stock on the assumption that there will be some change in the rate of dividend payments over time. We assume that the rate of growth in dividends is constant over the assumed time horizon, but the model could easily handle varying growth rates if we knew what they were. Finally, the relevant time frame is prospective rather than retrospective.

Q. What was your first step in conducting your DCF analysis for LGE and KU?

A. My first step was to construct a proxy group of companies with a risk profile that is reasonably similar to the Companies. Since LGE and KU are subsidiaries of PPL Corp., they do not have publicly traded stock. Thus, one cannot estimate a DCF cost of equity on the Companies directly. It is necessary to use a group of companies that are similarly situated and have reasonably similar risk profiles to LGE and KU.

Q. Please describe your approach for selecting a group of electric companies.

A. For purposes of this case, I chose to rely on the proxy group that Companies witness McKenzie used for his analysis. Although the selection criteria he used are somewhat different from those I have used in past cases, the constituent members of his proxy group comprise a reasonable basis for purposes of estimating the ROE for the Companies, with three exceptions. I eliminated the following companies from Mr. McKenzie's proxy group as follows:

- Avangrid Inc.: NMF (no meaningful figure) for Value Line earnings and dividend growth forecasts. No Value Line beta, Safety Rank, and Financial Strength ratings. Since Value Line is one of my primary sources for growth rate forecasts, there is not enough Value Line information to include this company in the proxy group.

- Entergy Corp.: Negative earnings growth rates from First Call/IBES and Zacks and 0.5% earnings growth rate from Value Line. These earnings growth forecasts are not indicative of long-term growth and negative growth rates cannot reasonably be used in the DCF model to properly estimate the investor required rate of return.
- PPL Corp.: NMF for Value Line earnings growth forecast.

The resulting comparison group of 19 electric and gas companies that I used in my analysis is shown in the Table 1 below.

TABLE 1
Credit Ratings
Proxy Group and LGE/KU

	S&P	Moody's
Alliant Energy Corporation	A-	Baa1
Ameren Corp.	BBB+	Baa1
Avista Corporation	BBB	Baa1
Black Hills Corp.	BBB	Baa2
CenterPoint Energy, Inc.	A-	Baa1
CMS Energy Corp.	BBB+	Baa2
Consolidated Edison	A-	A3
DTE Energy Co.	BBB+	Baa1
Eversource Energy	A	Baa1
Exelon Corp.	BBB	Baa2
NorthWestern Corp.	BBB	A3
PG&E Corp.	BBB+	Baa1
Public Service Enterprise Group	BBB+	Baa2
SCANA Corp.	BBB+	Baa3
Sempra Energy	BBB+	Baa1
Southern Company	A-	Baa2
Vectren Corp.	A-	A2
WEC Energy	A-	A3
Xcel Energy Inc.	A-	A3
LG&E/KU	A-	A3

Q. How do LGE/KU's credit ratings compare to those of the proxy group?

A. LGE and KU have slightly better credit ratings than the proxy group. With respect to Moody's ratings, 4 of the 19 companies have A ratings similar to those of LGE and KU. The remaining 15 companies have Moody's ratings that are lower than the Companies. With respect to the S&P ratings, 11 of the 19 companies in the proxy group have ratings lower than LGE and KU. This suggests that LGE and KU are likely to have a slightly lower required return on equity compared to the proxy group.

Q. What was your first step in determining the DCF return on equity for the proxy group?

A. I first determined the current dividend yield, D_1/P_0, from the basic equation. My general practice is to use six months as the most reasonable period over which to estimate the dividend yield. The six-month period I used covered the months from August 2106 through January 2017. I obtained historical prices and dividends from Yahoo! Finance. The annualized dividend divided by the average monthly price represents the average dividend yield for each month in the period.

The resulting average dividend yield for the comparison group is 3.43%. These calculations are shown in Exhibit No. ___(RAB-4).

Q. Having established the average dividend yield, how did you determine the investors' expected growth rate for the electric comparison group?

A. The investors' expected growth rate, in theory, correctly forecasts the constant rate of growth in dividends. The dividend growth rate is a function of earnings growth and the payout ratio, neither of which is known precisely for the future. We refer to a perpetual growth rate since the DCF model has no arbitrary cut-off point. We must estimate the investors' expected growth rate because there is no way to know with absolute certainty what investors expect the growth rate to be in the short term, much less in perpetuity.

For my analysis in this proceeding, I used three major sources of analysts' forecasts for growth. These sources are The Value Line Investment Survey, Zacks, and First Call/IBES. This is the method I typically use for estimating growth for my DCF calculations.

Q. Please briefly describe Value Line, Zacks, and First Call/IBES.

A. The Value Line Investment Survey is a widely used and respected source of investor information that covers approximately 1,700 companies in its Standard Edition and several thousand in its Plus Edition. It is updated quarterly and probably represents the most comprehensive of all investment information services. It provides both historical and forecasted information on a number of important data elements. Value Line neither participates in financial markets as a broker nor works for the utility industry in any capacity of which I am aware.

Zacks gathers opinions from a variety of analysts on earnings growth forecasts for numerous firms including regulated electric utilities. The estimates of the analysts responding are combined to produce consensus average estimates of earnings growth. I obtained Zacks' earnings growth forecasts from its web site.

Like Zacks, First Call/IBES also compiles and reports consensus analysts' forecasts of earnings growth. I obtained these forecasts from Yahoo! Finance.

Q. **Why did you rely on analysts' forecasts in your analysis?**

A. Return on equity analysis is a forward-looking process. Five-year or ten-year historical growth rates may not accurately represent investor expectations for dividend growth. Analysts' forecasts for earnings and dividend growth provide better proxies for the expected growth component in the DCF model than historical growth rates. Analysts' forecasts are also widely available to investors and one can reasonably assume that they influence investor expectations.

Q. **Please explain how you used analysts' dividend and earnings growth forecasts in your constant growth DCF analysis.**

Q. Page 1, Columns (1) through (5) of Exhibit No. ____(RAB-5) shows the forecasted dividend, earnings, and retention growth rates from Value Line and the earnings growth forecasts from First Call/IBES and Zacks. In my analysis I used four of these growth rates: dividend and earnings growth from Value Line and earnings growth from Zacks and First Call/IBES. It is important to include dividend growth forecasts in the DCF model since the model calls for forecasted cash flows. Value Line is the only sources of which I am aware that forecasts dividend growth and my approach gives this forecast equal weight with the three earnings growth forecasts.

Q. **How did you proceed to determine the DCF return of equity for the comparison group?**

A. To estimate the expected dividend yield (D_1), the current dividend yield must be moved forward in time to account for dividend increases over the next twelve months. I estimated the expected dividend yield by multiplying the current dividend yield by one plus one-half the expected growth rate.

Page 2 of Exhibit No. ___(RAB-5) presents my standard method of calculating dividend yields, growth rates, and return on equity for the comparison group of companies. The DCF Return on Equity Calculation section shows the application of each of four growth rates I used in my analysis to the current group dividend yield of 3.43% to calculate the expected dividend yield. I then added the expected growth rates to the expected dividend yield. In evaluating investor expected growth rates, I use both the average and the median values for the group under consideration. The calculations of the resulting DCF returns on equity for both methods are presented on page 2 of Exhibit No. ____(RAB-5).

Q. What are the results of your constant growth DCF model?

A. The DCF results for the constant growth DCF approach are shown on page 2 of Exhibit No. ____(RAB-5). For the average growth rates in Method 1, the results range from 8.59% to 9.27%, with the average of these results being 8.83%. Using the median growth rates in Method 2, the results range from 8.51% to 9.53%, with the average of these results being 9.06%.

Capital Asset Pricing Model

Q. Briefly summarize the Capital Asset Pricing Model ("CAPM") approach.

A. The theory underlying the CAPM approach is that investors, through diversified portfolios, may combine assets to minimize the total risk of the portfolio. Diversification allows investors to diversify away all risks specific to a particular company and be left only with market risk that affects all companies. Thus, the CAPM theory identifies two types of risks for a security: company-specific risk and market risk. Company-specific risk includes such events as strikes, management errors, marketing failures, lawsuits, and other events that are unique to a particular firm. Market risk includes inflation, business cycles, war, variations in interest rates, and changes in consumer confidence. Market risk tends to affect all stocks and cannot be diversified away. The idea behind the CAPM is that diversified investors are rewarded with returns based on market risk.

Within the CAPM framework, the expected return on a security is equal to the risk-free rate of return plus a risk premium that is proportional to the security's market, or non-diversifiable, risk. Beta is the factor that reflects the inherent market risk of a security and measures the volatility of a particular security relative to the overall market for securities. For example, a stock with a beta of 1.0 indicates that if the market rises by 15%, that stock will also rise by 15%. This stock moves in tandem with movements in the overall market. Stocks with a beta of 0.5 will only rise or fall 50% as much as the overall market. So with an increase in the market of 15%, this stock will only rise 7.5%. Stocks with betas greater than 1.0 will rise and fall more than the overall market. Thus, beta is the measure of the relative risk of individual securities vis-à-vis the market.

Based on the foregoing discussion, the equation for determining the return for a security in the CAPM framework is:

$$K = Rf + \beta(MRP)$$

Where: K = *Required Return on equity*
Rf = *Risk-free rate*
MRP = *Market risk premium*
β = *Beta*

This equation tells us about the risk/return relationship posited by the CAPM. Investors are risk averse and will only accept higher risk if they expect to receive higher returns. These returns can be determined in relation to a stock's beta and the market risk premium. The general level of risk aversion in the economy determines the market risk premium. If the risk-free rate of return is 3.0% and the required return on the total market is 15%, then the risk premium is 12%. Any stock's required return can be determined by multiplying its beta by the market risk premium. Stocks with betas greater than 1.0 are considered riskier than the overall market and will have higher required returns. Conversely, stocks with betas less than 1.0 will have required returns lower than the market as a whole.

Q. In general, are there concerns regarding the use of the CAPM in estimating the return on equity?

A. Yes. There is some controversy surrounding the use of the CAPM.[6] There is evidence that beta is not the primary factor in determining the risk of a security. For example, Value Line's "Safety Rank" is a measure of total risk, not its calculated beta coefficient. Beta coefficients usually describe only a small amount of total investment risk.

---

[6] For a more complete discussion of some of the controversy surrounding the use of the CAPM, refer to *A Random Walk Down Wall Street* by Burton Malkiel, pp. 206 - 211, 2007 edition.

There is also substantial judgment involved in estimating the required market return. In theory, the CAPM requires an estimate of the return on the total market for investments, including stocks, bonds, real estate, etc. It is nearly impossible for the analyst to estimate such a broad-based return. Often in utility cases, a market return is estimated using the S&P 500 or the return on Value Line's stock market composite. However, these are limited sources of information with respect to estimating the investor's required return for all investments. In practice, the total market return estimate faces significant limitations to its estimation and, ultimately, its usefulness in quantifying the investor required ROE.

In the final analysis, a considerable amount of judgment must be employed in determining the risk-free rate and market return portions of the CAPM equation. The analyst's application of judgment can significantly influence the results obtained from the CAPM. My past experience with the CAPM indicates that it is prudent to use a wide variety of data in estimating investor-required returns. Of course, the range of results may also be wide, indicating the difficulty in obtaining a reliable estimate from the CAPM.

Q. How did you estimate the market return portion of the CAPM?

A. The first source I used was the Value Line Investment Analyzer, Plus Edition, for February 14, 2017. This edition covers several thousand stocks. The Value Line Investment Analyzer provides a summary statistical report detailing, among other things, forecasted growth rates for earnings and book value for the companies Value

Line follows as well as the projected total annual return over the next 3 to 5 years. I present these growth rates and Value Line's projected annual return on page 2 of Exhibit No.____(RAB-6). I included median earnings and book value growth rates. The estimated market returns using Value Line's market data range from 9.50% to 9.85%. The average of these market returns is 9.67%.

Q. Why did you use median growth rate estimates rather than the average growth rate estimates for the Value Line companies?

A. Using median growth rates is likely a more accurate method of estimating the central tendency of Value Line's large data set compared to the average growth rates. Average earnings and book value growth rates may be unduly influenced by very high or very low 3 - 5-year growth rates that are unsustainable in the long run. For example, Value Line's Statistical Summary shows both the highest and lowest value for earnings and book value growth forecasts. For earnings growth, Value Line showed the highest earnings growth forecast to be 140.4% and the lowest growth rate to be -30.5%. The highest book value growth rate was 72.5% and the lowest was -33%. None of these levels of growth is compatible with long-run growth prospects for the market as a whole. The median growth rate is not influenced by such extremes because it represents the middle value of a very wide range of earnings growth rates.

Q. Please continue with your market return analysis.

A. I also considered a supplemental check to the Value Line projected market return estimates. Duff and Phelps publishes a study of historical returns on the stock market in its 2016 SBBI Yearbook. Some analysts employ this historical data to estimate the market risk premium of stocks over the risk-free rate. The assumption is that a risk premium calculated over a long period of time is reflective of investor expectations going forward. Exhibit No. ___(RAB-7) presents the calculation of the market returns using the historical data.

Q. Please explain how this historical risk premium is calculated.

A. Exhibit No. ___(RAB-7) shows both the geometric and arithmetic average of yearly historical stock market returns over the historical period from 1926 - 2015. The average annual income return for 20-year Treasury bond is subtracted from these historical stocks returns to obtain the historical market risk premium of stock returns over long-term Treasury bond income returns. The historical market risk premium range is 5.0% - 7.0%.

Q. Did you add an additional measure of the historical risk premium in this case?

A. Yes. Duff and Phelps reported the results of a study by Dr. Roger Ibbotson and Dr. Peng Chen indicating that the historical risk premium of stock returns over long-term government bond returns has been significantly influenced upward by substantial growth in the price/earnings ("P/E") ratio for stocks from 1980 through 2001.[7] Duff and Phelps noted that this growth in the P/E ratio for stocks was subtracted out of the historical risk premium because "it is not believed that P/E will continue to increase in the future." The adjusted historical arithmetic market risk premium is 6.03%,

---

[7] *2016 SBBI Yearbook,* Duff and Phelps, pp. 10-28 through 10-30.

which I have also included in Exhibit No. ___(RAB-7). This risk premium estimate falls near the middle of the market risk premium range.

Q. How did you determine the risk free rate?

A. I used the average yields on the 20-year Treasury bond and five-year Treasury note over the six-month period from August 2016 through January 2017. This was the latest available data from the Federal Reserve's Selected Interest Rates (Daily) H.15 web site during the preparation of my Direct Testimony. The 20-year Treasury bond is often used by rate of return analysts as the risk-free rate, but it contains a significant amount of interest rate risk. The five-year Treasury note carries less interest rate risk than the 20-year bond and is more stable than three-month Treasury bills. Therefore, I have employed both securities as proxies for the risk-free rate of return. This approach provides a reasonable range over which the CAPM return on equity may be estimated.

Q. How did you determine the value for beta?

A. I obtained the betas for the companies in the electric company comparison group from most recent Value Line reports. The average of the Value Line betas for the comparison group is 0.69.

Q. Please summarize the CAPM results.

A. For my forward-looking CAPM return on equity estimates, the CAPM results are 7.25% - 7.51%. Using historical risk premiums, the CAPM results are 5.80% - 7.18%.

Conclusions and Recommendations

Q. Please summarize the cost of equity results for your DCF and CAPM analyses.

A. Table 2 below summarizes my return on equity results using the DCF and CAPM for my comparison group of companies.

TABLE 2
SUMMARY OF ROE ESTIMATES

Baudino DCF Methodology:	
Average Growth Rates	
- High	9.27%
- Low	8.59%
- Average	8.83%
Median Growth Rates:	
- High	9.53%
- Low	8.51%
- Average	9.06%
CAPM:	
- 5-Year Treasury Bond	7.25%
- 20-Year Treasury Bond	7.51%
- Historical Returns	5.80% - 7.18%

Q. What is your recommended return on equity for LGE and KU?

A. I recommend that the KPSC adopt a 9.0% return on equity for the Companies. My recommendation is consistent with the average DCF results from my constant growth DCF model. Based on current market evidence, a 9.0% return on equity is fair and reasonable for A-rated, lower risk electric utility companies like LGE and KU. In fact, as I demonstrated in Table 1, LGE and KU have credit ratings that slightly exceed those of the proxy group as a whole. Thus, a reasonable case could be made that the Companies' ROE should be set slightly lower than the overall results for the proxy group. However, 9.0% is certainly a reasonable allowed ROE for the Companies in today's low interest rate environment.

Q. What is your recommended weighted cost of capital?

A. Mr. Kollen presents KIUC's recommended weighted cost of capital in his testimony. I have accepted the Companies' proposed capital structures in this proceeding.

IV. RESPONSE TO LGE AND KU TESTIMONY

Q. Have you reviewed the Direct Testimony of Mr. McKenzie?

A. Yes.

Q. Please summarize your conclusions with respect to his testimony and return on equity recommendation.

A. Mr. McKenzie's recommended 10.23% return on equity is overstated and inconsistent with the current low interest rate environment. As I shall demonstrate later in this section of my testimony, Mr. McKenzie made judgments that served to inflate his ROE results, particularly for the DCF and CAPM. As such, his testimony and analyses provide very little useful guidance for the Commission with respect to the investor required ROE for LGE and KU.

The rest of Section IV contains my detailed responses to Mr. McKenzie's analyses and recommendations. I will use references from Mr. McKenzie's KU Direct Testimony for purposes of clarity and brevity. Mr. McKenzie used the same approaches to estimating the ROE for both LGE and KU, so my responses apply to Mr. McKenzie's LGE testimony as well.

<u>**Outlook for Capital Costs**</u>

Q. On page 13, Mr. McKenzie presented his view of current capital market conditions, noting that these conditions "continue to be deeply affected by the Federal Reserve's unprecedented monetary policy actions, which were designed to push interest rates to historically and artificially low levels ..." Please respond to Mr. McKenzie's position with respect to current capital market conditions.

A. I agree that the economy is in a low interest rate environment that is being supported quite deliberately by Federal Reserve policy. Nonetheless, current financial market conditions do indeed provide a representative basis for estimating the cost of equity capital for LGE and KU, and for utilities generally. The fact that interest rates are relatively low by historical standards does not preclude the rate of return analyst from making a reasonable assessment of investor required ROEs using current stock prices and interest rates.

Q. On page 15 of Mr. McKenzie's KU Direct Testimony, Figure 3 shows higher forecasted interest rates through 2021 from several different forecasting sources. Should the Commission increase its allowed return on equity based on these higher interest rate forecasts?

A. No. As I stated in Section II my Direct Testimony, current interest rates embody investor expectations based on their assessments of all available market information. This includes interest rate forecasts cited by Mr. McKenzie as well as statements from the Federal Reserve. The KPSC should not invest in the interest rate forecasts cited by Mr. McKenzie in determining a fair rate of return for LGE and KU.

There is evidence that economists have systematically overestimated interest rates in recent years. Jared Bernstein wrote the following in a recent article in the New York Times[8]:

> In the early 1980s, forecasters did a good job of predicting the path of bond rates, though their job was a bit easier than usual because rates were so highly elevated that it was a pretty sure bet they'd be headed back down. ("Regression to the mean," for all you statistics fans.)

[8] "We Keep Flunking Forecasts on Interest Rates, Distorting the Budget Outlook", Jared Bernstein, *New York Times*, Feb. 23, 2015.

> But since the mid-1990s, government forecasters have consistently overestimated this critical variable.
>
> This "consistently" point is essential. Most economic forecasts are off one way or the other — too high or too low, but they tend to be pretty much balanced in either direction. But on the 10-year bond rate, the errors are systemic.
>
> Forecasters are regularly overestimating and thus regularly overstating, all else being equal, future interest payments on the debt.

Another article by Akin Oyedele entitled "Interest Rate Forecasters Are Shockingly Wrong Almost All Of The Time"[9] showed that from June 2010 through June 2015 interest rate forecasts were wrong most of the time. Mr. Oyedele noted that 2014 "was particularly bad, when strategists became too optimistic that the Federal Reserve would hike rates."

These articles highlight the consistent upward bias that is likely embodied in the forecasts presented by Mr. McKenzie.

Q. Is there support for the position that today's currently low interest rates is part of a long-term trend?

A. Yes. In a weekly blog at the Brookings Institution, former Federal Reserve Chairman Ben Bernanke wrote the following:[10]

> Interest rates around the world, both short-term and long-term, are exceptionally low these days. The U.S. government can borrow for ten years at a rate of about 1.9 percent, and for thirty years at about 2.5 percent. Rates in other industrial countries are even lower: For example, the yield on ten-year government bonds is now around 0.2 percent in Germany, 0.3 percent in Japan, and 1.6 percent in the United

[9] Akin Oyedele, "Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time", *Business Insider*, July 18, 2015.

[10] Ben S. Bernanke, "Why Are Interest Rates So Low", Weekly Blog, Brookings, March 30, 2015. https://www.brookings.edu/blog/ben-bernanke/2015/03/30/why-are-interest-rates-so-low/

Kingdom. In Switzerland, the ten-year yield is currently slightly negative, meaning that lenders must pay the Swiss government to hold their money! The interest rates paid by businesses and households are relatively higher, primarily because of credit risk, but are still very low on an historical basis.

Low interest rates are not a short-term aberration, but part of a long-term trend. As the figure below shows, ten-year government bond yields in the United States were relatively low in the 1960s, rose to a peak above 15 percent in 1981, and have been declining ever since. That pattern is partly explained by the rise and fall of inflation, also shown in the figure. All else equal, investors demand higher yields when inflation is high to compensate them for the declining purchasing power of the dollars with which they expect to be repaid. But yields on inflation-protected bonds are also very low today; the real or inflation-adjusted return on lending to the U.S. government for five years is currently about *minus* 0.1 percent.

Why are interest rates so low? Will they remain low? What are the implications for the economy of low interest rates?

If you asked the person in the street, "Why are interest rates so low?", he or she would likely answer that the Fed is keeping them low. That's true only in a very narrow sense. The Fed does, of course, set the benchmark nominal short-term interest rate. The Fed's policies are also the primary determinant of inflation and inflation expectations over the longer term, and inflation trends affect interest rates, as the figure above shows. But what matters most for the economy is the real, or inflation-adjusted, interest rate (the market, or nominal, interest rate minus the inflation rate). The real interest rate is most relevant for capital investment decisions, for example. The Fed's ability to affect real rates of return, especially longer-term real rates, is transitory and limited. Except in the short run, real interest rates are determined by a wide range of economic factors, including prospects for economic growth—not by the Fed.

Q. Did Mr. McKenzie present forecasted interest rates in the testimony he co-sponsored in KU and LGE Case Nos. 2014-00371 and 2014-00372?

A. Yes. On page 13 of the Direct Testimony he co-sponsored with Dr. Avera in those cases, Mr. McKenzie presented Figure 2 on page 13 of his KU testimony that showed forecasted interest rates with a graph like the one included in his KU Direct Testimony in this case on page 15. I reviewed the work papers submitted by Dr. Avera and Mr. McKenzie in those proceedings and found the Blue Chip financial forecast dated June 1, 2014, which formed part of the basis of Figure 2 in their testimony in those cases, which was filed on November 26, 2014.

In the Blue Chip forecasts dated June 1, 2014 presented by Mr. McKenzie in the last KU and LGE rate cases, the consensus forecast for the 30-year Treasury Bond was 4.7% for 2016 and 5.1% for 2017.[11] The actual December 2016 30-Year Treasury Bond yield was 3.11% and for January 2017 was 3.02%. The June 2014 Blu Chip consensus forecasts presented by Mr. McKenzie overshot the recent actual 30-Year Treasury Bond rates by 159 – 208 basis points. Stated another way, the Blue Chip consensus forecasts missed the recent actual 30-Year Treasury Bond rates by 1.59% to 2.08%.

The magnitude of the overstatement by the Blue Chip consensus forecasts are strong support for my recommendation that the Commission disregard interest rate forecasts when considering its allowed ROE for LGE and KU in this proceeding.

DCF Model

Q. Briefly summarize Mr. McKenzie's approach to the DCF model.

A. Mr. McKenzie constructed a group of electric and gas utilities for purposes of estimating the DCF ROE for LEG and KU. He used several sources of growth rate forecasts, which included IBES, Zacks, and Value Line as well as an estimate of sustainable growth. I ultimately adopted Mr. McKenzie's proxy group with the three exceptions I noted earlier.

[11] KU response to AG 1-187, Docket No. 2014-00371, WP-25.

In his Exhibit No. 5, Mr. McKenzie adjusted his DCF ROE results by excluding certain company ROE results that, in his view, were either too low or too high. On the low end, these results ranged from 0.1% to 6.9%. On the high end, Mr. McKenzie excluded one value of 15.3%, but saw fit to include ROE results of 12.4% and 13.2%. After making these exclusions, his resulting DCF range was 8.4% to 9.5% using an average of the remaining results. The midpoints ranged from 8.9% to 10.4%.

Q. Please comment on Mr. McKenzie's approach to formulating his DCF recommendation to the Commission.

A. Mr. McKenzie conducted a biased approach in formulating his DCF recommendations. He applied a test for excluding ROE results that, in his view, were too low but failed to exclude other results that were too high. For example, the average Commission-allowed ROE for 2015 that was reported by Mr. McKenzie in his Exhibit No. 9 was 9.85%. Furthermore, the *EEI Q4 Financial Update* showed that the average Commission-allowed ROE in the fourth quarter of 2016 was 9.57%. With recent Commission allowed ROEs of around 9.6%, Mr. McKenzie included ROEs in his Exhibit No. 5 ranging from 12.4% to 13.2%. My review of Commission allowed returns contained in Mr. McKenzie's Exhibit No. 9 reveals that 2002 was the last year that allowed returns on equity were as high as 11% and that the last Commission allowed return near 13% was in 1989.

It is abundantly clear that Mr. McKenzie's one-sided approach to excluding ROE results from his DCF analysis had the effect of inflating his DCF ROE recommendation.

Q. Have you conducted an alternative analysis that includes all the DCF results from Mr. McKenzie's Exhibit No. 5?

A. Yes. Table 3 below presents the average and median ROEs utilizing all the DCF results from Mr. McKenzie's Exhibit No. 5, page 3 of 3.

Table 3
McKenzie ROE Results

Company	V Line	IBES	Zacks	br+sv Growth
Alliant Energy	9.1%	9.7%	9.2%	8.1%
Ameren Corp.	9.6%	8.8%	9.7%	7.2%
Avangrid, Inc.	NA	13.2%	13.2%	NA
Avista Corp.	8.4%	8.4%	8.7%	7.1%
Black Hills Corp.	10.5%	9.7%	8.9%	10.7%
CenterPoint Energy	6.6%	9.9%	10.1%	7.4%
CMS Energy Corp.	9.1%	10.4%	9.7%	8.7%
Consolidated Edison	6.2%	5.8%	6.5%	6.9%
DTE Energy Co.	9.3%	8.9%	9.1%	7.8%
Entergy Corp.	6.6%	2.0%	0.1%	8.2%
Eversource Energy	9.5%	8.9%	9.5%	7.5%
Exelon Corp.	10.9%	6.5%	7.5%	9.7%
NorthWestern Corp.	10.1%	8.6%	8.6%	8.2%
PG&E Corp.	15.3%	9.0%	7.6%	8.4%
PPL Corp.	NA	7.1%	8.2%	9.2%
Pub Sv Enterprise Grp.	7.0%	5.5%	8.5%	8.8%
SCANA Corp.	7.9%	9.4%	8.8%	8.0%
Sempra Energy	11.0%	10.7%	10.0%	8.8%
Southern Company	8.5%	7.6%	8.4%	8.6%
Vectren Corp.	12.4%	8.4%	8.7%	9.7%
WEC Energy Group	9.5%	10.2%	9.7%	6.9%
Xcel Energy Inc.	9.0%	8.8%	8.9%	7.7%
Average	9.3%	8.5%	8.6%	8.3%
Median	9.2%	8.8%	8.8%	8.2%

Rather than simply excluding low-end results, I recommend that the median be used as an alternative measure of central tendency. As I testified in Section III, the median is not affected by extremely high or low results, but instead represents the middle value of the data set. If there are concerns about results that are either too high or too low, the median may be used as an additional reference for the investor required ROE.

Table 3 shows that when all results are considered, the average and median results from Mr. McKenzie's Exhibit No. 5 are quite close. In my opinion, this suggests that low-end results are offset by high-end results. If all DCF results are considered, Mr. McKenzie's average and median ROEs are close to my recommended ROE of 9.0%.

__CAPM and ECAPM__

Q. Beginning on page 46 of his KU Direct Testimony, Mr. McKenzie described the Empirical CAPM ("ECAPM") analysis. Is this a reasonable method to use to estimate the investor required ROE for LGE and KU?

A. No. The ECAPM is supposed to account for the possibility that the CAPM understates the return on equity for companies with betas less than 1.0. I believe it is highly unlikely that investors use the ECAPM formulation shown in Mr. McKenzie's Exhibit No. 8 to "correct" CAPM returns for electric utilities. To the extent investors use the CAPM to estimate their required returns, I believe it is much more likely that they use the traditional CAPM equation that I used in Section III of my testimony. Mr. McKenzie presented no evidence that investors use the adjustment factors contained in his CAPM and ECAPM analyses. Moreover, the use of an adjustment factor to "correct" the CAPM results for companies with betas less than 1.0 suggests that published betas by such sources as Value Line are incorrect and that investors should not rely on them. In fact, Mr. McKenzie testified on page 44, lines 14 through 16 of his KU Direct Testimony that Value Line is "the most widely referenced source for beta is regulatory proceedings."

Q. Please continue your evaluation of the results of Mr. McKenzie's CAPM and ECAPM analysis.

A. I disagree with Mr. McKenzie's general formulation of the CAPM and ECAPM and in particular with his estimate of the expected market return. He estimated the market return portion of the CAPM and ECAPM by estimating the current market return for dividend paying stocks in the S&P 500. The market return portion of the CAPM should represent the most comprehensive estimate of the total return for all investment alternatives, not just a small subset of publicly traded stocks that pay dividends. In practice, of course, finding such an estimate is difficult and is one of the thornier problems in estimating an accurate ROE when using the CAPM. If one limits the market return to stocks, then there are more comprehensive measures of the stock market available, such as the Value Line Investment Survey that I used in my CAPM analysis. Value Line's projected earnings growth used a sample of 2,067 stocks and its book value growth estimate used 1,518 stocks. Value Line's projected annual percentage return included 1,673 stocks. These are much broader samples than Mr. McKenzie's limited sample of dividend paying stocks from the S&P 500.

Q. Did Mr. McKenzie overstate the expected market return component of the CAPM and ECAPM.

A. Yes, most definitely. My forward-looking market returns show an expected return on the market of 9.85%, far less than the 11.3% expected return result for the limited sample of companies Mr. McKenzie used for his ECAPM and CAPM market return.

Q. On pages 44 through 45 of his KU Direct Testimony, Mr. McKenzie explained that he incorporated a size adjustment to his CAPM and ECAPM results. This increased his average CAPM results by about 60 basis points, or 0.60%. Is this size adjustment appropriate?

A. No. The data that Mr. McKenzie relied upon to make this adjustment came from the *2016 Valuation Handbook – Guide to Cost of Capital.* The groups of companies from which he took this significant upward adjustment to his CAPM and ECAPM results contain many unregulated companies. Further, the decile groups from which these adjustments were taken had average betas ranging from 0.92 to 1.17[12]. These betas are greatly in excess of my utility proxy group average beta of 0.69, suggesting that the unregulated companies that Mr. McKenzie used to make his size adjustment are riskier than regulated utilities. There is no evidence to suggest that the size premium used by Mr. McKenzie applies to regulated utility companies, which on average are quite different from the group of companies included in the *2016 Valuation Handbook* research on size premiums. I recommend that the Commission reject Mr. McKenzie's size premium in the CAPM ROE.

Q. On page 46 of his Direct Testimony, Mr. McKenzie recommended using projected bond yields in the CAPM ROE models. Should the Commission consider using forecasted bond yields in its ROE analysis in this proceeding?

---

12 WP-33 submitted by LGE in response to AG DR1, Q-282.

A. Definitely not. Current interest rates and bond yields embody all the relevant market data and expectations of investors, including expectations of changing future interest rates. Current interest rates present tangible market evidence of investor return requirements today, and these are the interest rates and bond yields that should be used in the CAPM, ECAPM, and in the bond yield plus risk premium analyses. To the extent that investors give forecasted interest rates any weight at all, they are already incorporated in current securities prices.

Utility Risk Premium

Q. Please summarize Mr. McKenzie's utility risk premium approach.

A. Mr. McKenzie developed an historical risk premium using Commission-allowed returns for regulated utility companies from 1974 through 2015. He also used regression analysis to estimate the value of the inverse relationship between interest rates and risk premiums during that period. On page 52 of his KU Direct Testimony, Mr. McKenzie calculated the risk premium ROE to be 9.99%.

Q. Please respond to the Company witnesses' risk premium analysis.

A. Generally, the bond yield plus risk premium approach is imprecise and can only provide very general guidance on the current authorized ROE for a regulated electric utility. Risk premiums can change substantially over time and with varying risk perceptions of investors. As such, this approach is a "blunt instrument", if you will, for estimating the ROE in regulated proceedings. In my view, a properly formulated DCF model using current stock prices and growth forecasts is far more reliable and accurate than the bond yield plus risk premium approach, which relies on an historical risk premium analysis over a certain period of time.

Finally, for the reasons I discussed earlier, the use of forecasted bond yields is inappropriate and should be rejected.

Expected Earnings Approach

Q. Beginning on page 52 of his KU Direct Testimony, Mr. McKenzie presented an expected earnings approach based on expected returns on equity using Value Line's rates of return on common equity for electric utilities over its 2019 - 2021 forecast horizon. Is this a reasonable method for estimating the current required return on equity in this proceeding?

A. No. The Commission should not rely on forecasted utility ROEs for 2019 - 2021 for the same reasons that it should not rely on interest rate forecasts. These forecasted ROEs have little value in today's market, especially considering that current DCF returns are significantly lower than these forecasts, which range from 11.3% to 12.2%. Moreover, recent allowed ROEs for electric utilities averaged about 9.6% in the fourth quarter of 2016. The expected ROEs presented by Mr. McKenzie are so far removed from recent allowed returns that the Commission should reject them out of hand.

Flotation Costs

Q. Beginning on page 55 of his Direct Testimony, Mr. McKenzie discussed flotation costs. Are flotation costs a legitimate consideration for the Commission's determination of ROE in this proceeding?

A. No. Mr. McKenzie recommended that the Commission consider adding an adjustment of 13 basis points to recognize flotation costs. A flotation cost adjustment attempts to recognize and collect the costs of issuing common stock. Such costs typically include legal, accounting, and printing costs as well as well as broker fees and discounts.

In my opinion, it is likely that flotation costs are already accounted for in current stock prices and that adding an adjustment for flotation costs amounts to double counting. A DCF model using current stock prices should already account for investor expectations regarding the collection of flotation costs. Multiplying the dividend yield by a 4% flotation cost adjustment, for example, essentially assumes that the current stock price is wrong and that it must be adjusted downward to increase the dividend yield and the resulting cost of equity. I do not believe that this is an appropriate assumption. Current stock prices most likely already account for flotation costs, to the extent that such costs are even accounted for by investors.

Non-Utility Benchmark

Q. Beginning of page 57 of his KU Direct Testimony, Mr. McKenzie presented the results of a low-risk non-utility DCF model. Is it appropriate to use a group of unregulated companies to estimate a fair return on equity for LGE and KU?

A. No. Mr. McKenzie's use of unregulated non-utility companies to estimate a fair rate of return for LGE and KU is completely inappropriate and should be rejected by the Commission.

Utilities have protected markets, e.g. service territories, and may increase the prices they charge in the face of falling demand or loss of customers. This is contrary to competitive, unregulated companies who often lower their prices when demand for their products decline. Obviously, the non-utility companies have higher overall risk structures than a lower risk electric company like LGE or KU and will have higher required returns from their shareholders. The average DCF results for Mr.

McKenzie's non-utility group range from 10.0% - 11.2%. This is substantially greater than the utility proxy group DCF results for both myself and Mr. McKenzie.

Although Mr. McKenzie stated that he did not directly consider the non-utility group DCF results in arriving at this recommendation, he stated that it was a "relevant consideration in evaluating a fair ROE for the Company," (KU Direct Testimony, page 59). I disagree. The relevant consideration should be the DCF results for the utility proxy group that I employed in my analysis.

Q. Does this complete your Direct Testimony?

A. Yes.

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

RICHARD A. BAUDINO, 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.

Richard A. Baudino

Richard A. Baudino

Sworn to and subscribed before me on this
3rd day of March 2017.

Jessica K. I

Notary Public

JESSICA K INMAN
MY COMMISSION EXPIRES
NOTARY
PUBLIC
JULY 31, 2019
CHEROKEE COUNTY, GEORGIA

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES	)))	**CASE NO. 2014-00371**

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES	))))	**CASE NO. 2014-00372**

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF

KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

MARCH 6, 2015

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-two years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates: Consultant** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Climax Molybdenum Company
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania charge proposals.	Evaluation of cost allocation, rate design, rate plan, and carrying
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD & United States	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T Users Group	WV	West Virginia Energy	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2017**

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-	WV E-42T	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate