DELMARVA POWER & LIGHT COMPANY
TESTIMONY OF ELLIOTT P. TANOS
BEFORE THE DELAWARE PUBLIC SERVICE COMMISSION
CONCERNING AN INCREASE IN GAS BASE RATES
DOCKET NO. 10-

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1. Q: Please state your name and position.

A: My name is Elliott P. Tanos. I am Manager, Cost Allocation for Pepco Holdings, Inc. (PHI) located at P.O. Box 9239, Newark, DE 19714. I am testifying on behalf of Delmarva Power & Light Company (Delmarva or the Company).

2. Q: Please state your educational background and professional qualifications.

A: I graduated from Villanova University, with a Bachelors of Science degree in Economics. I received a Masters of Arts degree in Economics from Temple University.

In 1980, I was employed by the Philadelphia Gas Works (PGW) in the Corporate Planning Area. From 1982 to 1996, I held various positions at PGW in the Office of Vice President Rates and Regulatory Affairs. A key responsibility over this period was to support the preparation of the gas cost of service studies (COSS), including compiling all data needed for the cost studies and assessing the reasonableness of the cost allocation methods. Additional responsibilities included: rate design and tariff administration, market pricing for the largest customers, design and administration of the Company's gas transportation service, and corporate economic analyses. I also testified in selected cases before

the local regulatory body in support and defense of the Company's rates and services.

From 1997 to 2005, I was engaged in international consulting work, starting as an Independent Consultant (1997-2001), and then as a Principal Consultant with PA Consulting Group, Inc. (2001-2005). In this capacity, I provided technical assistance to the emerging national regulatory bodies in countries of the Former Soviet Union, with additional assignments in Ghana and Jordan. This work focused on tariff methods, cost of service, privatization, and social safety net measures. The assignments were concentrated in the electric industries, with additional work in the natural gas and irrigation water sectors. Clients included the United States Agency for International Development, the World Bank, and private sector clients.

In 2005, I joined Washington Gas Light Company as Specialist Senior Federal Regulatory Affairs. In this position, my responsibilities included monitoring Federal regulatory matters and participating in a base rate case proceeding before the Federal Energy Regulatory Commission (FERC).

In 2007, I joined PHI as Regulatory Affairs Lead having responsibility for developing the Company's cost of service studies for Delmarva and Atlantic City Electric Company (ACE). In 2008, I was promoted to my current position as Manager, Cost Allocation for Delmarva and ACE.

In addition to the experience described above, I have taken the utility industry-sponsored courses on cost of service and rate design, including: the Edison Electric Institute Advanced Rate Design School, the American Gas

Association (AGA) Rate Fundamentals course, and the AGA Advanced Rate course.

3. Q: <u>Have you previously submitted testimony in other regulatory proceedings?</u>

A: Yes, I have submitted testimony before the Philadelphia Gas Commission, the Maryland Public Service Commission, the New Jersey Board of Public Utilities, and the Delaware Public Service Commission.

4. Q: <u>What is the scope of your testimony in this proceeding?</u>

A: I am presenting the Customer Class Cost of Service Study for Delmarva's Gas Delivery business.

The cost of service study results presented in my testimony are based on twelve month period ended December 31, 2009 that is the Test Year in this case, as detailed in the testimony and schedules of Company Witness VonSteuben.

As described below, the cost of service study excludes the revenues and expenses that are recoverable through the Company's Gas Cost Rate (GCR). Therefore, the remaining revenues and expenses are base rate related.

It is the Company's intent to provide an updated COSS based on the twelve month period ended June 30, 2010 (the Test Period in this proceeding) when the forecasted six months of the Test Period are updated to actual values in September.

5. Q: <u>Please describe the organization of your testimony.</u>

A: The first section of my testimony discusses the adjustments to the accounting data used as input to the COSS. This includes a brief discussion regarding the development of weather normalized customer sales and revenues.

The second section of my testimony discusses the purpose for performing a cost-of-service study, and the traditional steps involved in preparing the COSS studies.

I next discuss the underlying basis for the cost of service study submitted in the current filing. This is followed by a review of the major line-item allocations contained in the Company's class cost of service study.

I conclude my testimony with a summary of the cost of service results in the form of Rates of Return for the various customer classes.

6. Q: <u>Please describe the adjustments made before developing the Class Cost of Service Study.</u>

A: Several adjustments were made from the Company's Test Year per book numbers that are reflected in the COSS. First, the customer sales and revenues have been adjusted from actual to reflect normal weather conditions. Also, a number of customer adjustments have been made to reflect changes in customer contracts, rates, closing, and additions. The customer adjustments are described in the testimony of Company Witness Phillips.

Several additional pre-cost of service adjustments have been made as identified in the testimony and schedules of Company Witness VonSteuben. This includes an adjustment to remove all revenues and operating expenses recoverable through the Company's GCR. Accordingly, the remaining revenues and expense items contained in the COSS are base rate related.

7. Q: Please briefly describe the weather normalization process.

A: Because the Company's gas sales are extremely weather sensitive, the Company's actual monthly gas sales and revenues have been adjusted to reflect normal weather patterns. The resulting weather normalized sales and revenues are then used as the basis for determining revenue requirements, and for developing the class cost of service study and rate design proposals.

For example, the Test Year temperature was warmer than normal, and the weather normalization adjustment resulted in pro forma delivered gas sales that are larger than the actual gas sales observed in the Test Year.

An explanation of the Company's weather normalization adjustment, including the detail results of the analysis, is provided in the testimony and schedules of Company Witness Phillips.

8. Q: Please briefly describe the purpose for performing cost of service analyses.

A: A cost of service study seeks to assign the Company's revenue requirement to the customer groups on the basis of cost causation. The costs may be directly assigned or allocated. The fundamental principle underlying the cost allocation process is that costs should be attributed to the particular customer group(s) that causes the utility to incur such costs. Appropriately allocated costs then provide a basis to derive class rate of return results and class revenue targets, and they serve as an important guide in designing the rates charged to each customer class.

9. Q: <u>Please briefly describe the key processes involved in cost allocation.</u>

A: There are three basic steps traditionally followed in the cost allocation process: cost functionalization, classification, and allocation.

Cost functionalization is the process of dividing the total revenue requirement into functional categories as related to gas operations of the Company. In the present analysis, the elements of both Rate Base and Operating Expenses are grouped into functional categories depending on their use. For example, the Company's investment in gas plant in service includes the following functional categories:

- Other Storage - LNG facilities
- Transmission
- Distribution
  - Mains
  - Services
  - Meters
- Intangible
- General and Common

The FERC Uniform System of Accounts provides the framework to functionalize this gas plant investment.

The functional categories of operating expenses correspond to the plant categories above, and include additional O&M functional categories, namely:

- Customer Accounts Expenses
- Sales Expenses

- Administrative and General Expenses

The functional categories are presented in detail in the first column of the Company's cost of service study (please see Schedule EPT-1).

10. Q: <u>What is the next step in the process?</u>

A: The functionalized Rate Base and operating expense items are then further separated, or classified, based upon the gas system design or operating characteristics that cause the costs to be incurred. The three primary cost categories used in the COSS are demand, commodity, and customer classifications.

Schedule EPT-2 contains a summary of the unbundled demand related, commodity related, and customer related costs by customer class developed in the Company's cost study. The unbundled results are calculated at both present rates and at uniform class rates of return. The equalized class rates of return are set equal to the Company's proposed overall ROR of 8.10%.

11. Q: <u>Please describe cost allocation.</u>

A: The third step in the process is cost allocation where the functionalized and classified costs are apportioned to the particular customer groups. The Company's costs that serve only a particular customer class are directly assigned to that class. The remaining costs are allocated to the customer groups based on a method that is considered most consistent with cost causation.

Please see Schedule EPT-1 that provides the line-item allocations of the Total Company costs.

12. Q: <u>Please briefly describe the Company's cost of service model.</u>

A: A cost of service model has been developed for Delmarva's gas operations to enable the Company to directly assign or allocate each element of Rate Base, Revenues, and Operating Expenses to the respective customer classes.

The model is a cost matrix with the Total Company component reflected in the initial column and the customer classes listed on the horizontal or initial row.

The cost model starts with the Rate Base detail including each plant account and continues with the remaining items of Rate Base, Revenues, Operating Expenses, Taxes, and the development of the Labor allocator.

The cost model also contains an important column labeled "ALLOC". The ALLOC column contains an acronym identifying the allocation factor used to allocate the particular Total Company cost to the customer groups. Each allocation factor is identified in the Allocation Factor table located at the end of the cost studies (found in Schedule EPT-1, starting at page 26).

The cost of service study uses both internally developed and external allocators. The internally developed allocators used in the cost study are detailed on Schedule EPT-1, starting at page 29-1. This includes a description of the cost item allocated, together with the acronym identifying the particular internal allocator. The internally developed allocators represent one or more previously allocated cost items. For example, the PLANT allocator shown on page 29, line 2, is an internally developed allocator that represents Total Gas Plant in Service, referenced on page 4, line 29.

The external allocators have been developed using data or studies outside of the cost study. For example, the Company has prepared detailed analyses of service line and meter investment by customer class. The results of these studies are then used to attribute the embedded costs contained in the plant accounts to the respective customer classes.

Once the Total Company costs are fully allocated, the assigned costs are aggregated by customer class to determine the cost to serve that class and to compute the class rate of return.

13. Q: <u>What customer classes did you use in your class cost of service study?</u>

A: The COSS continued to recognize and allocate the Company's costs to the following firm sales and transportation customer classes:

- Residential (Rate R)
- Residential Space Heating (Rate RSH)
- General Service (Rates GG & GVFT)
- Medium Volume General Service (Rates MVG & MVFT)
- Large Volume General Service (Rates LVG & LVFT)
- Lighting (LTG)

14. Q: <u>Please describe the underlying basis for the cost of service study submitted in this case.</u>

A: In the present case, the Company used the same basic cost of service model submitted in PSC Docket No. 06-284 that also formed the basis for the approved rate design in that case.

The COSS presented in my testimony reflects the Total Company Rate Base, Revenues, and Expenses for the 12 months ended December 31, 2009. The cost of service results represent the Delmarva Gas Delivery class-allocated results with the supporting Total Company cost details for these results provided in Company Witness VonSteuben's testimony and schedules. As mentioned, these results also reflect the use of weather normalized customer sales and revenues for the Test Year.

Finally, the Company has proposed a revised method to calculate the Design Day demand allocator used in the current COSS, as described by Company Witness Phillips.

15. Q: Please summarize your schedules.

A: Schedule EPT-1 contains the Customer Class Cost of Service Study for Delmarva Gas Delivery business. This schedule identifies the detailed allocation for each cost item, together with all supporting allocation factors used in the study.

Schedule EPT-2 provides a summary of the unbundled demand, commodity, and customer related cost components for each customer class calculated at both present rates and uniform class rates of return.

Schedule EPT-3 presents the results for the Company's Class Cost of Service Study expressed as Class Rates of Return and Relative Rates of Return.

Cost of Service Allocation Method

16. Q: Please describe the major line-item allocations contained in the Company's cost of service study.

A: A description of the cost allocation methods for Rate Base, Revenues, and Operation and Maintenance expense is provided below.

RATE BASE

17. Q: How have you allocated the various components of Rate Base?

A: Each functionalized Rate Base component, and the associated line-item allocation factors, is detailed on my Schedule EPT-1, pages 2 through 8. A description of the cost allocation method for each major component, starting with gas plant in service, is provided below.

Gas Plant in Service

18.Q: Please discuss how the Company's Liquefied Natural Gas (LNG) plant investment has been allocated.

A: The LNG facilities have been functionalized to Other Storage Plant, classified as demand related, and allocated using the demand allocator, DEMSTOR found on Schedule EPT-1, page 26-1, line 1. This approach is consistent with that used in the prior case. The DEMSTOR allocator was developed using the design day demand contribution for each customer class less an average daily base sendout for each class calculated from two summer months.

The development of the design day demand contribution by customer class is discussed in the testimony of Company Witness Phillips. In particular, the Company has estimated the demands for the residential and general gas service customer classes, and then added the Contract Maximum Daily Quantities (MDQs) for those customers with MDQs, adjusted for losses, to develop the final

system demand estimate. The MDQs for the interruptible customers have been excluded from this calculation.

19. Q: Please explain how Transmission plant investment has been allocated.

A: The Transmission plant investment contained in Accounts 365-371, as shown on Schedule EPT-1, page 3, lines 1-9, is a component of the Company's gas delivery infrastructure. As shown in my schedule, the majority of this plant investment is for mains that are categorized as transmission because of their high operating pressure compared to distribution mains. The Company has retained the use of the DEMTRAN allocation factor for Transmission plant that is based on the Commission's prescribed allocation method. This plant allocator is a composite factor comprised of design day demand and annual sendout components. In particular, the DEMTRAN allocator was developed based on an annual sendout load factor of 24.3%, shown on page 27, line 24. The DEMTRAN allocator factor for each customer class was then developed using the weighting of the load factor for the annual sendout component and the remainder (1 - 24.3%), or 75.7%, for the design day demand component.

20. Q: Please describe how Distribution plant investment has been allocated.

A: As shown on my Schedule EPT-1, page 3, the vast majority of the Company's investment in Distribution plant (Accounts 374-387) is associated with Mains, Services, and Meters. The remaining categories of Distribution plant include Land and Land Rights, Structures and Improvements, and Measuring and Regulating Station equipment.

21. Q: How have main costs been allocated?

A: Distribution main costs (Account 376) have been allocated using the DEMMAIN allocation factor. This is another plant allocator based on load factor weighted design day demand and annual sendout components, calculated in a similar manner as described above. In the development of this allocation factor, the MDQ demands and delivered quantities associated with the interruptible customers and the large customers served off the Transmission system have been excluded from the calculation.

22. Q: How have Distribution Service Line costs (Account 380) been allocated?

A: The service line is the pipe that extends from the gas main to the customer's meter. The Company conducted a detailed analysis of the service line costs by size and type for each customer class. After removing the service costs associated with the interruptible customers, the final service cost allocator was then used to assign the embedded costs of Account 380- Services to the remaining customer classes.

23. Q: How were meter costs allocated?

A: The Company conducted a separate analysis of gas meters and meter devices to allocate Account 381- Meters to the respective customer classes. Similar to the Service cost analysis, the meter costs for the interruptible customers were excluded from the final allocator that was then used to allocate the embedded cost of meters to the remaining customers.

24. Q: Please describe how the remaining Distribution plant items have been allocated.

A: The remaining Distribution plant items, including Land/Land Rights (Account 374), Structures and Improvements (Account 375), and Measuring & Regulating Station Equipment (Account 378), have been allocated using the DEMDIST plant allocation factor. This is another allocator using weighted design day demand and annual sendout components, consistent with the Commission prescribed approach. Finally, the plant associated with the Asset Retirement Obligation shown on the schedule relates to gas meters and has been allocated using the meter allocator, CUST381.

25. Q: Please describe the allocation methods used for the remaining items of plant in service.

A: The remaining items of plant in service consist of General, Intangible, Common, and Service Company assets. General plant and Service Company assets were allocated on Labor. Intangible and Common plant were allocated on the appropriate Labor and plant allocators.

The Labor allocation factor for each customer class was developed by first reviewing the labor component included in each Operations and Maintenance expense account. The labor portion was then allocated in the same manner as the corresponding O&M expense account. The allocated labor costs were then subtotaled by customer class to arrive at the final Labor allocation factor.

Other Rate Base Items

26. Q: How were the remaining elements of Rate Base allocated?

A: The remaining elements of Rate Base consist of the following: the Depreciation Reserve, Construction Work in Progress (CWIP), Materials & Supplies, Prepayments, Cash Working Capital, Customer Advances & Deposits, Deferred State and Federal Taxes, and Accumulated Investment Tax Credit. These Rate Base items are detailed in Schedule EPT-1, starting at page 5. Each Rate Base item has been functionalized and directly assigned or allocated using an appropriate factor. For example, the Depreciation Reserve and CWIP have been allocated on the corresponding plant accounts.

The gas storage inventory costs, shown on page 6, line 10, have been allocated to the sales customer classes using the ESTOR allocator. This allocator is based on the total winter sendout for the five months November through March less a total winter base sendout component.

Also, as described in the testimony of Company Witness Timothy White, a Lead/Lag analysis was conducted to determine Cash Working Capital (CWC). The individual components of CWC are detailed in the cost study and assigned using appropriate allocators. The Company has also computed the Deferred Federal and State Income taxes, as detailed on page 8 of the cost study.

REVENUES

27. Q: How were Revenues addressed in your cost study?

A: The Company's total weather normalized revenues have been directly assigned to the respective customer classes, as detailed in the testimony and

schedules of Company Witness Janocha. The major components of Other Operating Revenues have been assigned as follows: (1) Late Payment Revenue has been directly assigned, (2) Other Revenue Rent has been allocated on Plant; and (3) interruptible transportation revenues continue to be allocated to all firm classes based on an equal weighting of meters, services, and transmission plant components.

OPERATION & MAINTENANCE EXPENSE

28. Q: How are Operation and Maintenance expenses allocated?

A: The Operation and Maintenance (O&M) expenses are allocated to the customer classes using methods that most closely match cost causation. For example, Account 892, Maintenance of Services, is assigned based on the plant allocator reflecting the Company's investment in service lines.

As previously mentioned, all gas costs and revenues recovered through the GCR have been removed from the cost study. The remaining portion of gas costs related to purchasing gas in Accounts 807 and 813 continue to be allocated only to sales customers.

LNG, Transmission, and Distribution O&M expenses are allocated to the customer classes primarily using the corresponding plant allocations.

Meter reading expenses (Account 902) were allocated to the respective customer classes based on a separate analysis of meter reading expenses. A separate analysis was also conducted to allocate Customer Records and Collection Expenses (Account 903). Finally, Uncollectible Accounts expense (Account 904) was allocated based on write-offs by customer class.

29. Q: Please describe the allocation of General and Administrative (A&G) costs.

A: The A&G costs were allocated to each customer class based upon the applicable Labor, Plant, or Revenue allocator. For example, Property Insurance was allocated on Plant, and Employee Pensions and Benefits follow the allocation of Labor. Regulatory Commission expense was apportioned to the customer classes based on a Revenue allocator.

30. Q: Please describe the allocation of the remaining operating expenses.

A: The remaining operating expenses consist of Depreciation and Amortization expenses, Taxes Other Than Income Taxes, Net ITC adjustment, AFUDC, Interest on Customer Deposits, and Federal and State Income Taxes. The line-item allocation of each of these remaining operating expenses is shown in Schedule EPT-1, starting at page 15. These schedules include the details of the applicable Federal and State income taxes.

31. Q: Have you prepared a summary of the results of your Delmarva Gas Delivery customer class cost of service study?

A: Yes, the summary results for the Company's class cost of service study expressed as Rates of Return, and Relative Rates of Return, are provided in Schedule EPT-3.

32. Q: Does this conclude your testimony?

A: Yes.