BEFORE THE KANSAS CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of Southern Pioneer Electric Company for Approval to Make Certain Changes in its Charges for Electric Services.	**))))**	**Docket No. 20-SPEE-169-RTS**

DIRECT TESTIMONY AND SCHEDULES OF

GLENN A. WATKINS

RE: RESIDENTIAL RATE DESIGN
AND
GRID ACCESS CHARGES

ON BEHALF OF

THE CITIZENS' UTILITY RATEPAYER BOARD

MARCH 2, 2020

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Glenn A. Watkins. My business address is 6377 Mattawan Trail, Mechanicsville, Virginia 23116.

Q. What is your professional and educational background?

A. I am President and Senior Economist with Technical Associates, Inc., which is an economics and financial consulting firm with offices in the Richmond, Virginia area. Except for a six month period during 1987 in which I was employed by Old Dominion Electric Cooperative, as its forecasting and rate economist, I have been employed by Technical Associates continuously since 1980.

During my career at Technical Associates, I have conducted marginal and embedded cost of service, rate design, cost of capital, revenue requirement, and load forecasting studies involving numerous electric, gas, water/wastewater, and telephone utilities. I have provided expert testimony on more than 250 occasions in Alabama, Arizona, Delaware, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Montana, Nevada, New Jersey, North Carolina, Ohio, Pennsylvania, Vermont, Virginia, South Carolina, Washington, and West Virginia.

I hold an M.B.A. and B.S. in economics from Virginia Commonwealth University and am a Certified Rate of Return Analyst. A more complete description of my education and experience as well as a list of my prior testimonies is provided in my Schedule GAW-1.

Q. Have you previously provided testimony before this Commission?

A. Yes. I have provided testimony before this Commission in Atmos Energy Corporation's recent general rate case (Docket No. 19-ATMG-525-RTS) as well as the last two Kansas Gas Services' general rate cases (Docket Nos. 16-KGSG-491-RTS and 18-KGSG-560-RTS) on behalf of the Citizens' Utility Ratepayer Board ("CURB").

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

A. Technical Associates, Inc. ("TAI") has been engaged by CURB to investigate and evaluate Southern Pioneer Electric Company's ("SPEC" or "Company") proposed Residential customer charges and its proposed Grid Access Charges ("GAC"). The purpose of my testimony is to present the findings of my investigation and offer my recommendations to the Commission in these areas.

Q. Please provide a summary of your recommendations.

A. With regard to Residential rate design, I recommend that the fixed customer charge be reduced to $11.77 per month. With regard to the Company's proposed Grid Access Charges ("GAC"), I recommend that this proposal be rejected.

II. RESIDENTIAL RATE DESIGN

Q. Please explain SPEC's current and proposed Residential rate structure.

A. The Company offers two Residential rates: General Use and Space Heating. These rate schedules' base rates are structured with a fixed monthly customer (service) charge plus seasonally differentiated energy charges per KWH.[1] As indicated in the direct testimony

[1] The Residential General Use delivery rate is somewhat higher in the summer ($0.13155/KWH) than in the winter ($0.12055/KWH). The Residential Space Heating delivery rate is also higher in the summer ($0.13155/KWH) but

of Company witness Richard Macke, SPEC is proposing a three-year rate plan in which Residential fixed monthly customer charges would be increased annually by $1.20 per month in each year in the three-year period. At the same time, delivery charges are proposed to remain at their current level during the three-year rate plan. With regard to Residential customer charges, the current monthly rate is $13.77 such that this rate is proposed to increase to $14.97 in Year 1, $16.17 in Year 2, and $17.37 in Year 3. As such, under the Company's rate design proposal, the fixed Residential customer charge would increase $3.60 per month ($43.20 annually), or by 26% over the three-year period.

Q. Is SPEC's proposed increases to the Residential fixed monthly charge reasonable or in the public interest?

A. No. SPEC's proposed increases to the fixed monthly charge violates the economic theory of efficient competitive pricing and is contrary to effective conservation efforts.

Q. Why does the Company's proposed increases to fixed monthly charges violate the economic theory of competitive markets?

A. The most basic tenet of competition is that prices determined through a competitive market ensure the most efficient allocation of society's resources. Because public utilities are generally afforded monopoly status under the belief that resources are better utilized without duplicating the fixed facilities required to serve consumers, a fundamental goal of regulatory policy is that regulation should serve as a surrogate for competition to the

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encompasses a lower three-tiered delivery charge of $0.12055/KWH for the first 800 KWH, $0.10232/KWH for usage between 801-5,800 KWH, and $0.12055/KWH for all usage above 5,800 KWH.

greatest extent practical.[2] As such, the pricing policy for a regulated public utility should mirror those of competitive firms to the greatest extent practical.

Q. Please briefly discuss how prices are generally structured in competitive markets.

A. Under economic theory, efficient price signals result when prices are equal to marginal costs.[3] It is well known that costs are variable in the long run. Therefore, efficient pricing results from the incremental variability of costs even though a firm's short-run cost structure may include a high level of sunk or "fixed" costs or be reflective of excess capacity. Indeed, competitive market-based prices are generally structured based on usage; i.e., volume-based pricing. A colleague of mine often uses the following analogy: an oil refinery costs well over a billion dollars to build, such that its cost structure is largely comprised of sunk, or fixed, costs, but these costs are recovered one gallon at a time.

Q. Please briefly explain the economic principles of efficient price theory and how short-run fixed costs are recovered under such efficient pricing.

A. Perhaps the best known micro-economic principle is that in competitive markets (i.e., markets in which no monopoly power or excessive profits exist), prices are equal to marginal cost. Marginal cost is equal to the incremental change in cost resulting from an incremental change in output. A full discussion of the calculus involved in determining marginal costs is not appropriate here. However, it is readily apparent that because marginal costs measure the changes in costs with output, short-run "fixed" costs are

[2] James C. Bonbright, et al., *Principles of Public Utility Rates*, p. 141 (Second Edition, 1988).

[3] Strictly speaking, efficiency is achieved only when there is no excess capacity such that short-run marginal costs equal long-run marginal costs. In practice, there is usually at least some excess capacity present such that pricing based on long-run marginal costs represents the most efficient utilization of resources.

irrelevant in efficient pricing. This is not to say that efficient pricing does not allow for the recovery of short-run fixed costs. Rather, they are reflected within a firm's production function such that no excess capacity exists and that an increase in output will require an increase in costs -- including those considered "fixed" from an accounting perspective. As such, under efficient pricing principles, marginal costs capture the variability of costs, and prices are variable because prices equal these costs.

Q. Please explain how efficient pricing principles are applied to the electric utility industry.

A. Universally, utility marginal cost studies include three separate categories of marginal costs: demand, energy, and customer. Consistent with the general concept of marginal costs, each of these costs varies with incremental changes. Marginal demand costs measure the incremental change in costs resulting from an incremental change in peak load (demand). Marginal energy costs measure the incremental change in costs resulting from an incremental change in KWH (energy) consumption. Marginal customer costs measure the incremental change in costs resulting from an incremental change in number of customers.

Particularly relevant here is understanding what costs are included within, and the procedures used to determine, marginal customer costs. Since marginal customer costs reflect the measurement of how costs vary with the number of customers, they only include those costs that directly vary as a result of adding a new customer.

Q. Please explain how this theory of competitive pricing should be applied to regulated public utilities such as SPEC.

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

Marginal cost pricing only relates to efficiency. This pricing does not attempt to address fairness or equity. Fair and equitable pricing of a regulated monopoly's products and services should reflect the benefits received for the goods or services. In this regard, those that receive more benefits should pay more in total than those who receive fewer benefits. Regarding electricity usage, the level of consumption is the best and most direct indicator of benefits received. Thus, volumetric pricing promotes the fairest pricing mechanism to customers and to the utility.

The above philosophy has consistently been the belief of economists, regulators, and policy makers for generations. For example, consider utility industry pricing in the 1800s, when the industry was in its infancy. Customers paid a fixed monthly fee and consumed as much of the utility commodity/service as they desired (usually water). It soon became apparent that this fixed monthly fee rate schedule was inefficient and unfair. Utilities soon began metering their commodity/service and charging only for the amount actually consumed. In this way, consumers receiving more benefits from the utility paid more, in total, for the utility service because they used more of the commodity.

Q. Is the electric utility industry unique in its cost structures, which are comprised largely of fixed costs in the short-run?

A. No. Most manufacturing and transportation industries are comprised of cost structures predominated with "fixed" costs. These fixed costs, also called "sunk" costs, are primarily comprised of investments in plant and equipment. Indeed, virtually every capital-intensive industry is faced with a high percentage of so-called fixed costs in the short run. Prices for competitive products and services in these capital-intensive industries are invariably established on a volumetric basis, including those that were once regulated, e.g., motor transportation, airline travel, and rail service.

Q. How are high fixed customer charge rate structures contrary to effective conservation efforts?

A. High fixed charge rate structures actually promote additional consumption because a consumer's price of incremental consumption is less than what an efficient price structure would otherwise be. A clear example of this principle is exhibited in the natural gas transmission pipeline industry. As discussed in its well-known Order 636, the FERC's adoption of a "Straight Fixed Variable" ("SFV") pricing method[4] was a result of national policy (primarily that of Congress) to encourage increased use of domestic natural gas by promoting additional interruptible (and incremental firm) gas usage. The FERC's SFV pricing mechanism greatly reduced the price of incremental (additional) natural gas consumption. This resulted in significantly increasing the demand for, and use of, natural gas in the United States after Order 636 was issued in 1992.

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

[4] Under SFV pricing, customers pay a fixed charge that is designed to recover all of the utility's fixed costs.

functions of pipelines.[5] The second goal was to encourage the increased consumption of natural gas in the United States. In Order 636's introductory statement, FERC stated:

> The Commission's intent is to further facilitate the unimpeded operation of market forces to stimulate the production of natural gas... [and thereby] contribute to reducing our Nation's dependence upon imported oil… .[6]

With specific regard to the SFV rate design adopted in Order 636, FERC stated:

> Moreover, the Commission's adoption of SFV should maximize pipeline throughput over time by allowing gas to compete with alternate fuels on a timely basis as the prices of alternate fuels change. The Commission believes it is beyond doubt that it is in the national interest to promote the use of clean and abundant gas over alternate fuels such as foreign oil. SFV is the best method for doing that.[7]

Recently, some public utilities have begun to advocate SFV residential pricing, claiming a need for enhanced fixed charge revenues. To support their claim, the companies argue that because retail rates have been historically volumetric-based, there has been a disincentive for utilities to promote conservation or encourage reduced consumption. However, the FERC's objective in adopting SFV pricing suggests the exact opposite. The price signal that results from SFV pricing is meant to promote additional consumption, not reduce consumption. Thus, a rate structure that has a high level of fixed monthly customer charges sends an even stronger price signal to consumers to use more energy.

Q. As a public policy matter, what is the most effective tool that regulators have to promote cost effective conservation and the efficient utilization of resources?

[5] Federal Energy Regulatory Commission, Docket Nos. RM91-11-001 and RM87-34-065, Order No. 636 (Apr. 9, 1992), p. 7.
[6] *Id.* p. 8 (alteration in original).
[7] *Id.* pp. 128-129.

A. Unquestionably, one of the most important and effective tools that this, or any, regulatory Commission has to promote conservation is developing rates that send proper price signals to conserve and utilize resources efficiently. A pricing structure that is largely fixed, such that customers' effective prices do not properly vary with consumption, promotes the inefficient utilization of resources. Pricing structures with high fixed charges are much more inferior from a conservation and efficiency standpoint than pricing structures that require consumers to incur more cost with additional consumption.

Q. Notwithstanding the efficiency reasons as to why regulation should serve as a surrogate for competition, are there other relevant aspects to the pricing structures in competitive markets *vis a vis* those of regulated utilities?

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

Q. On page 19 of his direct testimony, Mr. Macke claims that his proposed increase to the Residential fixed monthly customer charge "will improve the rate design to reduce the extent of intra-class subsidies." Please respond to this assertion.

A. First, it should be noted that Mr. Macke provides no evidence that any such intra-class subsidies exist. Rather, he simply assumes that such subsidies within the Residential class exist. However, when the load and usage characteristics of Residential customers are examined, we see that as an entire class, Residential usage and loads tend to be weather sensitive such that demands (loads) and usages (energy) are higher during the winter months due to heating load and summer months to air conditioning load. During the shoulder months of spring and fall, the total Residential load and energy usage tends to be lower. With this understanding, when we look at intra-class differences (i.e., differences within the Residential class), large volume customers tend to use electricity less consistently throughout the year than do small volume customers due to the higher heating and air conditioning levels of usage during the winter and summer months and lower levels of usage during the spring and fall months. At the same time, small volume Residential customers tend to use electricity more consistently throughout the year due to their smaller dependence on electric heating and air conditioning.

With these realities, small volume Residential customers tend to have higher load factors than do large volume Residential customers. Because high load factor customers evenly spread their demands throughout the year, these customers are cheaper to serve (on a per unit of consumption basis) than low load factor customers. As such, it cannot be said that high usage customers subsidize low usage customers due to a predominantly volumetric (energy) based pricing schedule.

Q. Does Mr. Macke provide any support or rationale for his proposal to increase the monthly Residential customer charge to $17.37?

A. Yes. Mr. Macke also sponsors the Company's class cost of service study ("CCOSS") wherein he calculated a Residential "customer cost" of $17.43 per month.[8] In developing his "customer cost," Mr. Macke first functionalized all rate base and operating income amounts between power supply, transmission, and distribution. He then "classified" these functionalized costs into various costing buckets. With respect to functionalized distribution costs, Mr. Macke's classified costing buckets were separated between Substations, Primary Lines, Transformers, Secondary & Service, Meters, Account & Services, and Revenues.

Q. Do Mr. Macke's calculated "customer costs" include costs that should not be considered in developing Residential fixed monthly charges?

A. Yes. Due to the structure and presentation of Mr. Macke's CCOSS, it is not possible to determine which costs are, and are not, included within his "customer costs" without a detailed analysis of his electronic CCOSS spreadsheet. This is because of the way Mr. Macke first placed every rate base and operating income account into one of three functional buckets and then assigned each functional cost bucket to various "classification" buckets. Mr. Macke's presentation of his Residential customer cost is as follows:

[8] $17.44 per month can be found in Mr. Macke's Exhibit PSE-4, page 3. However, on page 21 of his direct testimony, Mr. Macke claims this amount is $17.39 month.

SPEC
Calculated Residential General Use Customer Cost

Description	Allocated Dollars	Cost Per Month
Meter & Service:		
Depreciation	$152,206	$1.06
Interest	$298,438	$2.08
O&M	$440,982	$3.07
A&G	$94,127	$0.66
Subtotal	$985,753	$6.87
Customer Acct. Expense	$1,168,991	$8.15
Taxes & Miscellaneous	$137,482	$0.96
Margins	$208,667	$1.45
TOTAL CUSTOMER COST [9]	$2,500,929	$17.43

By drilling down through Mr. Macke’s electronic spreadsheet, I was able to replicate his results by separating his costs on an account-by-account basis as shown in the table below:

[9] Totals may not add due to rounding.

		Classification	Residential General Use
(1) O&M Expenses:			
580	Oper. Super & Eng.	Meters & Services	$52,609
586	Oper. Meters	Meters & Services	$268,139
588	Oper. Misc. Oper.	Meters & Services	$117,179
590	Maint. Super. & Eng.	Meters & Services	$348
597	Maint. Meters	Meter & Service	$2,284
598	Maint. Misc. Dist.	Meter & Service	$431
902	Meter Reading Expense	Cust. Acct.	$26,628
903	Records & Collections	Cust. Acct.	$716,648
904	Uncollectible Accounts	Cust. Acct.	$44,354
905	Misc. Customer Account	Cust. Acct.	$28,280
907	Supervision	Cust. Acct.	$7,778
908	Customer Assistance	Cust. Acct.	$120,913
910	Misc. Cust Serv. & Info	Cust. Acct.	$14,304
912	Demonstrating & Selling	Cust. Acct.	$4,479
920-932	A&G	Meters & Cust. Acct.	$299,760
	Total O&M		$1,704,135
(2) Depreciation Expense:			
	Services	Meter & Service	$33,013
	Meters	Meter & Service	$119,193
	Total Depreciation		$152,206
(3) Return & Taxes:			
	Interest Expense	Meter & Service	$298,438
	Margin	Margins	$208,667
	Taxes & Misc.	Taxes & Misc.	$137,482
	Total Return & Taxes		$644,587
	Total Customer Cost: (1) + (2) + (3)		$2,500,929
	Number of Customers		11,960
	Number of Bills		143,520
Customer Cost Per Month			$17.43

As discussed earlier in my testimony, customer charges should only reflect those incremental costs required to connect and maintain a customer's account. However, Mr. Macke's customer cost analysis includes a multitude of costs that reflect overhead and general business costs that are more appropriately collected in variable energy charges. The following is a detailed discussion on an account-by-account basis of those costs that should be excluded (in whole, or in part) from Mr. Macke's "customer cost" analysis:[10]

Account 580 (Distribution Operations Supervision & Engineering) – This account includes expenses incurred in the general supervision and direction of the operation of the distribution system. Direct supervision of specific activities shall be charged to the (other) appropriate accounts. As such, this is a general overhead expense in which these costs do not directly vary with number of customers and are not required to connect and maintain a customer's account.

Account 588 (Distribution Miscellaneous Operations) – This account includes expenses in distribution operation not provided for elsewhere. As such, this is a general overhead expense in which these costs do not directly vary with number of customers and are not required to connect and maintain a customer's account.

Account 590 (Distribution Maintenance Supervision & Engineering) – This account includes expenses incurred in the general supervision and direction of maintenance of the distribution system. Direct supervision of specific activities shall be charged to the (other) appropriate accounts. As such, this is a general overhead expense in which these costs do not directly vary with number of customers and are not required to connect and maintain a customer's account.

[10] The account descriptions are based on the Rural Utilities Service ("RUS") Uniform System of Accounts – Electric, May 2008.

Account 598 (Distribution Miscellaneous Maintenance) – This account includes expenses incurred in the maintenance of distribution plant not provided for elsewhere. As such, this is a general overhead expense in which these costs do not directly vary with number of customers and are not required to connect and maintain a customer's account.

Account 903 (Records & Collections) – This account includes several subaccounts that include: Customer Records (Account 903.0); Cash Short/Long (Account 903.1); Collections (Account 903.2); Training Consumer Accounting (Account 903.5); and, Credit Card Merchant Fees (Account 903.6). While it is appropriate to include Customer Records expenses (Account 903.0), the other subaccounts are not required to connect and maintain a customer's account and should not be included in the determination of "customer costs."

Account 904 (Uncollectibles) – This account includes expenses incurred for all uncollectible utility revenues which include all revenues which are largely volumetrically-related.

Account 905 (Miscellaneous Customer Accounts) – This account includes two subaccounts that include: Miscellaneous Customer Accounting (Account 905.0); and, Customer Records for Advances, Dues, and Promotions (Account 905.4). While it is appropriate to include Miscellaneous Customer Accounting (Account 905.0), Account 905.4 should not be included in the determination of "customer costs."

Account 907 (Customer Service & Information Supervision) – This account includes expenses incurred in the general direction and supervision of customer service activities, the object of which is to encourage safe, efficient, and economical use of the utility's service. As such, these expenses are related to usage and not required to connect and maintain a customer's account.

Account 908 (Customer Assistance) – This account includes expenses incurred in providing instructions or assistance to customers, the object of which is to encourage safe, efficient, and economical use of the utility's service. As such, these expenses are related to usage and not required to connect and maintain a customer's account.

Account 910 (Miscellaneous Customer Service & Informational) – This account includes expenses incurred in connection with customer service and informational activities, which are not includable in other customer information expense accounts. Because customer service and informational expenses are related to the encouragement of safe, efficient, and economical use of the utility's service, these expenses are related to usage and not required to connect and maintain a customer's account.

Account 912 (Demonstrating & Selling) – This account includes expenses incurred in promotional, demonstrating, and selling activities (except by merchandising), the object of which is to promote or retain the use of utility services by present and prospective customers. As such, these expenses are not required to connect and maintain a customer's account.

Accounts 920-932 (Administrative & General) – These accounts reflect overall company overhead expenses including: A&G Salaries (Account 920); Office Supplies & Expenses (Account 921); Outside Services (Account 923); Property Insurance (Account 924); Injuries & Damages (Account 925); Employee Pensions & Benefits not recorded elsewhere (Account 926); Franchise Requirements (Account 927); Regulatory Commission Expenses (Account 928); General Advertising (Account 930.1); Miscellaneous General Expenses (Account 930.2); and, Rents (Account 931). These overhead expenses do not directly vary with number of customers and are not required to connect and maintain a customer's account.

Taxes & Miscellaneous – Mr. Macke's "Taxes & Miscellaneous" category includes: Other Interest expense (Account 431); Donations (Account 426.1); Scholarship Awards (Account 426.13); Penalties (Account 426.3); Other Deductions (Account 426.5); Pension Net Periodic Benefit Costs (Account 426.6); Amortization of Mortgage Fees (Account 428.0); Amortization of Loss on Reacquired Debt (Account 428.1); and, Other Taxes (Account 408).

While an allocable portion of the Amortization of Loss on Reacquired Debt (Account 428.1) is reasonable within the determination of customer-related costs (as these costs are related to debt and interest), the remaining costs included by Mr. Macke are not related to the cost to connect and maintain a customer's account.

Q. Have you conducted a Residential customer cost analysis that excludes those items discussed above and only includes those costs require to connect and maintain a customer's account?

A. Yes. My Schedule GAW-2, which consists of three pages provides my analyses of the Residential "customer costs" that should be considered in developing customer charges. As indicated, I have determined that the Residential customer cost is $11.77 per month as compared to Mr. Macke's calculation of $17.43 per month. As shown on page 1 of this Schedule, I show Mr. Macke's assignment of customer costs on an account-by-account basis as well as the costs I have included within my customer cost analysis. Support for those accounts and items in which only a portion of the costs included in Mr. Macke's analysis is provided on pages 2 and 3 of my Schedule GAW-2.

Q. On page 21 of his direct testimony, Mr. Macke asserts that his customer cost analysis is conservative in that his calculated customer costs would be much higher had he included the minimum size of distribution lines and line transformers. Please respond to Mr. Macke's assertion.

A. Mr. Macke appropriately excluded any costs associated with distribution overhead and underground lines as well as line transformer investments and related expenses. These types of plant are planned, sized, and placed into service based on maximum loads and are not placed in service simply to connect customers.

As an illustration, consider the fact that when a new customer is added to the distribution system, the Company does not replace or modify its distribution system upstream from the service lines in that distribution lines and transformers are placed in service to meet the collective needs of its customers and, again, are designed to meet peak load requirements. This is not to say that it is necessarily inappropriate to allocate distribution lines and transformers across classes based partially on number of customers and partially on peak demands, but rather, the lines and transformer costs allocated based on number of customers should not be considered in establishing reasonable customer charges. Indeed, the reason that some distribution costs are allocated across classes based partially on number of customers and partially on peak demands is due to variations in customer densities such that this approach provides for an equitable allocation of total costs across the various classes. However, this does not in any way imply that these costs should be collected in a fixed monthly customer charge.

Q. Is there academic support for your opinion that certain distribution costs classified as "customer-related," as well as a significant portion of the company's overhead expenses, are not properly considered as true customer costs?

A. In his well-known treatise Principles of Public Utility Rates, Professor James C. Bonbright states:

> . . . if the hypothetical cost of a minimum-sized distribution system is properly excluded from the demand-related costs for the reason just given, while it is also denied a place among the customer costs for the reason stated previously, to which cost function does it then belong? The only defensible answer, in our opinion, is that it belongs to none of them. Instead, it should be recognized as a strictly unallocable portion of total costs. And this is the disposition that it would probably receive in an estimate of long-run marginal costs. But fully-distributed cost analysts dare not avail themselves of this solution, since they are the prisoners of their own assumption that "the sum of the parts equals the whole." **They are therefore under impelling pressure to fudge their cost apportionments by using the category of customer costs as a dumping ground for costs that they cannot plausibly impute to any of their other cost categories.** [Emphasis added] (Second Edition, page 492)

Q. Is there an authoritative publication that discusses the determination of Residential customer charges for rate design purposes?

A. Yes. A NARUC Publication entitled Charging for Distribution Utility Services: Issues in Rate Design states the following as it relates to the determination of fixed monthly customer charges:

> In evaluating proposals for redesign of distribution rates, commissions may be asked to consider structures that call for some blend of customer and usage charges, weighted so as to increase the revenue share of the fixed rate elements (in relation to historical allocations). Although much of the

> discussion in this paper has been cast in either-or terms (usage-based vs. fixed rates), its general prescriptions apply no less to any intermediate proposal: the magnitude of a shift from usage-based to fixed rate elements will have predictable effects on consumer demand, utility revenues, and long-term dynamic efficiency. As one moves along the continuum of rate designs from usage-based to fixed, the benefits of the former give way more and more to the difficulties of the latter. This is the kind of trade-off that commissions are often faced with balancing: **our analysis concludes that the balance strongly favors a rate structure that allows consumers to avoid charges, when there cost-effective alternatives that they value more highly. Usage-based rates fit this bill; so do hook-up fees** [Emphasis added] (page 46).

Q. What is your recommendation regarding fixed monthly customer charges for SPEC's Residential customers?

A. I recommend the Residential fixed monthly customer charge be reduced to $11.77 per month such that the reduction in overall revenue as a result of lowering the fixed customer charge as well as required revenue associated with any authorized increase to Residential total revenues be collected through increases in the volumetric energy charges.

III. GRID ACCESS CHARGES

Q. Please summarize SPEC's proposed Grid Access Charge ("GAC").

A. As set forth in the direct testimony of Mr. Macke, the Company is proposing a GAC that would apply to future customers electing to participate in the Company's Net Metering program. As indicated by Mr. Macke, the existing five customers participating in the Net Metering program (one small General Service and four Residential customers) would be grandfathered and exempt from the GAC until 2030 or until such time as statutory requirements change.[11] Under the Company's proposal, future Net Metering customers

[11] As indicated in response to CURB-12, the GAC would not apply to customers that simply have distributed self-generation, but rather, only those that participate in the Net Metering program.

would be assessed what can be characterized as capacity charges based on the installed capacity of self-generation. For Residential customers, this capacity charge would be \$7.36 per month of installed capacity with a cap of \$41.00 per month. Small General Service would incur a capacity charge of \$5.42 per month (by Year 3) with a cap of \$15.00 per month (by Year 3).

Q. Have you evaluated the need for, and reasonableness of, the Company's proposed GAC?

A. Yes. In evaluating the Company's proposed GAC, I considered: (a) the structure and level of the Company's proposed GAC; (b) public policy issues concerning self-generation with renewable resources in general; (c) the statutory requirements of net metering; and, (d) guidance provided by this Commission in Docket No. 16-GIME-403-GIE.[12]

Q. Please explain your evaluation of the Company's proposed structure and level of Grid Access charges.

A. First, I have determined that the Company's proposed level and structure of GACs is discriminatory against smaller self-generation capacity (in terms of KW) as well as discriminatory against the Residential net metering customers relative to Small General Service net metering customers. With regard to future Residential net metering customers, the Company proposes a cap of \$41.00 per month of installed self-generation capacity. In response to CURB-16, the Company provided an itemization of the four Residential customers currently subscribed to the Net Metering program. The installed self-generation

[12] General Investigation to Examine Issues Surrounding Rate Design for Distributed Generation Customers.

capacity of these four customers are one with 10 KW, two with 14 KW, and one with 2 KW.

Consider the Residential customer with 14 KW of installed self-generation capacity. Due to the GAC cap of $41.00 per month, the effective GAC capacity charge for this customer is $2.93 per KW/month, while the capacity charge for the customer with installed self-generation capacity of 2 KW is $7.36 per KW/month. This discrimination against smaller installed self-generation capacity is nonsensical.

In addition, the capacity charge for Residential is $7.36 per KW while the corresponding charge for Small General Service customers is only $5.42 per KW. However, due to the capping mechanism, a Small General Service customer with installed capacity of 14 KW would have an effective capacity charge of only $1.07 per KW ($15.00 ÷ 14 KW) compared to a Residential customer with an effective capacity charge of $2.93 per KW ($41.00 ÷ 14 KW). As a result, this in and of itself is unduly discriminatory against future Residential net metering customers.

Q. Please explain why the proposed GAC is discriminatory against smaller installed self-generation and why it is nonsensical.

A. In response to CURB-16, the Company provided monthly data concerning the amount of energy delivered by SPEC to each current net metering customer along with the excess energy each customer delivered to the grid.[13] One of the Residential customers has installed capacity of 2 KW (Customer 6) while two other Residential customers have

[13] The response to CURB-16 provided information for six customers (not five as indicated by Mr. Macke). However, it appears that one of the six customers (Customer 2) provided in response to CURB-16 either no longer participates in net metering or that customer's self-generation is not functioning. This is because this customer has provided no energy delivered to SPEC's grid after March 2018.

installed capacity of 14 KW (Customers 4 and 5). Focusing first on Customer 6 (with 2 KW capacity), this customer did not deliver any energy to the grid in three of the twelve months of 2019. During the entire year, this customer only delivered 48 KWH to the grid in which that customer received a monetary benefit from SPEC. For Customer 6, the total annual gross net metering benefit to this customer during 2019 was $5.90.[14] However, if the Company's proposed GAC is approved, this customer would incur $176.64 of Grid Access Charges ($7.36 x 12 months x 2 KW). As a result, it would actually cost this customer to participate in the Net Metering program; i.e., GAC charges of $176.64 compared to a benefit of only $5.90.

Now, consider Customer 4 with installed capacity of 14 KW. This customer delivered 9,495 KWH into the grid and received a gross net metering benefit of $1,205.62.[15] Under the proposed GAC capping, this customer's GAC would be $492.00 annually ($41.00 x 12 months). As a result, this customer with a larger installed self-generation capacity would obtain some savings ($713.62) even after paying the proposed GAC; i.e., $1,205.62 minus $492.00. Similarly, Customer 5 (with 14 KW installed capacity) delivered 4,586 KWH into the grid and received a gross net metering benefit of $573.92[16] during 2019 and would also incur GAC of $492.00 annually, which would result in a minimal net benefit of $81.92 ($573.92 minus $492.00).

As can be seen above, even though the implementation of a GAC would reduce the net metering benefits to larger customers, these customers may still receive some net metering benefits. However, those customers with small levels of installed self-generation

[14] Per Schedule GAW-3, page 1.
[15] Per Schedule GAW-3, page 2.
[16] Per Schedule GAW-3, page 3.

capacity, would actually pay more in GAC than they receive in net metering benefits.

Q. Please explain your evaluation of Kansas public policy issues concerning self-generation with renewable resources generally.

A. In 2009, the Kansas Legislature passed the Renewable Energy Standards Act and codified as K.S.A. § 66-1256. In this statute, the Legislature declared: "it is in the public interest to promote renewable energy development in order to best utilize natural resources found in this state." SPEC's proposed GAC will provide a clear disincentive and impediment for its customers to install renewable energy generation sources and is therefore, at odds with the public policy of the state legislature.

Q. Please explain your evaluation of the statutory requirements of net metering.

A. K.S.A. § 66-1265 limits the amount of net metering to one percent of each utility's peak demand during the previous year. As such, there is a definitive cap on the amount of net metering benefits that may accrue to each utility's net metering customers. In addition, K.S.A. § 66-1267 limits the amount of net metering capacity to 15 KW for Residential customers. This provision limits the amount of potential net metering benefits that may accrue to Residential customers. As a result of these two statutory requirements, the amount of any potential cross-subsidization within a utility is significantly limited.

Q. Please explain your evaluation of the guidance provided by this Commission in Docket No. 16-GIME-403-GIE.

A. In its Final Order issued September 21, 2017, the Commission found:

> Utilities may create a separate residential class or sub-class for DG customers with their own rate design, which appropriately recovers the fixed costs of providing service to residential private DG customers, **or a utility may continue to serve residential private DG customers within an existing residential rate class if the utility determines there are too few DG customers to justify a separate residential private DG class or sub-class or determines other justification exists to retain those customers in the existing rate class.** A separate rate class for DG customers is not meant to punish those customers, rather such a class would serve to provide clarity for both utilities and customers.[17] [Emphasis added]

While the Commission's Order appears to provide latitude in this regard, SPEC's proposed GAC will clearly add a new sub-class of Residential customers in that these customers will be subject to different rates than other Residential customers. In evaluating whether there are too few Residential SPEC net metering customers to justify a separate sub-class, I calculated the percentage of Residential customers currently participating in the Company's Net Metering program. Currently, SPEC has four Residential net metering customers out of a total Residential customer base out of 12,528.[18] As such, Residential net metering customers comprise only 0.03% of SPEC's Residential customer base, which by any definition, is miniscule. Similarly, SPEC's net metering Residential customers received a net metering credit during 2019 of 23,006 KWH.[19] SPEC's total Residential KWH usage during 2019 was 112,673,983 KWH such that the net metering credits equate to only 0.02% of the Company's Residential sales.

While I recognize that the proposed GAC will only apply to future net metering customers and existing customers after 2030, it is apparent that net metering with

[17] Final Order at ¶ 20, page 8.
[18] 11,960 General Use customers and 568 Heating customers.
[19] Calculated per response to CURB-16.

renewable self-generation is inconsequential within SPEC's customer base with no indications that self-generation will grow to any significant degree in the near future.

Q. What are your conclusions and recommendations concerning the Company's proposed GAC?

A. Based on my evaluation of all criteria, I recommend SPEC's proposed GAC be rejected. In this regard, I have considered the proposed structure and level of the Company's proposed GAC, the State's general policy of promoting renewable energy development, the statutory limitations concerning the amount of net metering that will be available to customers, and prior guidance provided by this Commission. In summary, I have concluded that SPEC's Residential penetration of net metering self-generation is *de minimis* such that there is, nor will there be, any material impact on non-net metering customers in the foreseeable future and that the statutory net metering limitation of one percent of load coupled with a maximum 15 KW of self-generation capacity will further limit the amount of any potential cross-subsidization among the Residential class.

Q. Does this complete your testimony?

A. Yes.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO) ss:

Glenn A. Watkins, being duly sworn upon his oath, deposes and states that he is a consultant for the Citizens' Utility Ratepayer Board, that he has read and is familiar with the foregoing *Direct Testimony*, and that the statements made herein are true and correct to the best of his knowledge, information, and belief.

Glenn A. Watkins

SUBSCRIBED AND SWORN to before me this 28th day of February, 2020.

Notary Public

My Commission expires:

JENNIFER R. DOLEN
NOTARY PUBLIC
REG # 7315146
MY COMMISSION EXPIRES 10/31/2022
COMMONWEALTH OF VIRGINIA

BACKGROUND & EXPERIENCE PROFILE

GLENN A. WATKINS

PRESIDENT/SENIOR ECONOMIST
TECHNICAL ASSOCIATES, INC.

EDUCATION

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

POSITIONS

Jan. 2017-Present	President/Senior Economist, Technical Associates, Inc.
Mar. 1993-Dec. 2016	Vice President/Senior Economist, Technical Associates, Inc. (Mar. 1993-June 1995 Traded as C. W. Amos of Virginia)
Apr. 1990-Mar. 1993	Principal/Senior Economist, Technical Associates, Inc.
Aug. 1987-Apr. 1990	Staff Economist, Technical Associates, Inc., Richmond, Virginia
Feb. 1987-Aug. 1987	Economist, Old Dominion Electric Cooperative, Richmond, Virginia
May 1984-Jan. 1987	Staff Economist, Technical Associates, Inc.
May 1982-May 1984	Economic Analyst, Technical Associates, Inc.
Sep. 1980-May 1982	Research Assistant, Technical Associates, Inc.

EXPERIENCE

I. Public Utility Regulation

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

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

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

GLENN A. WATKINS

C. Forecasting and System Profile Studies -- Development of long range energy (Kwh or Mcf) and demand forecasts for rural electric cooperatives and investor owned utilities. Analysis of electric plant operating characteristics for the determination of the most efficient dispatch of generating units on a system-wide basis. Factors analyzed include system load requirements, unit generating capacities, planned and unplanned outages, marginal energy costs, long term purchased capacity and energy costs, and short term power interchange agreements.

D. Cost of Capital Studies -- Analyzed and provided expert testimony on the costs of capital and proper capital structures for ratemaking purposes, for electric, gas, telephone, water, and wastewater utilities. Costs of capital have been applied to both actual and hypothetical capital structures. Cost of equity studies have employed comparable earnings, DCF, and CAPM analyses. Econometric analyses of adjustments required to electric utilities cost of equity due to the reduced risks of completing and placing new nuclear generating units into service.

E. Accounting Studies -- Performed and provided expert testimony for numerous accounting studies relating to revenue requirements and cost of service. Assignments have included original cost studies, cost of reproduction new studies, depreciation studies, lead-lag studies, Weather normalization studies, merger and acquisition issues and other rate base and operating income adjustments.

II. Transportation Regulation

A. Oil and Products Pipelines -- Conducted cost of service studies utilizing embedded costs, I.C.C. Valuation, and trended original cost. Development of computer models for cost of service studies utilizing the "Williams" (FERC 154-B) methodology. Performed alternative tariff designs, and dismantlement and restoration studies.

B. Railroads -- Analyses of costing studies using both embedded and marginal cost methodologies. Analyses of market dominance and cross-subsidization, including the implementation of differential pricing and inverse elasticity for various railroad commodities. Analyses of capital and operation costs required to operate "stand alone" railroads. Conducted cost of capital and revenue adequacy studies of railroads.

III. Insurance Studies

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

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

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

GLENN A. WATKINS

IV. Anti-Trust and Commercial Business Damage Litigation

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

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

MEMBERSHIPS AND CERTIFICATIONS

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

**EXPERT TESTIMONY
PROVIDED BY
GLENN A. WATKINS**

YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
1985	SAVANNAH ELECT. & PWR CO.	GA. PSC	3523U	SALES FORECAST, RATE DESIGN ISSUES
1990	CENTRAL MAINE PWR CO.	ME. PUC	89-68	MARGINAL COST OF SERVICE
1990	WARNER FRUEHAUF	U.S. BANKRUPTCY CT.	n/a	VALUE OF STOCK, COST OF CAPITAL
1990	COMMONWEALTH GAS SERVICES (Columbia Gas)	VA. SCC	PUE900034	CLASS COST OF SERVICE
1991	W. VA. WATER	WVA PSC	91-140-W-42T	RATE DESIGN
1992	ALLSTATE INSURANCE COMPANY (DIRECT)	N.J. DEPT OF INSUR	INS 06174-92	COST ALLOCATIONS, PROFITABILITY
1992	ALLSTATE INSURANCE COMPANY (REBUTTAL)	N.J. DEPT OF INSUR	INS 06174-92	COST ALLOCATIONS, PROFITABILITY
1992	GRASS v. ATLAS PLUMBING, et.al.	RICHMOND CIRCUT CT	n/a	DAMAGES, BREACH OF COVENANT NOT TO COMPETE (PROFFERED TEST)
1992	S.C. WORKERS COMPENSATION	SC DEPT OF INSUR	92-034	INTERNAL RATE OF RETURN
1992	VIRGINIA NATURAL GAS	VA SCC	PUE920031	JURISDICTIONAL & CLASS COST OF SERVICE
1993	SOUTH WEST GAS CO.	AZ. CORP COMM	U-1551-92-253	DIRECT: CLASS COST ALLOCATIONS
1993	SOUTH WEST GAS CO.	AZ. CORP COMM	U-1551-92-253	SURREBUTTAL: CLASS COST ALLOCATIONS
1993	MOUNTAIN FORD v FORD MOTOR COMPANY	FEDERAL DISTRICT CT	n/a	VEHICLE ALLOCATIONS, INVENTORY LEVELS, INCREMENTAL PROFIT, & DAMAGES
1993	POTOMAC EDISON CO.	VA. SCC	PUE930033	COST ALLOCATIONS,RATE DESIGN
1995	NEW JERSEY AMERICAN WATER COMPANY	N.J. B.P.U.	WR95040165	COST ALLOCATIONS,RATE DESIGN
1995	PIEDMONT NATURAL GAS COMPANY	S.C. P.S.C.	95-715-G	COST ALLOCATIONS,RATE DESIGN,WEATHER NORMALIZATION
1995	CYCLE WORLD v. HONDA MOTOR CO.	VA. DMV	None	MARKET PERFORMANCE, FINANCIAL IMPACT OF NEW DEALER
1995	VIRGINIA AMERICAN WATER CO.	VA. SCC	PUE950003	JURISDICTIONAL ALLOCATIONS
1996	ELIZABETHTOWN WATER CO.	N.J. B.P.U.	WR95110557	COST ALLOCATIONS,RATE DESIGN
1996	ELIZABETHTOWN WATER CO.	N.J. B.P.U.	WR95110557	SURREBUTTAL COST ALLOCATIONS,RATE DESIGN
1996	SOUTH JERSEY GAS CO.	N.J. B.P.U.	GR96010032	CLASS COST OF SERVICE
1996	SOUTH JERSEY GAS CO.	N.J. B.P.U.	GR96010032	REBUTTAL - CLASS COST OF SERVICE
1996	HOUSE BILL # 1513	VA. GEN'L ASSEMBLY	N/A	WATER / WASTEWATER CONNECTION FEES
1996	HOUSE BILL # 1513	VA. GEN'L ASSEMBLY	N/A	WATER / WASTEWATER CONNECTION FEES
1996	VIRGINIA AMERICAN WATER CO.	VA. SCC	PUE950003	JURISDICTIONAL ALLOCATIONS
1996	VIRGINIA LIABILITY INSURANCE COMPETITION	VA. SCC	INS960164	COST ALLOCATIONS, INSURANCE PROFITABILITY
1997	PHILADELPHIA SUBURBAN WATER CO. (DIRECT)	PA. PUC	R-00973952	COST ALLOCATIONS,RATE DESIGN,RATE DISCOUNTS
1997	PHILADELPHIA SUBURBAN WATER CO. (REBUTTAL)	PA. PUC	R-00973952	COST ALLOCATIONS,RATE DESIGN,RATE DISCOUNTS
1997	PHILADELPHIA SUBURBAN WATER CO. (SURREBUTTAL)	PA. PUC	R-00973952	COST ALLOCATIONS,RATE DESIGN,RATE DISCOUNTS
1997	NISSAN v. CRUMPLER NISSAN	VA. DMV	None	MARKET DETERMINATION & PERFORMANCE
1997	VIRGINIA AMERICAN WATER CO.	VA. SCC	PUE970523	JURISDICTIONAL/CLASS ALLOCATIONS
1998	FREEMAN WRONGFUL DEATH	FfEDERAL DISTRICT CT.		LOST INCOME, WORK EXPECTANCY
1998	EASTERN MAINE ELECTRIC COOPERATIVE	MAINE PUC	98-596	REVENUE REQUIREMENT
1998	NEW JERSEY AMERICAN WATER COMPANY	N.J. B.P.U.	WR98010015	CLASS COST OF SERVICE,RATE DESIGN, REVENUES
1998	VIRGINIA ELECTRIC POWER COMPANY	VA. SCC	PUE960296	CLASS COST OF SERVICE and TIME DIFFERENTIATED FUEL COSTS
1998	AMERICAN ELECTRIC POWER COMPANY	VA. SCC	PUE960296	CLASS COST OF SERVICE and TIME DIFFERENTIATED FUEL COSTS
1998	CREDIT LIFE/AH RATE FILING	VA. SCC		PRIMA FACIA RATES, LEVEL OF COMPETITION
1999	MILLER VOLKSWAGEN v. VOLKSWAGEN oF AMERICA	VA. DMV	None	VEHICLE ALLOCATIONS/CSI
1999	CREDIT LIFE & A&H LEGISLATION	VA. GEN'L ASSEMBLY	N/A	COST ALLOCATIONS, INSURANCE PROFITABILITY
1999	COLUMBIA GAS of VIRGINIA	VA. SCC	PUE980287	RATE STRUCTURE
1999	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	INS990165	WORKERS COMPENSATION RATES
1999	ROANOKE GAS	VA. SCC	PUE980626	Rate Design/ Weather Norm
2000	PERSON-SMITH v. DOMINION REALITY	RICHMOND CIRCUIT	n/a	LOST INCOME
2000	CREDIT LIFE/AH RATE FILING	VA. SCC		PRIMA FACIA RATES, LEVEL OF COMPETITION
2000	UNITED CITIES GAS	VA. SCC		Cost Allocations/ Rate Design
2001	SERRA CHEVROLET v. GENERAL MOTORS CORP.	ALABAMA CIRCUIT CT.	98-2089	ECONOMIC DAMAGES
2001	VIRGINIA POWER ELECTRIC RESTRUCTURING	VA. SCC	PUE000584	RATE Design (UNBUNDLING)
2001	AMERICAN ELECTRIC POWER RESTRUCTURING	VA. SCC	PUE010011	RATE Design (UNBUNDLING)
2001	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	INS010190	WORKERS COMPENSATION RATES
2001	VERMONT WORKERS COMPENSATION RATE CASE	VT. INSURANCE COMM.	n/a	WORKERS COMPENSATION RATES
2002	HAROLD MORRIS PERSONAL INJURY	FED. DIST CT (RICHMOND)	n/a	LOST WAGES
2002	PHILADELPHIA SUBURBAN WATER CO. (DIRECT)	PA. PUC	R00016750	COST ALLOCATIONS AND RATE DESIGN
2002	PIEDMONT NATURAL GAS	S.C. PSC	2002-63-G	REVENUE RQMT, COST OF CAPITAL
2002	SOUTH CAROLINA ELECTRIC & GAS (ELECTRIC)	S.C. PSC	2002-223-E	REVENUE RQMT.
2002	VIRGINIA AMERICAN WATER COMPANY	VA. SCC	PUE-2002-00375	JURISDICTIONAL/CLASS ALLOCATIONS
2002	ROANOKE GAS COMPANY	VA. SCC	PUE-2002-00373	WEATHER NORMALIZATION RIDER
2003	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	INS-2003-00157	WORKERS COMPENSATION RATES
2003	CREDIT LIFE/AH RATE FILING	VA. SCC		PRIMA FACIA RATES, LEVEL OF COMPETITION
2003	ROANOKE GAS	VA. SCC	PUE-2003-00425	WEATHER NORMALIZATION ADJUSTMENT RIDER
2003	SOUTHWESTERN VIRGINIA GAS CO.	VA. SCC	PUE-2003-00426	WEATHER NORMALIZATION ADJUSTMENT RIDER

**EXPERT TESTIMONY
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YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
2004	NATIONAL FUEL GAS DISTRIBUTION	PA. PUC	R00049656	COST ALLOCATIONS/ RATE DESIGN
2004	SOUTH CAROLINA PIPELINE COMPANY	S.C. PSC	2004-6-G	COST OF GAS AND INTERUPT. SALES PROGRAM
2004	SCE&G FUEL CONTRACT	S.C. PSC	2004-126-E	GAS CONTRACT FOR COMBINED CYCLE PLANT
2004	SCE&G RATE CASE (ELECTRIC)	S.C. PSC	2004-178-E	COST OF CAPITAL/ REV RQMT.
2004	ATLAS HONDA v. HONDA MOTOR CO.	VA. DMV	None	NEW DEALER PROTEST
2004	MEDICAL MALPRACTICE LEGISLATION	VA. GENERAL ASSEMBLY	N/A	INDUSTRY RESTRUTURE/ PROFITABILITY
2004	VIRGINIA AMERICAN WATER COMPANY	VA. SCC	PUE-2003-00539	JURISDICTIONAL/CLASS ALLOCATIONS
2004	WASHINGTON GAS LIGHT	VA. SCC	PUE-2003-00603	RATE DESIGN/ WNA RIDER
2004	ATMOS ENERGY	VA. SCC	PUE-2003-00507	RATE DESIGN/ WNA RIDER
2004	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	INS-2004-00124	WORKERS COMPENSATION RATES
2005	NEWTOWN ARTESIAN WATER	PA. PUC		REV. RQMT./ RATE STRUCTURE
2005	CITY OF BETHLEHEM WATER RATE CASE	PA. PUC		REV. RQMT./ RATE STRUCTURE
2005	Serra Chevrolet	US Federal Ct.	CV-01-P-2682-S	Dealer incremental profits and costs
2005	WASHINGTON GAS LIGHT	VA SCC	PUE-2005-00010	WEATHER NORMALIZATION ADJUSTMENT RIDER
2005	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	INS-2005-00159	WORKERS COMPENSATION RATES
2005	Virginia Natural Gas	VA SCC	PUE-2005-00057	Revenue Requirement/ Alt. Regulation Plan
2006	Olathe Hyundai v. Hyundai Motors of America	KS DMV	None	Dealer impact analysis
2006	PPL Gas	PA. PUC	R-00061398	COST ALLOCATIONS/ RATE DESIGN
2006	Virginia Credit Life & A&H Prima Facia Rates	VA SCC	INS-2006-00013	Market Structure
2006	Columbia Gas of Virginia	VA SCC	PUE-2005-00098	Revenue Requirements/ Alt. Regulation Plan
2006	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	INS-2006-00197	WORKERS COMPENSATION RATES
2007	Georgia Power	Ga.PSC	25060-U	Cost Allocations/Rate Design
2007	Level of Private Pass. Auto Competition	Ma. Dept of Insur	N/A	Private Pass Auto level of competition
2007	Valley Energy	PA. PUC	R-00072349	Cost of Capital/Rate Design
2007	Wellsboro Electric	PA. PUC	R-00072350	Cost of Capital/Rate Design
2007	Citizens' Electric Of Lewisburg, Pa	PA. PUC	R-00072348	Cost of Capital/Rate Design
2007	WASHINGTON GAS LIGHT	VA SCC	PUE-2006-00059	Cost Allocations/ Rate Design/ Alt Regulation Plan
2007	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	INS-2007-00224	WORKERS COMPENSATION RATES
2008	Blue Grass Electric Cooperative	Ky PSC	2008-00011	Cost Allocations/Rate Design
2008	LG&E (Electric)	Ky PSC	2008-000252	Cost Allocations/Rate Design/ Weather Normalization
2008	LG&E (Natural Gas)	Ky PSC	2008-000252	Cost Allocations/Rate Design
2008	Kentucky Utilities	Ky PSC	2008-00251	Cost Allocations/Rate Design/ Weather Normalization
2008	Columbia Gas of Ohio	OH PUC	08-72-GA-AIR, et. al	Cost Allocations/Rate Design
2008	Columbia Gas of Pennsylvania	PA. PUC	R-2008-2011621	COST ALLOCATIONS/ RATE DESIGN
2008	Equitable Natural Gas	PA. PUC	R-2008-2029325	Cost Allocations/Rate Design/ Discounted Rates
2008	Pike County Natural Gas	PA. PUC	R-2008-2046520	Cost Allocations/Rate Design
2008	Pike County Electric	PA. PUC	R-2008-2046518	Cost Allocations/Rate Design
2008	Newtown Artesian Water	PA. PUC	R-2008-2042293	Revenue Requirement
2008	Virginia Natural Gas	Va SCC	PUE-2008-00060	Natl Gas Conservation/ Revenue Decoupling
2008	Greenway Toll Road Investigation	VA. GENERAL ASSEMBLY	N/A	Affiliate Transactions
2008	Puget Sound Energy (Electric)	WA UTC	UE-072300	Cost Allocations/Rate Design
2008	Puget Sound Energy (Gas)	WA UTC	UE-072301	Cost Allocations/Rate Design
2009	Fairfax County v. City of Falls Church Virginia	Fairfax Circuit Ct. (Va.)	CL-2008-16114	Water Revenue Requirement
2009	Columbia Gas of Kentuky	Ky PSC	2009-00141	Cost Allocations/Rate Design
2009	Duke Energy of Kentucky (Gas)	Ky. PSC	2009-00202	Rate Design
2009	Duke Energy Carolinas (Electric)	NC UC	E-7 Sub 909	Cost Allocations/Rate Design
2009	United Water of Pennsylvania	PA PUC	2009-212287	Cost Allocations/Rate Design
2009	Central Penn Gas, Inc.	PA. PUC	R-02008-2079675	Cost Allocation/Rate Design
2009	Penn Natural Gas, Inc.	PA. PUC	R-2008-2079660	Cost Allocation/Rate Design
2009	NCCI (Workers Compensation Rates)	VA SCC	INS-2009-00142	Workers Compensation Rates
2009	Leesburg Water & Sewer	Va. Circuit Ct.	Civil Action 42736	Revenue Requirement/ Excess Rates
2009	Credit Life/ A&H ratemaking	Va. SCC	n/a	Market Structure and Availability
2009	Avista Utilities (Electric)	WA UTC	UE-090134	Electric rate Design
2009	Avista Utilities (Gas)	WA UTC	UG-090135	Gas Rate design
2009	PacifiCorp	WA UTC	UE-090205	Rate Design/Low Income
2009	Puget Sound Energy (Electric)	WA UTC	UE-090704	Cost Allocations/Rate Design
2009	Puget Sound Energy (Gas)	WA UTC	UG-090705	Cost Allocations/Rate Design
2010	Georgia Power Company	GA PSC	Docket No. 31958	Cost Allocations/Rate Design
2010	Kentucky Utilities	Ky PSC	2009-00548	Cost Allocations/Rate Design/ Weather Normalization
2010	LG&E (Electric)	Ky PSC	2009-00549	Cost Allocations/Rate Design

EXPERT TESTIMONY
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YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
2010	LG&E (Natural Gas)	Ky PSC	2009-00549	Cost Allocations/Rate Design/ Weather Normalization
2010	Philadelphia Gas Works	PA PUC	2009-2139884	Cost Allocations/Rate Design
2010	Columbia Gas of Pennsylvania	PA PUC	2009-2149262	Cost Allocations/Rate Design
2010	PPL Electric Company	PA PUC	2010-2161694	Cost Allocations/Rate Design
2010	York Water Company	PA PUC	2010-2157140	Cost Allocations/Rate Design
2010	Valley Energy, Inc.	PA PUC	2010-2174470	Cost of Capital/Revenue Requirement/Rate Design
2010	City of Lancaster, Bureau of Water	PA PUC	R-2010-2179103	Cost of Capital
2010	Aqua Virginia, Inc.	VA SCC	PUE-2009-00059	Rate Design
2010	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	INS-2010-00126	WORKERS COMPENSATION RATES
2010	Columbia Gas of Virginia	VA SCC	PUE-2010-00017	Cost of Capital/Revenue Requirement/Rate Design
2011	Arizona-American Water Company	AZ. CORP COMM	W-01303A-10-0448	Excess Capacity/Need For Facilities
2011	Artesian Water Company	DE PSC	11-207	Cost Allocations/Rate Design
2011	Owen Electric Cooperative	KY PSC	PUE-2011-00037	Rate Design
2011	Columbia Gas of Pennsylvania	PA PUC	R-2010-2215623	Cost Allocations/Rate Design
2011	United Water of Pennsylvania	PA PUC	2011-2232985	Cost Allocations/Rate Design
2011	PPL Electric Company (Remand)	PA PUC	2010-2161694	Negotiated Industrial Rate
2011	Virginia Natural Gas	VA SCC	PUE-2010-00142	Pipeline Prudency/Cost Allocations/Rate Design
2011	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	2011-00163	WORKERS COMPENSATION RATES
2012	Tidewater Utilities, Inc.	DE PSC	11-397	Cost of Capital/Revenue Requirement/Rate Design
2012	Kentucky Utilities	Ky PSC	2012-00221	Cost Allocations/Rate Design/ Weather Normalization
2012	LG&E (Electric)	Ky PSC	2012-00222	Cost Allocations/Rate Design
2012	LG&E (Natural Gas)	Ky PSC	2012-00222	Cost Allocations/Rate Design/ Weather Normalization
2012	PPL Electric	PA PUC	R-2012-2290597	Cost Allocations/Rate Design
2012	Columbia Gas of Pennsylvania	PA PUC	2012-2321748	Cost Allocations/Rate Design/Revenue Distribution
2012	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	INS-2012-00144	WORKERS COMPENSATION RATES
2012	Credit Life Accident & Health	VA SCC	INS-2012-00014	Market Structure and Performance
2012	Avista Utilities (Electric)	WA UTC	UE-120436	Electric rate Design
2012	Avista Utilities (Gas)	WA UTC	UG-120437	Gas Rate design
2013	Delmarva Power & Light	DE PSC	12-546	Revenue Requirement/Rate Design
2013	Georgia Power Company	GA PSC	36989	Cost Allocations/Rate Design
2013	Atmos Energy Kentucky	KY PSC	2013-00148	Cost Allocations/Rate Design
2013	Columbia Gas of Kentuky	KY PSC	2013-00167	Cost Allocations/Rate Design
2013	Columbia Gas of Maryland	MD OPC	9316	Cost Allocations/Rate Design
2013	Gas-On-Gas Competition - Generic Investigation	PA PUC	2012-232-0323	Treatment of Rate Discounts
2013	Duquesne Light Company	PA PUC	R-2013-2372129	Cost Allocations/Rate Design
2013	Virginia Natural Gas - CARE Plan	VA SCC	2012-00118	Energy Conservation and Decoupling
2013	Northern Virginia Electric Cooperative Pole Attachment Fees	VA SCC	2013-00055	Financial Performance
2013	NCCI (Workers Compensation Insurance)	VA SCC	INS-2013-00158	Workers Compensation Rates
2013	PacifiCorp	WA UTC	13-0043	Residential Customer Charges
2014	Tidewater Utilities, Inc.	DE PSC	13-466	Cost of Capital/Rate Design
2014	Artesian Water Company	DE PSC	14-132	Revenue Requirement/Rate Design
2014	PEPCO Maryland	MD OPC	9336	Rate Design
2014	CITY OF BETHLEHEM WATER RATE CASE	PA PUC	R-2013-2390244	Cost of Capital
2014	Columbia Gas of Pennsylvania	PA PUC	R-2014-2406274	Cost Allocations/Rate Design
2014	Columbia NAS Pilot	PA PUC	R-2014-2407345	Mains Extension Policy
2014	Emporium Water Company	PA PUC	R-2014-2402324	Cost of Capital
2014	City of Lancaster, Bureau of Water	PA PUC	R-2014-2418872	Cost of Capital
2014	Peoples Service Expansion Tariff	PA PUC	R-2014-2429613	Mains Extension Policy
2014	NCCI (Workers Compensation Insurance)	VA SCC	INS-2014-00172	Workers Compensation Rates
2014	Avista Utilities, Inc. (Gas)	WA UTC	UG-140189	Cost Allocations/Rate Design
2014	PacifiCorp	WA UTC	UE-140762	Cost Allocations/Rate Design
2015	Exelon/PHI Acquisition	DE PSC	14-193	Merger/Acquisition
2015	Indianapolis Power & Light	Indiana OUCC	44576	Cost Allocations/Rate Design
2015	Choptank Electric Cooperative	MD OPC	9368	Cost Allocations/Rate Design
2015	PECO Energy Company-Service Expansion Tariff	PA PUC	R-2014-2451772	Mains Extension Policy
2015	PPL Electric Corporation	PA PUC	R-2015-2469275	Cost Allocations/Rate Design
2015	PECO Energy Company	PA PUC	R-2015-2468981	Cost Allocations/Rate Design
2015	Columbia Gas of Virginia	VA SCC	PUE-2014-00020	Rate Design-Customer Charges
2015	Credit Life/AH Rate Filing	VA SCC	INS-2015-00022	Market Structure and Performance
2015	NCCI (Workers Compensation Insurance)	VA SCC	INS-2015-00064	Workers Compensation Rates

**EXPERT TESTIMONY
PROVIDED BY
GLENN A. WATKINS**

YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
2016	Chesapeake Utilities, Inc.	DE PSC	15-1734	Revenue Requirements/Cost Allocations/Rate Design
2016	Suez Water Company	DE PSC	16-0163	Revenue Requirements/Cost Allocations/Rate Design
2016	Delmarva Power & Light - Electric	DE PSC	16-0649	Revenue Requirements/Cost Allocations/Rate Design
2016	Delmarva Power & Light - Gas	DE PSC	16-0650	Revenue Requirements/Cost Allocations/Rate Design
2016	Northern Indiana Public Service Company	Indiana OUCC	Cause No. 44688	Cost Allocations/Rate Design
2016	Kansas Gas Service	KS CURB	16-KGSG-491-RTS	Cost Allocations/Rate Design
2016	Kentucky Utilities	Ky PSC	2016-00370	Cost Allocations/Rate Design
2016	Louisville Gas & Electric	Ky PSC	2016-00371	Cost Allocations/Rate Design
2016	Washington Suburban Sanitary Complaint Comission	MD OPC	Case No. 9391	Rate Structure
2016	Columbia Gas of Maryland	MD OPC	Case No. 9417	Cost Allocations/Rate Design/Main Line Extensions Policy
2016	Atlantic City Sewerage	NJ Rate Counsel	WR16100957	Cost of Capital
2016	UGI Utilities, Inc. - Gas Division	PA PUC	R-2015-2518438	Cost Allocations/Rate Design
2016	Peoples Service Expansion Tariff	PA PUC	R-2016-2542918	Mains Extension Policy
2016	Anthem/Cigna Merger	VA SCC	INS-2015-00154	Market Structure/Level of Competition
2016	NCCI (Workers Compensation Insurance)	Va SCC	INS-2016-00158	Workers Compensation Rates: Cost of Capital, IRR
2016	Washington Gas Light	VA SCC	PUE-2016-00001	Cost Allocations/Rate Design
2016	Cascade Natural Gas	WA UTC	UG-152286	Revenue Requirements
2016	Avista Utilities, Inc. (Gas & Electric)	WA UTC	UE-160228/UG-160229	Attrition
2017	Indiana Michigan Power Company	Indiana OUCC	Cause No. 44967	Cost Allocations/Rate Design
2017	Duke Energy Kentucky	Ky PSC	2017-00321	Cost Allocations/Rate Design
2017	Choptank Electric Cooperative	MD OPC	Case No. 9459	Rate Design
2017	UGI Penn Natural Gas	PA PUC	R-2016-2580030	Cost Allocations/Rate Design
2017	Pennsylvania-American Water	PA PUC	R-2017-259583	Cost of Capital
2017	Aqua-Limerick Valuations	PA PUC	A-2017-2605434	Discounted Cash Flow Valuation
2017	PAWC-McKeesport Valuations	PA PUC	A-2017-2606103	Discounted Cash Flow Valuation
2017	Virginia Natural Gas	VA SCC	PUE-2016-00143	Cost Allocations/Rate Design
2017	NCCI (Workers Compensation Insurance)	Va SCC	INS-2017-00059	Workers Compensation Rates: Cost of Capital, IRR
2017	Puget Sound Energy	WA UTC	UE-170033 & UG-170034	Cost Allocations/Rate Design
2018	Delmarva Power & Light - Electric	DE PSC	17-0977	Revenue Requirements and Rate Design
2018	Delmarva Power & Light - Gas	DE PSC	17-0978	Revenue Requirements and Rate Design
2018	Delmarva Power & Light Plug-In Vehicle Charging	DE PSC	17-1094	Ratepayer subsidies for Electric Vehicles
2018	Chesapeake Utilities, Inc. Natural Gas Expansion	DE PSC	17-1224	Mains Extension Policy
2018	Indianapolis Power & Light	Indiana OUCC	Cause No. 45029	Cost Allocations/Rate Design
2018	Kansas Gas Service	KS CURB	18-KGSG-560-RTS	Cost Allocations/Rate Design
2018	Baltimore Gas & Electric Company	MD OPC	Case No. 9484	Cost Allocations/Rate Design
2018	Duquesne Light Company	PA PUC	R-2018-3000124	Cost Allocations/Rate Design/EV Subsidy/Microgrid
2018	PAWC-Sadsbury Valuations	PA PUC	A-2018-3002437	Discounted Cash Flow Valuation
2018	SUEZ Water Company-Mahoning Valuations	PA PUC	A-2018-3003519	Discounted Cash Flow Valuation
2018	Aqua Pennsylvania, Inc.	PA PUC	R-2018-3003558	Cost of Capital
2019	Chesapeake Utilities	DE PSC	19-0054	WNA Rider/Cost of Equity
2019	Northern Indiana Public Service Company	Indiana OUCC	Cause No. 45159	Cost Allocations/Rate Design
2019	Indiana Michigan Power Company	Indiana OUCC	Cause No. 45235	Cost Allocations/Rate Design
2019	Duke Energy Indiana	Indiana OUCC	Cause No. 45253	Cost Allocations/Rate Design
2019	Atmos Energy Kansas	KS CURB	19-ATMG-525-RTS	Cost Allocations/Rate Design
2019	Kentucky Utilities/Louisville Gas & Electric	Ky PSC	2018-00294	Cost Allocations/Rate Design
2019	Montana-Dakota Utilities	Montana Consumer Counsel	D2018.9.60	Cost Allocations/Rate Design
2019	Sierra Pacific Power Company	NV PUC	19-06002	Cost Allocations/Rate Design
2019	Peoples Natural Gas Company	PA PUC	R-2018-3006818	Cost Allocations/Rate Design/Negotiated Rates
2019	PAWC-Exeter Valuations	PA PUC	A-2018-3004933	Discounted Cash Flow Valuation
2019	Aqua-Cheltenham Valuations	PA PUC	A-2019-3008491	Discounted Cash Flow Valuation
2019	PAWC-Steelton Valuations	PA PUC	A-2019-3006880	Discounted Cash Flow Valuation
2019	Washington Gas Light	VA SCC	PUR-2018-00080	Cost Allocations/Rate Design
2019	Virginia-American Water Company	VA SCC	PUR-2018-00175	Cost Allocations/Rate Design
2019	Avista Remand (Customer Refunds)	WA UTC	UE-150204 & UG-150205	Distribution of Refund to Classes
2019	Avista Utilities, Inc. - Gas	WA UTC	UG-19-00335	Cost Allocations/Rate Design
2019	Puget Sound Energy-Electric	WA UTC	UE-19-00529	Cost Allocations/Rate Design
2019	Puget Sound Energy-Gas	WA UTC	UG-19-00530	Cost Allocations/Rate Design
2019	Duke Energy Kentucky	Ky PSC	2019-00271	Rate Design
2020	Aqua - East Norriton Valuation	PA PUC	2019-3009052	Discounted Cash Flow Valuation
2020	Delmarva Power & Light Maryland	MD OPC	9630	Cost Allocations/Rate Design

SOUTHERN PIONEER ELECTRIC COMPANY
CURB Residential Customer Cost Analysis

			Residential (R1)				Residential Heating (R2)			
		Classification	**Company**		**CURB**		**Company**		**CURB**	
O&M Expenses:										
580	Oper. Super & Eng.	Meters & Services	$ 52,609		$ -		$ 2,497		$ -	
586	Oper. Meters	Meters & Services	$ 268,139		$ 268,139		$ 12,727		$ 12,727	
588	Oper. Misc. Oper.	Meters & Services	$ 117,179		$ -		$ 5,562		$ -	
590	Maint. Super. & Eng.	Meters & Services	$ 348		$ -		$ 17		$ -	
597	Maint. Meters	Meter & Service	$ 2,284		$ 2,284		$ 108		$ 108	
598	Maint. Misc. Dist.	Meter & Service	$ 431		$ -		$ 20		$ -	
902	Meter Reading Expense	Cust. Acct.	$ 26,628		$ 26,628		$ 1,264		$ 1,264	
903	Records & Collections	Cust. Acct.	$ 716,648		$ 660,980	1/	$ 34,014		$ 31,372	1/
904	Uncollectible Accounts	Cust. Acct.	$ 44,354		$ -		$ 2,105		$ -	
905	Misc. Customer Account	Cust. Acct.	$ 28,280		$ 27,514	1/	$ 1,342		$ 1,306	1/
907	Supervision	Cust. Acct.	$ 7,778		$ -		$ 369		$ -	
908	Customer Assistance	Cust. Acct.	$ 120,913		$ -		$ 5,739		$ -	
910	Misc. Cust Serv. & Info	Cust. Acct.	$ 14,304		$ -		$ 679		$ -	
912	Demonstrating & Selling	Cust. Acct.	$ 4,479		$ -		$ 213		$ -	
920-932	A&G	Meters & Cust. Acct.	$ 299,760	2/	$ -		$ 14,228	3/	$ -	
	Total O&M		$ 1,704,135		$ 985,545		$ 80,883		$ 46,777	
Depreciation Expense:										
	Services	Meter & Service	$ 33,013		$ 33,013		$ 1,567		$ 1,567	
	Meters	Meter & Service	$ 119,193		$ 119,193		$ 5,657		$ 5,657	
	Total Depreciation		$ 152,206		$ 152,206		$ 7,224		$ 7,224	
Return & Taxes:										
	Interest Expense	Meter & Service	$ 298,438	4/	$ 298,438		$ 14,164	5/	$ 14,164	
	Margin	Margins	$ 208,667	6/	$ 208,667		$ 9,904	7/	$ 9,904	
	Taxes & Misc.	Taxes & Misc.	$ 137,482	8/	$ 44,787	9/	$ 6,530	10/	$ 2,126	9/
	Total Return & Taxes		$ 644,587		$ 551,892		$ 30,598		$ 26,194	
Summary - Revenue Requirement:										
	Total O&M		$ 1,704,135		$ 985,545		$ 80,883		$ 46,777	
	Depreciation		$ 152,206		$ 152,206		$ 7,224		$ 7,224	
	Return & Taxes		$ 644,587		$ 551,892		$ 30,598		$ 26,194	
	Total Revenue Requirement		$ 2,500,929		$ 1,689,643		$ 118,705		$ 80,194	
	Number of Customers		11,960		11,960		568		$ 568	
	Number of Bills		143,520		143,520		6,816		$ 6,816	
Customer Cost Per Month			$ 17.43		$ 11.77		$ 17.42		$ 11.77	

1/ Per Page 2.
2/ 94,128 associated with Meters and 205,632 associated with Services.
3/ 4,468 associated with Meters and 9,760 associated with Services.
4/ 233,707 associated with Meters and 64,731 associated with Services.
5/ 11,092 associated with Meters and 3,072 associated with Services.
6/ 163,407 associated with Meters and 45,260 associated with Services.
7/ 7,756 associated with Meters and 2,148 associated with Services.
8/ 43,956 associated with Meters and 93,526 associated with Services.
9/ Per Page 3.
10/ 2,086 associated with Meters and 4,444 associated with Services.

SOUTHERN PIONEER ELECTRIC COMPANY
CURB Development of Accounts 902-910

Total Southern Pioneer						CURB Customer Costs				
						R1		R2		
		2017	a/	Ratio to CCOSS		Alloc. Factor b/	Alloc. Amt.	Alloc. Factor b/	Alloc. Amt.	
902.0	METER READING	$ 39,542		$ 39,525	Include	67.3691%	$ 26,628	3.1975%	$ 1,264	
903.0	CUSTOMER RECORDS & COLLECTION	$ 981,568		$ 981,133	Include	67.3691%	$ 660,980	3.1975%	$ 31,372	
903.1	CASH SHORT/LONG	$ 330		$ 330	Exclude		$ -		$ -	
903.2	CUSTOMER RECORDS - COLLECTION	$ 60,519		$ 60,492	Exclude		$ -		$ -	
903.5	TRAINING-CONSUMER ACCOUNTING	$ 22,715		$ 22,704	Exclude		$ -		$ -	
903.6	CREDIT CARD MERCHANT FEES	$ (897)		$ (896)	Exclude		$ -		$ -	
	Total 903	$ 1,064,235		$ 1,063,764			$ 660,980		$ 31,372	
904.0	UNCOLLECTIBLE ACCOUNTS	$ 65,867		$ 65,837	Exclude		$ -		$ -	
905.0	CUSTOMER RECORDS-MISC CUSTOMER A	$ 40,858		$ 40,840	Include	67.3691%	$ 27,514	3.1975%	$ 1,306	
905.4	CUSTOMER RECORDS-ADV, DUES, PROM	$ 1,137		$ 1,137	Exclude		$ -		$ -	
	Total 905	$ 41,995		$ 41,977			$ 27,514		$ 1,306	
TOTAL CUSTOMER ACCOUNTS		$ 1,211,640		$ 1,211,103			$ 715,122		$ 33,942	
Customer Service and Informational Expense										
907.0	CUST SV & INFO-KEY ACCOUNT	$ 10,016		$ 9,085	Exclude		$ -		$ -	
907.4	KEY ACCOUNT SPECIAL EVENTS/ACTIVI	$ 2,713		$ 2,461	Exclude		$ -		$ -	
	Total 907	$ 12,729		$ 11,546			$ -		$ -	
908.0	CUST SV & INFO-CUSTOMER ASSISTANCE	$ 190,603		$ 172,887	Exclude		$ -		$ -	
908.4	CUST SV & INFO-ADV, DUES, PROMO, EN	$ 6,395		$ 5,801	Exclude		$ -		$ -	
908.5	TRAINING-ENERGY SERVICES	$ 872		$ 791	Exclude		$ -		$ -	
	Total 908	$ 197,870		$ 179,478			$ -		$ -	
910.0	MISC CUSTOMER SVC & INFORMATION E	$ 1,140		$ 1,034	Exclude		$ -		$ -	
910.11	YOUTH TOURS	$ 20,431		$ 18,532	Exclude		$ -		$ -	
910.1	SCHOLARSHIP EXPENSE (OTHER THAN A	$ 1,838		$ 1,667	Exclude		$ -		$ -	
	Total 910	$ 23,408		$ 21,233			$ -		$ -	
TOTAL CUSTOMER SERVICE & INFO. EXPENSE		$ 234,008		$ 212,257			$ -		$ -	

a/ Per SPPE Response to CURB Data Request No. 19, Attachment.
b/ Company allocation factor for Customer Accounts Expense.

SOUTHERN PIONEER ELECTRIC COMPANY
CURB Development of Taxes & Miscellaneous Expenses

	Total	Distribution	Distribution	Meters	Meters	Meters	Services	Services	Services	Meters + Services + Rev.	
	Pwr. Sup. + T + D	**Percent**	**Function**	**Classified**	**Alloc. To R1**	**Alloc. To R2**	**Classified**	**Alloc. To R1**	**Alloc. To R2**	**Alloc. To R1**	**Alloc. To R2**
1. Other Interest - Per Company CCOSS	$ 97,063	85.0388%	$ 82,541	$ 7,370	$ 4,965	$ 236	$ 16,101	$ 10,847	$ 515	$ 15,813	$ 751
1. Other Interest - Per CURB Analysis	Exclude									$ -	$ -
2. Other Deductions - Per Company CCOSS	$ 762,195	85.0388%	$ 648,162	$ 57,877	$ 38,991	$ 1,851	$ 126,437	$ 85,179	$ 4,043	$ 124,170	$ 5,893
2. Other Deductions - Per CURB Analysis											
426.1 DONATIONS	Exclude		$ 27,896	$ 2,491	$ 1,678	$ 80	$ 5,442	$ 3,666	$ 174	$ -	$ -
426.13 SCHOLARSHIP AWARDS	Exclude		$ 12,309	$ 1,099	$ 740	$ 35	$ 2,401	$ 1,618	$ 77	$ -	$ -
426.3 PENALTIES	Exclude		$ 2,448	$ 219	$ 147	$ 7	$ 478	$ 322	$ 15	$ -	$ -
426.5 OTHER DEDUCTIONS	Exclude		$ (7)	$ (1)	$ (0)	$ (0)	$ (1)	$ (1)	$ (0)	$ -	$ -
426.6 PENSION NET PERIODIC BENEFIT COST	Exclude		$ 364,530	$ 32,550	$ 21,929	$ 1,041	$ 71,109	$ 47,905	$ 2,274	$ -	$ -
428.0 AMORTIZATION OF MORTGAGE FEES	Exclude		$ 7,197	$ 643	$ 433	$ 21	$ 1,404	$ 946	$ 45	$ -	$ -
428.1 AMORTIZATION OF LOSS-REAQUIRED DE	Include		$ 233,788	$ 20,876	$ 14,064	$ 668	$ 45,605	$ 30,724	$ 1,458	$ 44,787	$ 2,126
Total Other Deductions - CURB			$ 648,162	$ 57,877	$ 38,991	$ 1,851	$ 126,437	$ 85,179	$ 4,043	$ 44,787	$ 2,126
3. Other Tax - Per Company CCOSS	$ (46,333)	100.0000%	$ (46,333)							$ (2,500)	$ (114)
3. Other Tax - Per CURB Analysis	Exclude									$ -	$ -
Total Taxes & Miscellaneous Expenses - Per Company CCOSS										$ 137,483	$ 6,530
Total Taxes & Miscellaneous Expenses - Per CURB Analysis										$ 44,787	$ 2,126

SOUTHERN PIONEER ELECTRIC COMPANY
Residential Customer #6 - Installed Self-Generation Capacity of 2 KW

Billing Period	Retail Rate Schedule	kWh Delivered to Consumer	Excess kWh Delivered to the Grid	Net kWh Usage	Net Bill	Energy Rate 1/	Net Metering Benefit	Proposed GAC	Net Benefit
Dec-19	KSK01	407	1	406	$ 62.44	$ 0.12240	$ 0.12	$ 14.72	$ (14.60)
Nov-19	KSK01	335	1	334	$ 54.14	$ 0.12240	$ 0.12	$ 14.72	$ (14.60)
Oct-19	KSK01	1,334	0	1,334	$ 206.94	$ 0.13340	$ -	$ 14.72	$ (14.72)
Sep-19	KSK01	1,504	0	1,504	$ 235.20	$ 0.13340	$ -	$ 14.72	$ (14.72)
Aug-19	KSK01	1,694	0	1,694	$ 252.24	$ 0.13340	$ -	$ 14.72	$ (14.72)
Jul-19	KSK01	865	2	863	$ 135.47	$ 0.13340	$ 0.27	$ 14.72	$ (14.45)
Jun-19	KSK01	259	7	252	$ 46.91	$ 0.12240	$ 0.86	$ 14.72	$ (13.86)
May-19	KSK01	286	18	268	$ 49.57	$ 0.12240	$ 2.20	$ 14.72	$ (12.52)
Apr-19	KSK01	630	8	622	$ 89.67	$ 0.12240	$ 0.98	$ 14.72	$ (13.74)
Mar-19	KSK01	1,323	2	1,321	$ 179.59	$ 0.12240	$ 0.24	$ 14.72	$ (14.48)
Feb-19	KSK01	794	4	790	$ 125.32	$ 0.12240	$ 0.49	$ 14.72	$ (14.23)
Jan-19	KSK01	608	5	603	$ 96.24	$ 0.12240	$ 0.61	$ 14.72	$ (14.11)
Total		10,039	48	9,991	$ 1,533.73		$ 5.90	$ 176.64	$ (170.74)

1/ Residential General Use delivery charge plus energy cost adjustment.

Source: Response to CURB-16.

SOUTHERN PIONEER ELECTRIC COMPANY
Residential Customer #4 - Installed Self-Generation Capacity of 14 KW

Billing Period	Retail Rate Schedule	kWh Delivered to Consumer	Excess kWh Delivered to the Grid	Net kWh Usage	Net Bill	Energy Rate 1/	Net Metering Benefit	Proposed GAC	Net Benefit
19-Dec	KSK01	2,228	472	1,756	$ 216.28	$ 0.12240	$ 57.77	$ 41.00	$ 16.77
19-Nov	KSK01	1,789	754	1,035	$ 133.57	$ 0.12240	$ 92.29	$ 41.00	$ 51.29
19-Oct	KSK01	1,158	834	324	$ 60.09	$ 0.13340	$ 111.26	$ 41.00	$ 70.26
19-Sep	KSK01	1,321	874	447	$ 78.52	$ 0.13340	$ 116.59	$ 41.00	$ 75.59
19-Aug	KSK01	1,022	1,077	0	$ 14.43	$ 0.13340	$ 143.67	$ 41.00	$ 102.67
19-Jul	KSK01	1,004	1,163	0	$ 14.43	$ 0.13340	$ 155.14	$ 41.00	$ 114.14
19-Jun	KSK01	1,048	1,169	0	$ 14.43	$ 0.12240	$ 143.09	$ 41.00	$ 102.09
19-May	KSK01	1,260	1,073	187	$ 38.19	$ 0.12240	$ 131.34	$ 41.00	$ 90.34
19-Apr	KSK01	1,735	993	742	$ 101.61	$ 0.12240	$ 121.54	$ 41.00	$ 80.54
19-Mar	KSK01	3,284	411	2,873	$ 364.86	$ 0.12240	$ 50.31	$ 41.00	$ 9.31
19-Feb	KSK01	2,833	349	2,484	$ 354.26	$ 0.12240	$ 42.72	$ 41.00	$ 1.72
19-Jan	KSK01	2,863	326	2,537	$ 349.94	$ 0.12240	$ 39.90	$ 41.00	$ (1.10)
Total		21,545	9,495	12,385	$ 1,740.61		$ 1,205.62	$ 492.00	$ 713.62

1/ Residential General Use delivery charge plus energy cost adjustment.

Source: Response to CURB-16.

SOUTHERN PIONEER ELECTRIC COMPANY
Residential Customer #5 - Installed Self-Generation Capacity of 14 KW

Billing Period	Retail Rate Schedule	kWh Delivered to Consumer	Excess kWh Delivered to the Grid	Net kWh Usage	Net Bill	Energy Rate 1/	Net Metering Benefit	Proposed GAC	Net Benefit
19-Dec	KSK01	884	426	458	$ 67.07	$ 0.12240	$ 52.14	$ 41.00	$ 11.14
19-Nov	KSK01	791	476	315	$ 50.69	$ 0.12240	$ 58.26	$ 41.00	$ 17.26
19-Oct	KSK01	931	251	680	$ 110.24	$ 0.13340	$ 33.48	$ 41.00	$ (7.52)
19-Sep	KSK01	925	256	669	$ 110.35	$ 0.13340	$ 34.15	$ 41.00	$ (6.85)
19-Aug	KSK01	955	275	680	$ 107.67	$ 0.13340	$ 36.69	$ 41.00	$ (4.32)
19-Jul	KSK01	753	363	390	$ 67.83	$ 0.13340	$ 48.42	$ 41.00	$ 7.42
19-Jun	KSK01	683	437	246	$ 45.15	$ 0.12240	$ 53.49	$ 41.00	$ 12.49
19-May	KSK01	723	496	227	$ 43.27	$ 0.12240	$ 60.71	$ 41.00	$ 19.71
19-Apr	KSK01	839	501	338	$ 54.15	$ 0.12240	$ 61.32	$ 41.00	$ 20.32
19-Mar	KSK01	1,410	302	1,108	$ 149.59	$ 0.12240	$ 36.96	$ 41.00	$ (4.04)
19-Feb	KSK01	970	374	596	$ 96.04	$ 0.12240	$ 45.78	$ 41.00	$ 4.78
19-Jan	KSK01	998	429	569	$ 89.67	$ 0.12240	$ 52.51	$ 41.00	$ 11.51
Total		10,862	4,586	6,276	$ 991.72		$ 573.92	$ 492.00	$ 81.92

1/ Residential General Use delivery charge plus energy cost adjustment.

Source: Response to CURB-16.

CERTIFICATE OF SERVICE

20-SPEE-169-RTS

I, the undersigned, hereby certify that a true and correct copy of the above and foregoing document was served by electronic service on this 2nd day of March, 2020, to the following:

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