PECO STATEMENT NO. 8

DIRECT TESTIMONY
OF
HOWARD S. GORMAN

DOCKET NO. R-2008-2028394

Presenting PECO's
Class Cost of Service Study

Date: March 31, 2008

DIRECT TESTIMONY OF
HOWARD S. GORMAN

1. Q. Please state your name, occupation and business address.

A. My name is Howard Gorman. I am a Principal Consultant with Black & Veatch Corporation ("Black & Veatch"). My business address is 898 Veterans Highway, Hauppauge, NY 11788.

2. Q. Please summarize your educational background, and professional experience.

A. My educational background and professional experience are outlined in my curriculum vitae that is attached to this testimony as Attachment A.

3. Q. Please briefly describe the scope of your engagement with PECO Energy Company and the purpose of your testimony.

A. Black & Veatch has been retained by PECO Energy Company (Gas) ("PECO" or "Company") to perform an unbundled, fully allocated class cost of service study (generally, a "COS Study"). One of the purposes of a COS Study is to assign the total costs and other elements of the revenue requirements of the Company to each rate class. The costs assigned to each rate class can then be compared to the revenue produced by the rates in the Company's current tariff, as well as to the rates proposed by the Company in this proceeding.

4. Q. Have yon previously testified before this Commission?

A. Yes, my prior testimony, including testimony before the Commission, is listed in Attachment B.

5. Q. What was the source of the information that you used in performing this engagement?

A. All of the information about PECO' s operations was provided by PECO, and I relied on the genuineness and completeness of all information presented to me by PECO. Costs and other data were provided by PECO for the Future Test Year (the year ending December 31, 2008), as described in the testimony of Company witness Mr. Robert O'Brien in PECO Statement No. 3. These data included forecasted costs of service, forecasted sales and transportation volumes, forecasted customer information and forecasted revenues. Other operating and plant information was supplied by PECO for the purpose of cost classification and the development of direct cost assignments and allocation factors that are required to perform the cost allocation study. The budget was prepared by PECO on the assumption of normal weather.

6. Q. How is your testimony organized?

A. In Section 1, I provide background information and identify the exhibits that I am sponsoring. In Section 2, I discuss the Cost of Service Study methodology. In Section 3, I discuss the development of the revenue requirement for each rate class. In Section 4, I present the results of the COS and discuss the contents of the exhibits.

SECTION I - BACKGROUND INFORMATION

7. Q. Please state PECO's distribution revennue requirement for the future test year.

A. The Future Test Year distribution revenue requirement, which excludes Purchased Gas Cost ("PGC") revenues, is $310,609,000, and $975,651,000 including PGC revenues. Please note that in my testimony, "sales" refers to volumes of natural

gas sold to customers and "revenues" refers to dollars received from customers on account of sales, transport service or otherwise.

8oQ. **Are all future test year revenues and cost reflected in the PECO cost of service study?**

mo Yes. The PECO COS Study reflects all revenues and costs except for those related to the Purchased Gas Clause. These are excluded because this filing by PECO is a distribution-only base rate case. Exhibit HSG-2A reconciles the costs and revenue requirement presented by Mr. O'Brien in PECO Statement No. 3 with those in the PECO COS Study.

9°Q. **Please identify the exhibits that are included with your testimony.**

The following exhibits are included with my testimony. They are discussed in detail in Section 4 of my testimony.

Exhibit HSG-1	Summary of Results
Exhibit HSG-1A	Revenue Requirement By Functional Classification
Exhibit HSG-1B	Total Class Allocation- Revenue Requirement By Rate Class
Exhibit HSG- 1C	Customer Charges
Exhibit HSG-2	Functionalization
Exhibit HSG-2A	Reconciliation of Net Income at Present Rates
Exhibit HSG-3	Classifications
Exhibit HSG-4A through Exhibit HSG-4F	Class Allocations
Exhibit HSG-5A	Allocator Values - Functionalization
Exhibit HSG-5B	Allocator Values - Classification
Exhibit HSG-5C	Allocator Values - Class Allocation
Exhibit HSG-5D	Assignment or Allocator Used for Each Account
Exhibit HSG-5E	Labor Report
Exhibit HSG-6	Development of External Allocator Values

10. Q. **Please summarize the results of your work as they apply to the changes to the tariff proposed by PEC in this filing.**

mo I have reached the following results and conclusions based on my work:

1. The current tariff rates result in the rate class net income as shown in Exhibit HSG-1, line 10, and the returns on rate base as shown on line 12.

2. PECO's total distribution revenue requirement for the Future Test Year has been assigned among the rate classes on a cost causation basis as shown on Exhibit HSG-1, line 13.

3. The increase or (decrease) in each rate class' revenue necessary to produce a return equal to the Company's proposed return on rate base are as shown in Exhibit HSG-1, line 20.

4. The monthly customer charges proposed by Mr. Paul Patterson in PECO Statement No. 9 are lower than the Company's costs of the type typically included in customer charges in Pennsylvania, as shown on Exhibit HSG-1C, line 64.

SECTION II - PECO CLASS COST OF SERVICE STUDY

11. Q. What are the guiding principles in performing a fully allocated cost of service study?

A. The essential element in performing a COS Study is the selection of allocators based on causal relationships between customer requirements, load profiles and usage characteristics on the one hand, and the costs incurred by the Company in serving those requirements on the other hand. The primary objectives in selecting allocators are:

1. recognition of **cost causality** as opposed to **value of service;**

2. stability of results over time;

3. logical consistency and **completeness;** and

4. ease of implementation.

12. Q. **Please briefly describe the purpose in performing a class cost of service study.**

mo An unbundled fully allocated cost of service study analyzes all the functional components of the utility's total cost of service and assigns plant investments and operating expenses, including gas supply costs, to determine the costs incurred by the utility in providing products and services to each rate class. The cost of service study determines the revenue requirement for each rate class. The revenue requirement for a rate class is that portion of the total costs of service incurred by the utility, in this case PECO, that can be attributed to that rate class on a cost-causality basis. An important aspect of a cost of service study is that all of the utility's costs of providing service must be analyzed and allocated among the rate classes, so that the utility can establish rates that ensure, subject to assumptions such as sales volumes and customer counts, that it recovers all of its costs.

13. Q. **Please explain the term "unbundled" with respect to the cost of providing natural gas service.**

mo Unbundling is the separation of the utility's cost of service into its various product and service components. This is further discussed in my discussion of the Functionalization step of the PECO COS Study.

14. Q. **Please summarize the approach that you followed in performing the** PECO COS **study.**

mo The most critical task in performing any cost of service study is establishing relationships between customer requirements, load profiles and usage characteristics on the one hand, and the costs incurred to serve those requirements on the other hand. At bottom, this requires an understanding of the utility system

design and the relationship of tat design to the characteristics of the customers it is designed to serve.

PECO, like most utilities, designs its gas distribution system to meet three primary objectives:

1. To extend distribution services to all customers;
2. To meet the aggregate design peak day capacity requirements of all customers entitled to receive service on the design peak day, and
3. To deliver volumes of natural gas to those customers either on a sales or transportation service basis.

It is important that the allocation methods used within a cost of service study recognize these *cost causative* characteristics of the utility' s plant investments and operating expenses. A cost of service study should objectively reflect cost causation factors attributable to the utility's customers, their gas usage requirements, and system operations, and to the extent possible, should not be influenced by desired end-results, customer equity, or other rate design considerations.

The PECO COS Study I am presenting was performed using the Black & Veatch proprietary Gas Cost of Service Model ("Model"), a Microsoft Excel based computer model. The Model is a tool that facilitates the allocation of common costs, speeds up computations and eases documentation. The study uses a basic three-step process of cost analysis: 1) *functionalization* of rate base, purchased gas supply costs and expenses among the following functions - supply, storage, transmission, distribution and onsite (including metering and customer accounts);

2) *classification* of functionalized costs into demand, commodity and customer cost categories; and 3) *class allocation* of functionalized, classified costs among the rate classes. The Model provides functionalized and classified cost information by service class, develops unbundled revenue requirements by functional classification and in total for each rate class, and calculates unit costs by function for demand, commodity and rate classifications.

15. Q. Please describe the functionalization step of a cost of service study.

A. In the functionalization step, costs are separated by the utility's basic service characteristics, as stated below. Commodity, storage, interstate transportation and related costs that are recovered in PECO's purchased gas cost rate filings have been excluded, because this filing is a distribution-only base rate case.

- *Supply* function includes operation and management costs related to commodity supply including production of liquid propane gas ("LPG").
- *Storage* function reflects costs incurred to ensure that firm customers' demand can be met on the design day. It includes the costs of operation and management of liquefied natural gas ("LNG") facilities.
- *Onsite* function includes the costs of operating activities starting at the meter on the customer's premises and includes metering, billing and accounting and certain customer assistance expenses.
- *Distribution* function includes all other costs, including operating expenses, the amounts of Uncollectible Accounts Expense and Customer Assistance Program not included elsewhere, and costs that are part of PECO' s regulated utility function.

16. Q. Please describe the classification step of a cost of service study.

A. In the classification step, the previously functionalized costs are separated according to the system design or operating characteristics that cause those costs to be incurred in the first instance. In this step, each cost is determined to be incurred to serve customers, to supply the natural gas commodity or to meet various capacity demands including coincident and non-coincident peaks.

Customer related costs are the costs incurred to attach a customer to the distribution system, to meter gas usage and to maintain the customer's account. Customer costs are a function of the number of customers served and continue to be incurred whether or not the particular customer uses any gas. They include capital costs associated with distribution mains, services and meters, and operating costs such as customer service, field service, billing and accounting expenses.

Commodity related costs are those costs that vary with the natural gas throughput sold to, or transported for, customers. These costs include commodity procurement and supply management costs.

Demand, or capacity, related costs are associated with plant that is designed, installed and operated to meet maximum hourly or daily gas flow requirements, such as measuring and regulating equipment. Demand-related costs associated with serving the *system design day are* allocated among the rate classes based upon contribution to the *system design day* requirements. Demand-related costs associated with managing supply throughout the *peak season are* allocated among the rate classes based upon contribution to the *peak season* requirements.

17. Q. Do all expenses fit neatly into one of these three classifications?

A. Most costs do fit neatly into one of the three classifications, but it may be necessary to assign some costs among two classifications based upon special external studies or based upon how related costs have been classified through the use of internal classification allocation factors. For example, Account 376, Mains, was classified as both demand and commodity related, as discussed below.

18. Q. Please describe the class allocation step of a cost of service study.

A. In the **class allocation** step, the functionalized, classified costs are allocated among the rate classes, based on causal relationships with the utility's gas system design and operations, its accounting records and its system and customer usage and load data. From the results of those analyses, direct assignments of costs, as well as class allocators, are chosen for each of the plant and expense elements.

19. Q. Please explain the term "direct assignment".

A. The term "direct assignment" means identifying plant investments or costs incurred exclusively to serve a specific customer or group of customers. Direct assignments best reflect the cost causation of serving individual customers or groups of customers, and should be used whenever the data are available.

20. Q. Is a large portion of the plant and expenses typically directly assined in a cost of service study?

A. No, most costs needs to be allocated. The nature of utility operations is characterized by common or joint use facilities. In addition, direct assignments require detailed information which may be unavailable or may require a great deal of time to obtain and use. For those utility plant costs and expenses that cannot be

directly assigned to customer groups, allocation factors must be derived to assign the remaining costs to the rate classes.

21. Q. Please explain how allocators are derived.

A. There are two types of allocation bases, or allocators, typically used in performing a cost of service study and employed in the Model: external allocators and internal allocators. *External allocators* are based on special studies derived from data in the utility's accotmting and other records. For example, the allocator Gas_Deliveries, which is the volume of gas delivered by PECO to each rate class, is an external allocator that is used to allocate some of the distribution system costs. Other examples of external allocators are number of customers and estimated design day sales. Exhibit HSG-6 shows the main external allocators that were developed based on data provided by PECO.

Internal allocators are based on some combination of external allocators, previously directly assigned costs and other internal allocators. For example, the allocators for property insurance costs are based on plant investment amounts assigned to components of the rate base; it is necessary to compute the rate base before property insurance costs can be assigned. Both external and internal allocators are used in each of the functionalization, classification and class allocation steps.

22. Q. What is the rate base and how does it affect the PECO cost of service study?

A. The rate base is the cost, net of accumulated depreciation, of PECO' s investment in plant and other assets used to serve customers. The revenue requirement

includes a return on the rate base at the rate proposed by Company witness Mr. Paul Moul in PECO Statement No. 5.

23. Q. What are the major components of PECO's rate base?

A. For purposes of discussing how I functionalized, classified and allocated the rate base in the PECO COS Study, I will refer to the following groupings of rate base items. After presenting the list, I will describe how I treated each of these major rate base categories:

- Production plant
- Storage plant
- Distribution plant
- General plant
- Depreciation reserve
- Other Rate Base items
- Working capital

24. Q. What is the total rate base?

A. As reflected in Mr. O'Brien's Exhibit RLO-1, the projected total rate base is $1.104 billion as of the end of the Future Test Year.

25. Q. How did you functionalize, classify and allocate among rate classes each component of rate based?

A. The principal allocators for each component of the rate base are:

Production plant represents the investment in liquid propane gas ("LPG") production assets which are used to meet design peak day and short-term needs of

firm sales customers. These assets have been functionalized to Supply, classified to demand, and allocated among rate classes based on design peak day send-out.

Storage plant represents the investment in liquefied natural gas ("LNG") facilities which are used to meet design peak day and short-term needs of firm sales customers. These assets have been functionalized to Storage, classified to demand, and allocated among rate classes based on design peak day send-out.

Distribution plant comprises:

Mains- Mains were functionalized to distribution. A portion of Mains costs was directly assigned, immediately below I will discuss the classification and allocation of the balance of Mains costs.

— Services- Services connect individual customers to the system. These assets have been functionalized to Distribution, classified as customer related costs, and allocated among rate classes based on the estimated total replacement cost for each rate class. Total replacement cost of Services for a rate class was estimated by multiplying: X) estimated replacement cost of a service line with typical diameter for the rate class, by Y) number of customers in the rate class.

— Meters and Meter installation- These assets have been functionalized to the Onsite function, classified as customer related costs and allocated among rate classes based on the average historical cost of meters for each rate class. The average historical cost of meters was obtained from the Company's plant accounting records.

— Other Distribution plant-. These assets comprise primarily a) Measuring and Regulator station equipment, a portion of which was directly assigned and the balance of which was functionalized to Distribution, classified as demand-related and allocated among the rate classes based on design peak day send-out; and b) Land and land rights and Structures and improvements, which were functionalized to Distribution, classified as demand-related and allocated among rate classes using averages for all other Distribution plant.

Generalplant includes primarily Structures and improvements, Tools and Power-operated equipment. These assets were functionalized, classified and allocated among rate classes based on direct labor content of operating expenses, reflecting the nature of the assets and common cost of service practice.

Depreciation reserve was provided by PECO detailed as to Production plant, Storage plant, Distribution plant and Onsite plant, with Distribution detailed as to Mains, Services, Meters and Other. Each component of Depreciation reserve item has been functionalized, classified and allocated among rate classes in the same ratio as the related assets.

Other Rate Base Items includes primarily Gas storage inventory, Accumulated deferred income taxes, Common plant, Customer deposits and Customer advances and Working capital, which are discussed below.

Gas storage inventories are used to support the planned winter heating requirements of the Company's sales customers and the daily balancing requirements of all its customers. Gas storage inventories was functionalized to

Storage and classified to commodity. The Company has identified that 8.7% of its storage activity relates to the daily balancing of its transportation service customers. Therefore 8.7% of PECO's gas storage inventory costs were allocated among its transportation rate classes based on their annual volumes. The remainder of the Company's storage activity was allocated among the finn sales rate classes based on the excess of their winter (November-March) gas volumes over their average annual volumes.

Accumulated deferred income taxes was functionalized, classified and allocated among rate classes in proportion to plant in service.

Common plant contains assets similar to those customarily found in General Plant, such as Structures and improvements, Office Furniture & Equipment and Communication Equipment, and was also functionalized, classified and allocated among rate classes based on direct labor content of operating expenses.

Customer Deposits and Customer Advances were directly assigned to rate classes based on information provided by PECO.

Working capital represents PECO's need for cash to keep the business running until revenues are collected to pay costs. Working capital was functionalized, classified and allocated among rate classes in proportion to plant in service.

26. Q. Please discuss the preferred method to classify and allocate to cost of mains among a utility's rate classes.

Mains have a dual purpose: (1) to attach a customer to the system and (2) to provide adequate capacity for the maximum demand level by the customer. The two factors that determine the cost of mains installed are length and diameter.

Length is related to the number of customers and diameter is related to design peak carrying capacity, or demand.

The preferable method is to classify mains as partly customer-related and demand-related. To determine the customer component of the total cost of mains, a zero-intercept study is used. A zero-intercept study estimates the investment that would be required if, instead of the existing mains, zero-diameter pipes were installed. By eliminating the diameter-related cost factor, the zero-intercept study isolates the length-related cost factor of mains, which is causally related to the number of customers. The portion of total cost represented by the zero-diameter system is classified as the customer component of mains, and the balance of the total investment in mains is the demand component, because the costs above the zero-diameter pipes are deemed to be incurred to serve design day demands. The customer component is allocated among the rate classes based on number of customers and the demand component is allocated based on contribution to system design peak demand.

27. Q. Did you use a zero-intercept study to classify mains?

A. No, I did not. Recently, the Commission rejected zero-intercept studies for gas distribution utilities presented by the applicant (R-00061931- Philadelphia Gas Works) and by an intervenor (R-00061398- PPL Gas Utilities Corporation). Therefore, while I believe that the classification of mains should reflect the length-related cost factor and should include a customer component such as determined by a zero-intercept study, in consultation with the Company, I have not included a customer component of mains in the PECO COS Study due to the

expectation that the Commission would require that revenue allocation b.nd rate design in a gas base rate case be based on a different approach.

28. Q. What method did you use to classify and allocate the cost of mains among the rate dasses?

A. I used the Average and Excess Demand method. This method is recognized as an acceptable method by the American Gas Association Gas Rate Fundamentals, 1987 Edition. In the Average and Excess Demand method, the portion of mains costs equal to the system average load factor is classified as commodity-related and allocated among the rate classes based on their annual deliveries. The balance of mains costs is classified as demand-related and allocated among rate classes based on Excess Demand, which is the excess of each class' design peak demand over its expected average demand.

29. Q. What are the major categories of PECO's costs?

A. The major categories in PECO's cost of service are:

- Production costs
- Storage costs
- Distribution costs
- Customer accounts, customer service and sales costs
- Administrative and general expenses
- Depreciation expense
- Amortization expense
- Tax expense, other than on income
- Income tax expense

- Return on rate base
- Other revenues and expenses

30. Q. In determining how you would treat these expenses in the cost of service study, was there any other important category of costs that you considered?

A. Yes, labor costs affect most of the cost categories because many costs are assigned based on the direct labor content of other costs. For example, Administrative & General Salaries, Account 920, is allocated among rate classes based on the direct labor content of operating expense accounts. To enable these allocations to be performed, the direct labor content of each cost account was obtained from PECO, and appropriate allocators were developed.

31. Q. **What costs are included in PECO's production costs and how were these costs, functionalized, classified and allocated among the rate classes?**

A. PECO's gas production costs include costs related to its investment in LPG production assets, and Natural Gas Operating Costs. Costs related to LPG have been functionalized to Supply, classified to demand, and allocated among rate classes based on design peak day send-out. Natural gas operating costs have been functionalized to Supply, classified to commodity and allocated among rate classes based on gas deliveries.

32. Q. What costs are included in PECO's storage costs and how were these costs functionalized, classified and allocated among the rate classes?

A. Storage costs are the costs of operating PECO's LNG facilities, which PECO maintains to meet to meet design peak day and short-term needs. Therefore, these costs were functionalized to Storage, classified as demand and allocated among rate classes based on design peak day send-out.

33. Q. What costs are included in PECO's distribution costs and how were these costs functionalized, classified and allocated among the rate classes?

A. Most of the distribution costs are the costs of operating and maintaining PECO's City Gate station, mains, services and meters, i.e., the gas delivery system. Some of these costs are functionalized to distribution and some to onsite. To the extent possible, costs were directly assigned. The balance of the costs of operating and maintaining PECO's gas delivery system were analyzed to determine which assets they were incurred to operate or maintain, and were functionalized, classified and allocated among rate classes in the same manner as they assets they were incurred to operate or maintain.

In addition to the costs of operating and maintaining PECO' s gas delivery system, distribution costs includes:

Customer Installation expenses- Field investigations for odors, high bill complaints and potential and actual energy theft; allocated based on number of customers.

Other Operating and Maintenance expenses- Allocated in proportion to total Distribution plant.

Natural Gas Operating expenses- Allocated based on gas deliveries.

34. Q. What costs were included in PECO's customer accounts costs and how were these costs functionalized, classified and allocated among the rate classes?

A. Customer accounts costs includes meter reading expenses, customer records and collection expenses, uncollectible accounts expense and miscellaneous customer accounts expense.

Meter reading expenses and related supervision were functionalized to Onsite, classified to customer and allocated among rate classes based on number of customers.

Customer records and collection expenses includes activities for billing, call center, payments processing, recoveries, support for LIURP and for CAP rates. These costs were functionalized to Onsite and classified to customer. For allocation among rate classes, the account was analyzed in detail to identify different activities and each activity was allocated using an appropriate basis. For example, the costs of bill activities were allocated based on customer counts; call center costs were allocated based on a study of the nature of calls over an eight month period. Exhibit HSG-6I shows the details of the special study.

Uncollectible accounts expense, or bad debts expense, was functionalized to distribution and classified to customer. A portion of this amount was determined to be related to Pre-Program Arrearages and was directly assigned to residential customers. The balance of the expense was allocated among rate classes based on the Company's experience over period 2003-2007.

Miscellaneous customer accounts expense includes costs related to meter reading, and was functionalized, classified and allocated among rate classes based on number of customers; costs for energy efficiency programs which are assigned based on program costs; costs for LIURP programs which are directly assigned to residential customers; and interest on customer deposits which was directly assigned among rate classes.

35. Q. What costs are included in PECO's customer service and informational costs and how were these costs functionalized, classified and allocated among rate classes?

A. Customer service and information costs includes informational costs and marketing costs. These costs were functionalized to Onsite and classified to customer. For allocation among rate classes, the account was analyzed in detail to identify different activities and each activity was allocated using an appropriate basis. Costs that applied to a particular rate class were directly assigned to that class; remaining costs were allocated based on gas deliveries.

36. Q. How were administrative and general expenses functionalized, classified and allocated among rate classes?

A. Administrative and general (A&G) expenses include administrative and general salaries, office supplies and expenses, outside services, injuries and damages, employee benefits, property insurance costs, regulatory commission expenses, miscellaneous general expenses, maintenance of general plant and rents.

Except for items discussed immediately below, A&G costs are related to labor costs and therefore were functionalized, classified and allocated among rate classes in the same ratio as direct labor content.

Property insurance costs were functionalized, classified and allocated among rate classes in the same ratio as plant in service.

Regulatory commission expenses, General advertising expenses and Miscellaneous general expenses were functionalized to Distribution, classified to customer and allocated among rate classes in the same ratio as the rate base.

37. Q. How was depreciation expense funcionalized, classified and allocated among the rate classes?

A. Depreciation expense was provided by PECO detailed as to Production plant, Storage plant, Distribution plant, Onsite plant and Common plant. Distribution was detailed as to Mains, Services, Meters and Other. Each component of Depreciation expense item was functionalized, classified and allocated among rate classes in the same ratio as the related assets.

38. Q. How was Manufactured Gas Plant remediation expense functionalized, classified and allocated among the rate classes?

A. Manufactured Gas Plant (MGP) expense is the normalized level of expense for remediating former MGP sites in the Company's service territory. MGP assets were used to meet supply requirements throughout the year. Therefore, this cost was allocated among rate classes based on firm gas sales.

39. Q. How were taxes other than income taxes functionalized, classified, and allocated among the rate classes?

A. Taxes other than income tax includes payroll-related taxes, capital stock tax, PURTA and real estate taxes. Payroll-related taxes were functionalized, classified and allocated among rate classes based on direct labor content; capital stock based on rate base; and PURTA and real estate taxes based on plant in service.

40. Q. How was income tax expense functionalized, classified and allocated among rate classes?

A. Income tax expense represents the income tax expense that would be incurred based on revenue at present rates. This expense was functionalized, classified and allocated among rate classes in proportion to the pre-tax revenue by rate class that would be realized as present rates.

41. Q. How were PECO's revenues at present rates computed and assigned among rate classes?

A. Distribution revenue at present rates was taken from Exhibit PTP-4.

Finance charge revenue, determined from PECO's budget, was allocated among the rate classes based on an analysis of late payment charges.

Revenue adjustments were allocated among the rate classes in proportion to Distribution revenue.

SECTION **III** - DEVELOPMENT OF RATE CLASS REVENUE REQUIREMENT

42. Q. How did you develop the revenue requirements for each class?

A. The revenue requirements for each rate class are computed in the same manner as that used by Company witness Mr. O'Brien in PECO Statement No. 3 to compute the overall revenue requirement for 2008. The revenue requirements for each rate class are the sum of its allocated operating expenses, depreciation expense, general taxes, return on rate base and income tax. Return on rate base for each rate class was computed by multiplying the rate class' rate base by the proposed system average rate of return. Income Taxes included in the revenue requirement for each rate class were computed directly by grossing up the required return on rate base for the class at the income tax rate related to the overall revenue requirement. Exhibits HSG-1, line 13 and Exhibit HSG-1B, line 192, both show the relevant rate class revenue requirements based on fully allocated distribution cost of service at the proposed system rate of return.

43. Q. How did you determine the increase or decrease in revenue needed for each class to produce the system average rate of return?

A. The increase or decrease needed for each rate class is computed by comparing the revenue requirements for each rate class to the revenue that is forecast at present rates for that class. This is the same method used by Company witness Mr.

O'Brien in PECO Statement No. 3 with respect to the overall revenue requirement and revenue deficiency.

SECTION IV - RESULTS OF THE PECO COS STUDY

44. Q. Please describe the information on Exhibit HSG-1.

A. Exhibit HSG-1 compares the revenue at current rates provided by each rate class to the revenue requirement allocated on a cost of service basis.

Net income at present rates shown on line 10. It is computed by subtracting operating expenses (line 7) and income tax expense (line 8) from revenue at present rates (line 3). The return on rate base at present rates is shown on line 12 for each rate class.

Line 13 shows each rate class' revenue requirement at full cost of service at the proposed rate of return. Line 14 shows the operating expenses, line 15 shows the additional bad debt and LIURP expense that would be realized if revenue were equal to the revenue requirement, and line 16 shows the required income tax expense. Line 18 shows the Net income that would be produced at the proposed revenue requirement assuming each rate class pays it full cost of service, and line 19 shows the rates of return on rate base.

Line 20 shows the increase (decrease) in revenue indicated for each rate class; it is the difference between the revenue requirement at full cost of service (line 13) and present revenue (line 3).

45. Q. Please describe the information on Exhibit I-ISG-1A and Exhibit I-ISG-1B.

A. Exhibit HSG-1A summarizes the results of the Class Allocations on Exhibits HSG-4A through 4F by functional classification. Exhibit HSG-1B summarizes

the results of the Class Allocations on Exhibits HSG-4A through 4F by account detail. Exhibit HSG-1B shows the allocation of each element of rate base (lines 1-60), operating expenses (lines 61-129), depreciation expense (lines 130-144) and taxes (lines 145-156) among the rate classes. Total expenses are on line 157. The exhibit then shows revenues at present rates (lines 158-166) and Net income at present rates (line 166).

A summary report of net income at present rates is on lines 169-177, the rate base is on line 178 and the return on rate base at present rates is on line 179.

The revenue requirement is developed on lines 180-192.

46. Q. Please describe the information on Exhibit HSG-1C.

A. Exhibit HSG-1C shows the amounts considered in the proposed customer charges developed by Company witness Mr. Paul Patterson in PECO Statement No. 9.

47. Q. Please describe the information on Exhibits HSG-2 and HSG-3.

A. Exhibit HSG-2 shows how each element of the revenue requirement has been allocated among the functions: Supply, Storage, Distribution and Onsite. The exhibit shows the allocator selected for each element, and the result of the allocation. The line captions are the same as in Exhibit HSG-1B.

Exhibit HSG-2A is a reconciliation of the components of net income at present rates and the revenue requirement presented by Mr. O'Brien in PECO Statement No. 3 to the amounts in the PECO COS Study.

48. Q. Please describe the information on Exhibit HSG-3.

A. Exhibit HSG-3 shows how each element of each functional revenue requirement for the Distribution function was classified as demand, commodity or customer.

The exhibit shows the allocator selected for each element, and the result of the allocation. The line captions are the same as in Exhibit HSG-1B.

Items functionalized to Supply and Storage are classified as 100% demand, and items functionalized to Onsite are classified as 100% customer, therefore there is no need to show the classification of each element of the revenue requirement.

49. Q. Please describe the information on Exhibits ItSG-4A through HSG-4F.

A. Exhibits HSG-4A through HSG-4F shows how each element of each functionally classified revenue requirement is allocated among the rate classes. Each shows the allocator selected for each element, and the result of the allocation. The line captions are the same as in Exhibit HSG-1B.

50. Q. Please describe the information on Exhibits I-ISG-SA through HSG-SE.

A. Exhibit HSG-5A shows the assignment and allocator values for functional assignment and allocation of the revenue requirement. Exhibit HSG-5B shows the assignment and allocator values for classification of the functionalized revenue requirement components. Exhibit HSG-5C shows the assignment and allocator values for allocation of functionally classified components of the revenue requirement among the rate classes. External allocators and internal allocators are identified by "EXT" and "INT on Exhibits HSG-5A through 5C. External and internal allocators were discussed above.

Exhibit HSG-5D shows the allocator used for each account, at each step: functionalization; classification; and allocation among rate classes. Items functionalized to Supply and Storage are classified as 100% demand, and items functionalized to Onsite are classified as 100% customer, therefore the

classification of amounts functionalized to Supply, Storage and Onsite are not shown on the exhibit.

Exhibit HSG-5E presents the Labor cost report. The Labor percentages shown on the exhibit are applied to the functionally classified account balances on Exhibits HSG-4A through HSG-4F and the resulting Labor allocators are shown on Schedules HSG-5A, HSG-5B and HSG-5C.

51. Q. Please explain how the unit cost results presented in Exhibit HSG-1A were prepared.

A. The Gas COS Model calculates the revenue requirement for each of functional classification (i.e., Supply demand, Storage demand, Distribution demand, Distribution commodity, Distribution customer and On-site customer). The functionally classified revenue requirements are unitized by dividing the totals by the appropriate number of billing units. Demand-related costs are divided by the design peak demand, customer-related costs are divided by the number of bills and commodity-related costs are divided by the number of Mcf delivered.

52. Q. Which costs were considered in developing the proposed customer charges?

A. The proposed customer charges are based on the specific customer-classified costs in the PECO COS Study which are typically considered in Pennsylvania. Customer related costs include all costs incurred to attach a customer to the distribution system, to meter gas usage and to maintain the customer's account. They include capital costs associated with services and meters, and operating costs such as operation and maintenance of these assets, metering and billing and customer service and account expenses. Total customer costs by rate class for the

Future Test Year are shown on Exhibit HSG-1A, line 15, and on a customer-month basis on line 18.

The costs typically considered in Pennsylvania in developing customer charges are shown on Exhibit HSG-1C. This exhibit shows each component of such costs in the total revenue requirement and on a unit (customer-month) basis.

53. Q. Did you compare the monthly customer charges being proposed by PECO to the customer related costs in the PECO costs of service study identified in Exhibit HSB-1C?

A. Yes. For every rate class, the monthly Customer Charges proposed by Mr. Paul Patterson in PECO Statement No. 9 are lower than the unitized customer related costs on Exhibit HSG-1C, which shows the costs typically considered in Pennsylvania in developing customer charges.

54. Q. Please describe the information on Exhibit HSG-6.

A. Exhibit HSG-6 presents the development of the main external allocators. These are described below. Except where noted, all data are for the Future Test Year.

Exhibit HSG-6A, Summary of External Allocator Values

Exhibit HSG-6B, Deliveries Allocator- Annual and monthly gas deliveries, in mcf, for each rate class

Exhibit HSG-6C, Cust_Avg Allocator- Annual and monthly number of customers for each rate class

Exhibit HSG-6D, Peak Allocators- Excess Demand allocator which is used to allocate a portion of mains costs

Exhibit HSG-6E, Storage Allocator- Develops the Storage allocator based on usage of storage assets for balancing needs of firm sales customers and transportation customers

Exhibit HSG-6F, Mains Direct- Information for customers with directly assigned mains. Information includes original cost, accumulated depreciation, depreciation

expense and estimated annual usage. These customers use only the portion of the distribution system for which they have been directly assigned costs.

Exhibit HSG-6G, Meter Invest Allocator- Computes investment in meters for each rate class based on historical cost for each meter type.

Exhibit HSG-6H, Service Invest Allocator- Computes investment in services for each rate class at estimated current replacement cost.

Exhibit HSG-6I, Acct903 Allocator- Allocates each activity in Customer Records and Collection, Account 903, using an appropriate external allocator. Rows 1-12 list each activity, the cost of the activity in the Historic Year and the allocator assigned to it. Rows 13-18 summarize the costs by allocator (e.g., the costs for all activities allocated using Cust_Avg allocator are added together) and show the amount allocated to each rate class. The allocator values are on row 19.

Exhibit HSG-6J, Acct905 Allocator- Allocates each activity in Miscellaneous Customer Expenses, Account 905, using an appropriate external allocator. Rows 1-8 list each activity, the cost of the activity in the Historic Year and the allocator assigned to it. Rows 9-14 summarize the costs by allocator and show the amount allocated to each rate class. The allocator values are on row 15.

Exhibit HSG-6K, Acct908-916 Allocator- Allocates each activity in Customer Service & Informational Expenses, Accounts 908-916 using an appropriate external allocator. Rows 1-9 list each component activity, the cost of the activity in the Historic Year, and the allocator assigned to it. Rows 10-17 summarize the costs by allocator. The allocator values are on row 18.

Exhibit HSG-6L, Account Aging- Computes the allocator values for the OVER60-Dol allocator. The column OVER60-Dol Allocator shows the percentage of the PECO Gas total accounts receivable over 2 months outstanding for each rate class, at each month-end from January-December 2007.

Exhibit HSG-6M, Write-Offs- Computes the allocator values for the Write-Off allocator. The column for each year 2003-2007 shows the write-offs for each rate class as a percentage of total write-offs, excluding Pre-Programmed Arrearages from both the numerator and the denominator.

Exhibit HSG-6N, Directs - Direct assignments based on Historic Year balances for Deposits, Interest on Deposits, Advances, Late Payments and Energy Efficiency Program Costs.

55. Q. Does this conclude your testimony?

A. Yes.

HOWARD S. GORMAN
Principal Consultant
Black & Veatch Corporation

Mr. Gorman has more than 20 years of diversified experience in the energy industry, and over 25 years of experience covering all areas of finance. He specializes in rate and regulatory matters including electric and gas revenue of requirements, cost of service and rate design; energy industry accounting and costing; energy project financing and analysis; energy asset valuations, acquisitions and divestitures; mergers and related management and organizational matters; economic and financial planning; and computer modeling and information systems. He also has extensive experience in budgeting and reporting; procurement and contract negotiation; interest and currency derivatives; and all areas of financial management including treasury and insurance. He has worked with regulated and unregulated utilities; independent power plants, combined heat and power facilities, other cogeneration facilities and district heating and cooling systems; and other industries including leisure goods and software.

Professional Employment

1997 - Present	Black & Veatch Corporation (originally joined R.J. Rudden Associates) Principal Consultant
1995-1997	Independent Consultant
1987-1995	Trigen Energy Corporation 1987-1993 Corporate Controller; Trigen was formed in 1987 1993-1995 Treasurer; Trigen had IPO with NYSE listing in 1994
1982- 1987	Coleco Industries, Inc. Director, Treasury
1976-1979	Touche Ross & Co. Staff Accountant

Representative Project Experience

Rate and Regulatory Matters

Mr. Gorman has extensive experience in rate and regulatory matters for electric and gas utilities. He has performed revenue requirements, cost of service and rate design assignments for numerous electric and gas clients. These assignments have included developing the unbundled, fully allocated cost of service for an electric company undergoing deregulation pursuant to FERC Order 888; developing revenue requirements and identifying customer class cross-subsidizations for electric and gas LDCs; revenue allocation and rate design for electric and gas LDCs; cost allocation and assisting with FERC rate filings for electric regional transmission organizations; budgeting and costing for an electric regional transmission organization.

These assignments included development of test year data under the regulatory basis, review and documentation of operations, establishment of cost causality, selection of allocation bases, development of allocators and developing revenue allocation and rate design proposals. Mr.

Gorman is one of the chief developers of Black &Veatch's proprietary Electric and Gas Cost of Service Models.

Mr. Gorman has testified on matters pertaining to revenue requirements, cost of service, cost allocations and related matters. He has testified before the New Jersey Board of Public Utilities, the New York State Public Service Commission, the Ontario Energy Board, the Pennsylvania Public Utility Commission and the Philadelphia Gas Commission.

Mr. Gorman's rate and regulatory clients have included Baltimore Gas & Electric, CT Enterprises, Duquesne Light Company, Freeport Electric, Hydro One Networks, KeySpan Energy, Midwest Energy, Niagara Mohawk Power Company, Philadelphia Gas Works, Village of Rockville Centre, as well as American Transmission Company, Hydro One, Inc., Midwest Independent System Operator, New York Independent System Operator, Ontario Power Generation, PJM Interconnection, LLC and Toronto Hydro Corporation.

Mr. Gorman has extensive experience in financial accounting as well as cost accounting. As controller of Trigen Energy Corporation, he founded and built the finance and accounting function; developed reports, procedures and management tools; and managed subsidiary controllers across North America.

Energy Project Financing and Analysis

Mr. Gorman has successfully completed numerous energy asset financing transactions as a principal and has also supported the financing of many other energy assets.

He has negotiated and completed transactions including construction and term loans, tax-exempt bonds, taxable bonds, subordinated debt, asset-backed (receivables and inventory) revolving credit facilities and other instruments. The borrowers have included corporations, joint ventures, special purpose entities and partnerships. He has worked successfully with lenders and borrowers to source and structure transactions, and has been instrumental in the negotiation of the loan documents and in the design of power sale contracts and supply procurement contracts to be financable. Among these financings are a $28 million construction and term loan for the joint venture which constructed the district heating and cooling system for McCormick Place Exposition Center, Chicago; a $62.5 million corporate acquisition and expansion facility secured by a portfolio of energy assets; a $40 million tax-exempt financing for the Trenton cogeneration and district energy system; a $39 million IPO for Trigen Energy Corporation (NYSE- TGN); and over $150 million in connection with acquisitions.

These projects have included independent power plants, combined heat and power facilities, other cogeneration facilities including plants which were Qualifying Facilities under PURPA, district heating and cooling systems, and regulated and unregulated entities.

Mr. Gorman has performed analysis of several energy projects in connection with due diligence for financing, including contract review, financial modeling, supply analysis, forward price projections, and economic valuation with cash flow forecasting, and the identification, assessment and mitigation of financial and operating risks for the project and its investors.

The clients and entities with which he has worked include Trigen Energy Corporation; The Toronto-Dominion Bank; Societe Generale; Peoples Gas Corporation; Calpine; Bank of Montreal; and Donaldson, Lufkin and Jenrette.

Energy Asset Valuations, Acquisitions and Divestitures

Mr. Gorman has participated both as principal and consultant in the valuation of energy assets, and also in the subsequent acquisition or divestiture. He has performed financial and strategic valuations of power plants, business units, public corporations, private corporations, partnerships and other entities.

These valuations included development and review of assumptions, analysis of data, modeling and forecasting, sensitivity testing under various constraints, and forming and supporting an opinion as to valuation.

These valuations were used to support strategic decisions as to which assets to acquire or divest, and what price to pay or accept, as well as the development of post-acquisition strategic alternatives for the acquiror. In the case of acquisitions, the valuations were often used to support the financing for the assets. Among these activities are valuations of power plants, combined heat and power plants, and energy companies for the purpose of acquisition; valuation and assessment of alternatives for the waste-to-energy assets and other energy assets of a diversified company on behalf of an interested acquiror; valuation of the common stock of a publicly traded multi-jurisdiction utility for the purpose of investment; assessment of strategic fit and valuation for a utility seeking to diversify into energy-related services; and assistance with valuation and preparation for negotiation for a private entity seeking a buyer for energy assets.

The clients and entities with which he has worked include Trigen Energy Corporation; Ameren Corporation; Blavin and Co.; and several confidential assignments.

Mergers and Related Management and Organizational Matters

In connection with his work in asset valuations and acquisitions, Mr. Gorman has extensive experience integrating newly acquired assets into a company. He was successfully completed the financial integration of several acquisitions, including development of accounting, reporting and control systems, consolidation of functions and procurement. In addition, he has advised clients on the operating implications of transactions under consideration, as well as the financial, regulatory and strategic implications. Mr. Gorman has performed these services on behalf of the Midwest ISO, Mappcor, Star Gas MLP, Trigen Energy Corporation, Calpine and several confidential assignments.

Computer Modeling and Decision Support

Mr. Gorman has extensive expertise in spreadsheet and database applications, as well as the use of programming tools. He has developed analytical tools to perform valuations, projections and simulations. These models have been applied to financial analysis, cost allocations, rate design and pricing, forecasting revenue requirements, numerous tax and accounting matters, supply modeling and optimizations. Several of these models have contained interactive modules for automated scenario testing and sensitivity analysis.

Mr. Gorman has performed analyses and created applications in Excel, Lotus, Access and VB/VBA. Among these assignments, he specified, designed and programmed the Black &Veatch' s proprietary Electric and Gas Cost of Service Models.

Financial Managem ent and Related Areas

Mr. Gorman has developed, sourced and procured competitive contracts for loans as well as for energy, both as principal and on behalf of clients. This included an RFP for competitive supply of electricity for the State of New Jersey and its agencies.

He has bought and sold derivatives in the course of business transactions for the purposes of managing interest rate risk and currency risk. This included interest rate forwards and options in connection with financings; and currency swaps and forwards in connection with intercompany transfers and international procurement.

He managed the corporate insurance portfolios and the benefit plans for Trigen Energy Corporation and for Coleco Industries.

Publications and Presentations

"Difficulties Surround Transmission System Financing," published in Electric Power & Light, November 2002, co-authored.

"A Balanced Look at Balance Sheets," published in R.J. Rudden Financial, LLC's *Energy Capital Markets Report,* June 2002.

"From Wires To Riches: Shareholder Value Creation In The T&D Business," April 2002 (co-authored).

"Assessment of Retail Choice Programs," presented at the American Gas Association Rate and Strategic Issues Committee Conference, March 2002.

"Value Creation With Transmission Assets," quoted in *Electrical World's Special Edition Quarter 1, 2002,* March 2002.

"The Remarkable Story of Enron," published in Scudder's *Annual End of Year Issue,* December 2001.

Education

New York University, BS Accounting, 1976

Harvard Business School, MBA, 1981

Certified Public Account, New York State

SUMMARY OF TESTIMONY EXPERIENCE
HOWARD S. GORMAN

JURISDICTION	CASE OR DOCKET NO.	UTILITY/ORGANIZATION INITIATING PROCEEDING	CLIENT	APPROXIMATE DATE	SUBJECT MATTER
Pennsylvania	R-00072350	Wellsboro Electric Company	Wellsboro Electric Company	April 2007	Electric cost of service; rate design
Pennsylvania	R-00072348	Citizens' Electric Company of Lewisburg, PA	Citizens' Electric Company of Lewisburg, PA	April 2007	Electric cost of service; rate design
Pennsylvania	R-00072349	Valley Energy, Inc.	Valley Energy, Inc.	April 2007	Gas cost of service; rate design
Pennsylvania	R-00061931	Philadelphia Gas Works	Philadelphia Gas Works	December 2006	Gas base rate case including fully allocated cost of service
New York	06-E-0911	Village of Freeport	Village of Freeport	July 2006	Electric cost of service; rate design
Ontario	**EB-2005-0378**	Hydro One Networks Inc.	Hydro One Networks Inc.	January 2006	Electric Transmission and Distribution Cost allocation
New York	03-E-1568	Village of Rockville Centre	Village of Rockville Centre	October 2003	Electric cost of service; rate design; sales forecast
New Jersey	ER02080506 PUC 7894-02 et al	Jersey Central Power & Light	Gerdau AmeriSteel aka Co-Steel	December 2002	Electric cost of service, cost allocation and rate design; industrial rates
New Jersey	ER02050303 PUC 5744-02	Public Service Electric & Gas	Gerdau AmeriSteel aka Co-Steel	October 2002	Electric cost of service, cost allocation and rate design; industrial rates

SUMMARY OF TESTIMONY EXPERIENCE
HOWARD S. GORMAN

JURISDICTION	CASE OR DOCKET NO.	UTILITY/ORGANIZATION INITIATING PROCEEDING	CLIENT	APPROXIMATE DATE	SUBJECT MATTER
Pennsylvania	M-00021612	Philadelphia Gas Works	Philadelphia Gas Works	July 2002	Gas rate unbundling
Pennsylvania	R-00017034	Philadelphia Gas Works	Philadelphia Gas Works	February 2002	Gas base rate case including fully allocated cost of service; cross-subsidies; special liquidity requirement
Pennsylvania	R- 00006042	Philadelphia Gas Works	Philadelphia Gas Works	January 2001	Gas base rate case including fully allocated cost of service; cross-subsidies; recovery of fixed charges