

**PECO ENERGY COMPANY
STATEMENT NO. 6**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION
v.
PECO ENERGY COMPANY – ELECTRIC DIVISION

DOCKET NO. R-2018-3000164

DIRECT TESTIMONY

WITNESS: JIANG DING

SUBJECT: CLASS COST-OF-SERVICE STUDY

DATED: MARCH 29, 2018

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1 **DIRECT TESTIMONY**
2 **OF**
3 **JIANG DING**

4 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

5 **1. Q. Please state your full name and business address.**

6 A. My name is Jiang Ding. My business address is PECO Energy Company,
7 2301 Market Street, Philadelphia, Pennsylvania 19103.

8 **2. Q. By whom are you employed and in what capacity?**

9 A. I am employed by PECO Energy Company (“PECO” or the “Company”)
10 as Principal Regulatory & Rates Specialist.

11 **3. Q. Please describe your educational background.**

12 A. I received a Bachelor’s Degree in Law from China University of Political
13 Science and Law, and I received a Master of Science Degree in Finance
14 from Texas A&M University.

15 **4. Q. Please describe your work experience with the energy industry.**

16 A. Upon graduation from Texas A&M University, I worked as an Accountant
17 for Enron and as a Financial Analyst for Halliburton Energy Services. I
18 was hired by Exelon Power as an Operational Area Analyst in 2002. I
19 then worked for Exelon Generation and Exelon Corporation as a Senior
20 Project Evaluation Analyst. I was appointed Principal Regulatory & Rates
21 Specialist in PECO’s Regulatory Strategy and Revenue Policy Division in
22 2013. My main responsibilities include revenue requirement modeling

1 and analyses for regulatory initiatives, cost of service studies and base rate
2 case filings. For example, in the Company's last base rate proceeding, I
3 developed the COS study with PECO witness, Alan B. Cohn, and assisted
4 with preparing all exhibits accompanying his cost-of-service testimony.

5 **5. Q. Have you prepared any exhibits to accompany your testimony?**

6 A. Yes. PECO Exhibits JD-1 to JD-10 were prepared and are described in
7 detail in my testimony.

8 **6. Q. Please describe the purpose of your testimony?**

9 A. I will explain the cost of service principles underlying the unbundled, fully
10 allocated class cost-of-service study ("COS study") that I performed, the
11 methods and procedures employed to perform such study and the results
12 produced by the COS study.

13 **7. Q. How is your testimony organized?**

14 A. My testimony is divided into four parts. First, I provide some background
15 information, identify the exhibits that I am sponsoring, and summarize the
16 results of the COS Study. Second, I introduce and discuss the COS study
17 methodology. Third, I explain the development of the revenue
18 requirement for each rate class. Fourth, I present the results of the COS
19 study in detail and discuss the contents of the exhibits. Finally, I describe
20 the analysis undertaken by the Company in accordance with the settlement
21 of its 2015 base rate proceeding.

1 **II. BACKGROUND INFORMATION AND SUMMARY**
2 **OF COST-OF-SERVICE STUDY RESULTS**

3 **8. Q. What is the total revenue requirement you used to prepare PECO’s**
4 **COS study?**

5 A. I used the total distribution revenue requirement for the fully projected
6 future test year (“FPFTY”) developed in PECO Exhibit BSY-1, which is
7 sponsored by PECO witness Benjamin S. Yin and discussed in Mr. Yin’s
8 direct testimony (PECO St. No. 3). The total distribution revenue
9 requirement for the FPFTY is \$1,406 million (PECO Exhibit JD-1, line
10 64) excluding costs recovered under PECO’s Generation Supply
11 Adjustment (“GSA”)¹ and Transmission Service Charge (“TSC”)² and
12 \$2,241 million (PECO Exhibit JD-1, line 114) including costs recovered
13 under the GSA and TSC. The total distribution revenues and distribution
14 revenues by customer class for the FPFTY under existing rates that are
15 used in the COS study were also obtained from PECO Exhibit BSY-1.

16 **9. Q. Please identify the exhibits that accompany your direct testimony.**

17 A. The exhibits identified below accompany my testimony and are discussed
18 in greater detail in Section IV of my testimony.

19

¹ The GSA is the reconcilable rate adjustment that recovers, on a bypassable basis, the costs PECO incurs to provide default service to customers that do not obtain generation from an electric generation supplier.

² The TSC is the reconcilable rate adjustment that recovers charges for network transmission service incurred by PECO on a bypassable basis from PECO’s default service customers. PJM Interconnection LLC (“PJM”) furnishes network transmission service to PECO pursuant to the PJM Open Access Transmission Tariff.

PECO Exhibit JD-1	Summary of Results
PECO Exhibit JD-2	Total Class Allocation - Revenue Requirement by Rate Class
PECO Exhibit JD-3	Revenue Requirement by Functional Classification
PECO Exhibit JD-4	Unitized Functionally Classified Revenue Requirement
PECO Exhibit JD-5	Customer-Related Revenue Requirement and Customer Charge
PECO Exhibit JD-6	Night Service Rider-Related Costs
PECO Exhibit JD-7	Development of External Allocation Factors
PECO Exhibit JD-8	Development of Unbundled Cash Working Capital Rate for the GSA
PECO Exhibit JD-9	Development of Unbundled Cash Working Capital Rate for the TSC
PECO Exhibit JD-10	Calculation of Rate HT High Voltage Discount

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10. Q. Please summarize the results of the COS study as they pertain to changes in rates proposed in PECO’s filing.

A. The results of the COS study and my conclusions based on those results are as follows:

1. The current tariff rates produce the net income by rate class shown on line 16 of PECO Exhibit JD-1,³ which yields the rates of return on rate base shown on line 25 of that exhibit.

The table below summarizes these results.

Rate Class	ROR	Ratio to Average ROR
R	5.65%	0.98
RH	4.50%	0.78
GS	6.63%	1.15
PD	6.46%	1.12
HT	6.03%	1.05

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³ Please note that the line numbering is continuous across pages 1-3 of PECO Exhibit JD-1. I will refer to the line numbers in PECO Exhibit JD-1 without page references.

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EP	3.65%	0.63
SL	7.12%	1.24
Average	5.76%	

- 2. PECO’s total distribution revenue requirement for the FPFTY has been allocated or assigned among the rate classes based on the results of the COS study. The results of the COS study are summarized on pages 1-3 of PECO Exhibit JD-1, which show the total distribution revenue requirement separately for Distribution, Transmission, and Purchased Power costs.
- 3. The increases or (decreases) in revenue by rate class needed to produce rates of return by class equal to the Company’s proposed overall rate of return are shown on line 120 of page 3 of PECO Exhibit JD-1. The increases or (decreases) in revenue shown on line 120 are shown separately for Distribution base rates (line 70) and the working capital revenue requirement recovered in the TSC (line 95) and in the GSA (line 83) on page 2 of PECO Exhibit JD-1. While the summary on pages 1-3 of PECO Exhibit JD-1 shows the rate increases or decreases necessary to move each class to the system average rate of return, the Company is not proposing rates that will take all classes to their indicated cost of service at this time, as explained by the direct testimony of Mark Kehl in PECO Statement No. 7.

1 **III. PECO’S CLASS COST-OF-SERVICE STUDY**

2 **11. Q. Briefly describe the purpose of a class COS study.**

3 A. The purpose of a COS study is to determine the cost to serve, expressed as
4 revenue requirement, for each rate class served by a utility. The revenue
5 requirement for a rate class is that portion of a utility’s total cost of service
6 attributed to that rate class in accordance with principles of cost causation.
7 In a COS study, all of the utility’s costs of providing service must be
8 analyzed and assigned or allocated among the rate classes. The COS
9 study is used, along with other factors, as discussed in more detail by Mr.
10 Kehl, to design rates that fully recover the utility’s costs.

11 **12. Q. What are the guiding principles for performing a class COS study?**

12 A. The central element in performing a COS study is the determination of
13 allocation factors based on causal relationships between, on the one hand,
14 customer demands, load profiles and usage characteristics, and, on the
15 other hand, the costs incurred by the Company to meet customers’ service
16 requirements imposed by those demands, load profiles and usage
17 characteristics. The primary goals in selecting allocation factors are:

- 18 1. The appropriate recognition of cost causality;
19 2. The stability of study methods and their consistent application
20 over time, so that trends in the direction of class revenues
21 relative to cost-of-service can be discerned properly from case
22 to case; and

1 3. Completeness, such that the COS study captures all of the costs
2 that each class imposes on the distribution system.

3 **13. Q. What rate classes are included in the PECO COS study?**

4 A. The rate classes included in the PECO COS study are Residential (rate R),
5 Residential Heating (rate RH), General Service (rate GS), Primary
6 Distribution (rate PD), High Tension (rate HT), Electric Propulsion (rate
7 EP) and Lighting. In the COS study, all of the lighting rate schedules in
8 PECO's current tariff are combined into a single Lighting class, because
9 their cost and usage characteristics are very similar. The separate classes
10 consist of Private Outdoor Lighting (POL), Street Lighting-Suburban (SL-
11 S), Street Lighting-Customer-Owned (SL-E), Traffic Lighting Constant
12 Load Service (TLCL), Alley Lighting (AL) and Smart Lighting Control
13 (SL-C).

14 For customers participating in PECO's Customer Assistance Program
15 ("CAP"), the current CAP Residential (CAP-R) rate class is combined
16 with the Residential class, because their usage characteristics are the same
17 and CAP-R rates are designed with reference to Residential rates. For the
18 same reasons, the current CAP Residential Heating (CAP-RH) rate class is
19 combined with the Residential Heating class.

20 **14. Q. Please summarize the approach you used in preparing PECO's COS**
21 **study.**

22 A. As I previously explained, the most critical task in performing any COS
23 study is establishing relationships between customer demands, load

1 profiles and usage characteristics, and the costs incurred to meet those
2 customer requirements. This requires an understanding of the design of
3 the utility's distribution system and how that design relates to the
4 characteristics of the customers it is designed to serve.

5 PECO, like most electric utilities, designs its electric distribution system to
6 meet three primary objectives:

- 7 1. Connect all customers to the grid;
- 8 2. Deliver sufficient electricity to meet the aggregate peak
9 demand for electricity of all firm delivery customers whenever
10 those peaks occur, and
- 11 3. Assure that electricity is delivered to customers safely and
12 reliably throughout the year.

13 The allocation methods used in a COS study must take into account the
14 objectives that the distribution system is designed to achieve so that the
15 allocation of plant investment and operating expenses properly aligns with
16 cost-causation factors such as the need to connect all customers to the
17 distribution system and to meet class peak demands whenever they occur.
18 Other factors, such as incentives to influence customer behavior (e.g.,
19 conservation or demand reduction) or to temper the impact on customers
20 of rate changes, are more appropriately considered in the revenue
21 allocation and rate design phase.

22 The PECO COS study I prepared was performed using the proprietary
23 Electric Cost of Service Model ("Model") developed by Management

1 Applications Consulting, Inc., which employs a Microsoft Excel platform.
2 The Model facilitates the preparation of the COS study, accelerates
3 computations and develops appropriate documentation. The Model uses a
4 three-step process to allocate or assign costs to rate classes, in accordance
5 with general cost of service principles. These three steps consist of: (1)
6 functionalizing rate base and costs to determine the particular rate
7 schedules that should share responsibility for each of those assets and
8 costs; (2) classifying functionalized costs into demand-related, energy-
9 related and customer-related cost categories to facilitate allocating such
10 costs to rate schedules in accordance with identifiable characteristics; and
11 (3) allocating the functionalized, classified costs among rate classes. The
12 Model provides functionalized, classified cost information by rate class,
13 develops unbundled revenue requirements by functional classification and
14 in total for each rate class, and calculates unit costs.

15 **15. Q. Please describe the functions included in the COS study.**

16 A. The COS study includes the following functions:

17 **Energy:** The Energy function includes purchased power and related costs
18 incurred by the Company, which are recovered under its GSA, which
19 applies to default service.

20 **Transmission:** The Transmission function includes costs associated with
21 the Company's bulk transmission system, which is designed to move
22 power from generation sources to the primary distribution system and

1 operates at voltages of 69 kV and above. These costs are generally
2 recovered in the TSC and the Non-Bypassable Transmission Rider
3 (“NBT”).⁴ The working capital included in this function only applies to
4 the bypassable portion of the TSC cost.

5 **Primary Distribution High Tension (“Primary HT”):** This function
6 includes costs associated with moving power from the transmission
7 system to the Primary Distribution system, including substations that
8 transform power from 69 kV to 34 kV or 13 kV and from 34 kV to 13 kV,
9 conductors operating primarily at voltages between 13 kV and 34 kV, and
10 related assets. This includes some facilities operating at voltages of 69 kV
11 and above that are distribution facilities.

12 **Primary Distribution (“Primary”):** This function includes costs
13 associated with moving power from the Primary HT system to the primary
14 distribution system, including transformers that reduce voltage from 13 kV
15 to 4 kV or 2.4 kV, conductors operating at voltages between 2.4 kV and 4
16 kV, and related assets.

17 **Secondary Distribution Customer and Demand (“Secondary**
18 **Distribution”):** This function includes costs associated with moving

⁴ The NBT is the reconcilable rate adjustment that recovers PJM charges for Regional Transmission Expansion Plan (“RTEP”), Expansion Cost Recovery, and certain Generation Deactivation / Reliability Must Run charges on a non-bypassable basis from all of PECO’s distribution customers.

1 power from the Primary system to customers' premises, including costs
2 related to conductors operating at secondary voltage.

3 **Distribution Transformers:** This function includes the secondary
4 transformers that reduce the voltage from primary power levels to levels at
5 which secondary voltage customers receive service.

6 **Meters:** This function includes the cost to meter customers' usage and
7 demand.

8 **Services:** This function includes the investment in, and operating and
9 maintenance expenses related to, the service lines from the Company's
10 distribution conductors to customer locations.

11 **Customer Accounts:** This function includes the cost of customer billing
12 and records, call center, collection of customer accounts and uncollectible
13 accounts.

14 **Customer Service:** This function includes costs incurred to provide
15 energy efficiency, education, educational advertising, and conservation-
16 related service.

17 **Customer Other:** This function includes costs not included elsewhere,
18 such as street lighting and customer deposits.

1 **16. Q. Please describe the classification step of a COS study.**

2 A. In the classification step, the previously functionalized assets and costs are
3 separated into customer, energy or demand classifications according to the
4 system design or operating characteristics that cause those costs to be
5 incurred.

6 Customer-related costs are the expenditures made to attach a customer to
7 the distribution system, to meter usage and to maintain the customer's
8 account. Customer costs are a function of the number of customers served
9 and continue to be incurred whether or not a customer uses any electricity.
10 This classification includes capital costs associated with poles, wires,
11 services and meters and operating expenses incurred for customer service,
12 field service, billing and accounting and related activities.

13 Energy-related costs are those that vary with the quantity of electricity
14 sold to, or transported for, customers. These costs include purchased
15 power costs and related costs.

16 Demand-related or capacity-related costs are those expenditures associated
17 with plant that is designed, installed and operated to meet peak usage.

18 Distribution assets are designed to meet the peak loads of the customers
19 they serve at a localized level. Such localized loads exhibit far less
20 diversity than the aggregation of such localized loads that occurs at the
21 bulk transmission and generation levels. Accordingly, the costs of
22 demand-related distribution assets are allocated among the rate classes

1 based upon their respective class non-coincident peak (“NCP”) demands
2 (i.e., the peak electricity demand of each rate class, not necessarily
3 coincident with each other or with the system peak).

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

5 A. Many costs do fit neatly into one of the three classifications, but some
6 costs must be assigned between two classifications based upon special
7 studies or based upon how related costs have been classified. Special
8 studies, such as a minimum size study, are sometimes used to classify
9 poles, conductors and transformers between customer-related and demand-
10 related investment. A special study was not performed in this case
11 because investment related to such plant operating at secondary voltage
12 was considered to be customer-related and investment in plant operating at
13 primary voltage was considered to be demand-related and, therefore, such
14 plant was classified as customer and demand, respectively.

15 **18. Q. Please describe the class allocation step of a COS study.**

16 A. In the class allocation step, costs that have been functionalized and
17 classified are allocated among the rate classes based on appropriate causal
18 relationships. The allocation phase takes into account the design of the
19 utility system and how it is operated; cost data derived from the utility’s
20 accounting records; and usage and load data both for the system overall
21 and for specific customer classes. Based on analyses of the relationship
22 between costs and the factors driving the need to incur such costs, each

1 component of the revenue requirement is either directly assigned to a rate
2 class or an allocator is selected to apportion that component among rate
3 classes.

4 **19. Q. Please explain the term “direct assignment.”**

5 A. The term “direct assignment” means identifying specific plant investments
6 or specific expenses incurred exclusively to serve a specific customer or
7 group of customers. Direct assignments reflect a direct causal connection
8 between costs to serve and the customers being served. Therefore, if data
9 are available to make a direct assignment, it is generally the preferred
10 approach.

11 **20. Q. Can significant portions of a utility’s assets and expenses generally be**
12 **directly assigned in a COS study?**

13 A. No, most costs must be allocated. Utility service is generally provided to
14 customers by facilities that are used, and expenses that are incurred, in
15 common by all, or many, classes of customers. In addition, even in
16 instances where it might be possible to associate specific physical facilities
17 with particular customers, the detailed cost information needed to make a
18 direct assignment may not be reasonably available.

19 **21. Q. Please explain how allocation factors are determined.**

20 A. External and internal allocation factors are typically used to perform a
21 COS study and, consequently, were employed in the Model. External
22 allocators distribute costs in proportion to customers’ use of plant and

1 services represented by functionalized and classified costs. Examples of
2 external allocators are kWh deliveries (for energy-related costs), number
3 of customers (for customer-related costs) and class NCP demands
4 (distribution demand-related costs). PECO Exhibit JD-7 shows the
5 development of the main external allocators. Internal allocators are based
6 on some combination of external allocators, directly assigned costs and
7 other internal allocators. For example, property insurance costs are
8 allocated in proportion to the plant investment allocated or assigned to
9 each rate class, while plant investment itself is allocated on the basis of
10 one or more external allocation factors (e.g., NCP demand for demand-
11 related plant costs and customer counts for customer-related plant costs).

12 **22. Q. What is the source of the total rate base amount being allocated or**
13 **assigned to customer classes in the PECO COS study?**

14 A. The total rate base amount employed in the PECO COS study is \$4,846
15 million (PECO Exhibit JD-1, line 103) and is derived from PECO Exhibit
16 BSY-1, page 1.

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

18 A. For purposes of discussing how I functionalized, classified and allocated
19 rate base in the PECO COS study, I will refer to the following components
20 of rate base:

- 21 • Intangible plant
- 22 • Distribution plant

- 1 • General plant
- 2 • Depreciation reserve
- 3 • Other rate base items

4 **24. Q. How did you functionalize, classify and allocate each component of**
5 **the rate base among the rate classes?**

6 A. The principal allocators for each component of the rate base are discussed
7 below:

8 **Intangible plant** represents the costs of franchises and consents and other
9 intangible assets. It was functionalized, classified and allocated in
10 proportion to distribution plant (i.e., excluding plant serving the Energy
11 and Transmission functions) with the exception of a portion of the total
12 that is associated with Advanced Meter Infrastructure (“AMI”). Intangible
13 AMI system costs, which consist of the software necessary to operate the
14 AMI system and to interface with other systems such as billing, were
15 classified as customer-related and allocated based on number of meters.

16 **Distribution plant** allocators were developed for specific subcategories of
17 distribution plant, as follows:

- 18 • Land and land rights, stations, and structures and improvements
19 were functionalized to Primary HT, classified as demand, and
20 allocated among the rate classes based on their respective class
21 NCP demands at the Primary HT level.

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- Poles, towers and fixtures, overhead conductors and devices, underground conduit, and underground conductors and devices were functionalized between Primary HT/Primary, on one hand, and Secondary Distribution, on the other, based upon a detailed study of the respective costs, as shown in PECO Exhibit JD-7 at page 3. The Primary HT/Primary portion was split between Primary HT and Primary based on a study of the respective wire miles of conductors in each function (see PECO Exhibit JD-7, p. 5). Costs identified as Primary HT and Primary were classified as demand-related and allocated among the rate classes based on their respective NCP demands at the Primary HT and Primary voltage levels, respectively (see PECO Exhibit JD-7, p. 14). Costs identified as Secondary Distribution were classified as customer-related and allocated based on the number of customer locations served.
 - Line transformers were functionalized to Secondary Distribution and allocated among the rate classes based on NCP demands at secondary voltage (see PECO Exhibit JD-7, p. 4).
 - Services connect individual customers to the system and, therefore, were functionalized to their own category, classified as customer-related and allocated based on the estimated total replacement cost of all services in each rate class (see PECO Exhibit JD-7, p. 6). The total replacement cost of services for a

1 rate class was estimated by multiplying the estimated
2 replacement cost of a single service for a member of the class by
3 the number of customer locations in the class.

- 4 • Meters were functionalized to their own category, classified as
5 customer-related and directly assigned based on the cost of new
6 AMI meters installed pursuant to PECO's Smart Meter Universal
7 Deployment Plan, which was approved by the Pennsylvania
8 Public Utility Commission ("Commission"). The unrecovered
9 cost of Automated Meter Reading ("AMR") meters replaced by
10 AMI meters are also functionalized to this category and allocated
11 in the same proportion as the Company's investment in AMI
12 meters. Street lighting and signal systems were functionalized to
13 Customer Other, classified as customer-related and directly
14 assigned to Lighting.

15 **General plant** includes primarily structures and improvements relating to
16 administrative activities, tools, and communications equipment, as well as
17 other miscellaneous assets. These assets were functionalized, classified
18 and allocated among rate classes based on the direct labor component of
19 operating expenses, which reflects the nature of the assets and common
20 cost-of-service practices for this type of property.

21 **Depreciation reserve** was provided by PECO by each asset account.
22 Each component of the depreciation reserve was functionalized, classified
23 and allocated among rate classes in the same ratio as the related assets.

1 **Other rate base items** include primarily materials and supplies,
2 accumulated deferred income taxes, customer deposits, common plant,
3 customer advances for construction, working capital and pension and other
4 post-retirement benefit (“OPEB”) assets, which are discussed below.

- 5 • Materials and supplies were functionalized, classified and
6 allocated among rate classes in proportion to plant in service.
- 7 • Accumulated deferred income taxes were functionalized,
8 classified and allocated among rate classes in proportion to plant
9 in service.
- 10 • Customer deposits were directly assigned to rate classes based on
11 information provided by Mr. Yin (see PECO Exhibit JD-7, page 8).
- 12 • Common plant consists of assets similar to those customarily
13 found in General Plant and, therefore, was functionalized,
14 classified and allocated among rate classes based on the direct
15 labor component of operating expenses.
- 16 • Customer advances were functionalized to Distribution and
17 Secondary Distribution, classified as demand and customer-
18 related and allocated among the rate classes in the same
19 proportion as Distribution and Secondary Distribution assets.
- 20 • Working capital represents PECO’s need for cash to keep the
21 business running until revenues are collected to pay the costs of
22 providing service. Working capital was directly assigned to

1 Energy and Transmission based on the results of the lead-lag
2 study prepared by Mr. Yin and described in PECO Statement No.
3 3. Energy-related working capital requirements were calculated
4 for each rate class in the same manner that Mr. Yin calculated
5 the total working capital. Transmission-related working capital
6 requirements were calculated for each rate class in the same
7 manner that Mr. Yin calculated the total working capital. The
8 cost by class of service was directly assigned in proportion to
9 costs that are allocated on the basis of PJM's methodology. PJM
10 allocates such costs in proportion to contributions to the single
11 coincident peak experienced in the prior year. The balance of
12 working capital was functionalized, classified and calculated for
13 each rate class using the same methodology employed by Mr.
14 Yin.

- 15 • The pension asset and OPEB Accumulated Deferred Tax Asset,
16 which are discussed by Mr. Yin in PECO Statement No. 3, are
17 directly related to employees and, therefore, were functionalized,
18 classified and allocated among rate classes based on the direct
19 labor component of operating expenses.

20 **25. Q. What are the major categories of PECO's expenses?**

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

- 22 • Distribution operating and maintenance expenses;

- 1 • Customer accounting and customer service expenses;
- 2 • Administrative and general expenses;
- 3 • Depreciation expense;
- 4 • Taxes other than income taxes; and
- 5 • Income taxes.

6 **26. Q. In determining how to treat these expenses in the COS study, was**
7 **there any other important grouping of expenses that had to be**
8 **considered?**

9 A. Yes, there was. Labor costs affect each of the first three categories
10 identified above. Consequently, certain cost categories are allocated on
11 the basis of direct labor costs. For example, Account 920 –
12 Administrative and General Salaries is allocated among rate classes based
13 on the composite allocation of direct labor costs included in all operating
14 expense accounts. Likewise, employee benefits are allocated using a labor
15 allocator. In order to develop such allocators, the direct labor costs
16 included in each expense account were obtained from data assembled by
17 Mr. Yin.

18 **27. Q. What do PECO's distribution operating and maintenance expenses**
19 **include and how were these expenses functionalized, classified and**
20 **allocated among rate classes?**

21 A. PECO's distribution system consists principally of substations; poles,
22 towers and fixtures; overhead and underground conductors and related

1 equipment; meters; line transformers; outdoor lighting plant; and other
2 miscellaneous assets. Operating and maintenance expenses were analyzed
3 to determine the assets they were incurred to operate or maintain and,
4 therefore, were functionalized, classified and allocated among rate classes
5 in the same manner as the assets to which they relate. The COS study also
6 includes costs of purchased power and transmission costs paid to PJM that
7 are recovered through GSA, TSC and NBT charges. Purchased power
8 costs were functionalized as Energy, classified as energy-related and
9 allocated on the basis of default service sales. Transmission-related costs
10 were functionalized as Transmission and assigned among rate classes
11 based on their contributions to the single PJM coincident peak, which is
12 the same basis on which PJM determines its charges to PECO for
13 transmission service and thus used by PECO for budgeting purposes.

14 In addition to the expenses of operating and maintaining PECO's
15 distribution system, distribution expenses include the following:

- 16 • **Customer-installation expenses:** These expenses relate to field
17 investigations, high-bill complaints, and potential and actual
18 energy theft, and were allocated based on number of customers.
- 19 • **Miscellaneous distribution expenses and rents:** These
20 expenses relate to information technology ("IT") and other
21 expenses associated with all distribution assets. Accordingly,
22 they were functionalized, classified and allocated among rate
23 classes in proportion to total distribution plant.

1 **28. Q. What do PECO's customer accounting and customer service expenses**
2 **include and how were those expenses functionalized, classified and**
3 **allocated among the rate classes?**

4 A. Customer accounting and customer service expenses primarily include
5 meter-reading expenses, customer records and collection expenses,
6 uncollectible accounts expense, miscellaneous customer accounts expense
7 and customer-assistance expense. These costs were functionalized to
8 Customer Accounts, classified as customer-related and allocated as
9 follows:

10 • **Meter reading expenses**, have been supplanted by the new AMI
11 system expenses except for some minor expenses.

12 • **Customer records and collection expenses** relate to billing, call
13 center operations, payment processing, arrearage recoveries,
14 support for administering PECO's CAP program, and
15 termination and restoration of service. The account was
16 analyzed in detail, discrete functions were identified, and
17 expenses related to each function were allocated among rate
18 classes using an appropriate allocation factor (see PECO Exhibit
19 JD-7, p. 9). For example, expenses incurred for billing activities
20 were allocated based on number of bills, and call center costs
21 were allocated based on the number of customers. A single
22 customer allocation could not be used because some costs are
23 specific to residential customers while others are specific to

1 commercial and industrial customers. Therefore, a weighted
2 allocator, based upon the analysis discussed above, was used for
3 this account.

4 • **Uncollectible accounts expense**, or bad debt expense, was
5 allocated among rate classes based on the Company's experience
6 over an historic three-year period (2015-2017) (see PECO
7 Exhibit JD-7, p. 11).

8 • **Miscellaneous customer accounts expense** includes IT support
9 for the other customer account functions.

10 • **Customer assistance expense** comprises expenses incurred for
11 the Low Income Usage Reduction Program, marketing and
12 conservation. Costs specific to the residential class were
13 allocated to Rates R and RH based on number of customers.
14 General marketing and conservation costs were allocated based
15 on sales (see PECO Exhibit JD-7, p 10).

16 **29. Q. How were administrative and general expenses functionalized,**
17 **classified and allocated among rate classes?**

18 A. Administrative and general expenses include administrative and general
19 salaries, office supplies and expenses, outside services, property insurance
20 costs, injuries and damages, employee benefits, regulatory commission
21 expenses, general advertising expenses, miscellaneous general expenses,
22 maintenance of general plant, and rents.

1 Except for items discussed below, administrative and general expenses are
2 related to labor costs and, therefore, were functionalized, classified and
3 allocated among rate classes in the same ratio as direct labor expenses.

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

6 Regulatory commission expenses, general advertising, and miscellaneous
7 general expense were functionalized, classified, and allocated among rate
8 classes in proportion to revenue.

9 **30. Q. How were depreciation expense and depreciation reserve**
10 **functionalized, classified and allocated among the rate classes?**

11 A. Depreciation expense was derived from PECO Exhibit SAB-3, which is
12 sponsored by Mr. Bailey and PECO Exhibit No. BSY-1, which show
13 depreciation expense by plant account. The depreciation reserve was
14 obtained from the same sources. Both the depreciation expense and the
15 depreciation reserve were functionalized, classified and allocated among
16 rate classes in the same ratio as the plant account to which they relate.

17 **31. Q. How were taxes other than gross receipts tax and income taxes**
18 **functionalized, classified, and allocated among the rate classes?**

19 A. Taxes, other than gross receipts tax and income taxes, include Public
20 Utility Realty Tax ("PURTA"), payroll-related taxes, local use taxes and
21 real estate taxes. Payroll-related taxes were functionalized, classified and

1 allocated among rate classes in proportion to direct labor expenses;
2 PURTA taxes were allocated based on the allocation of land; and real
3 estate taxes were allocated based on total plant;

4 **32. Q. How was gross receipts tax functionalized, classified, and allocated**
5 **among the rate classes?**

6 A. Gross receipts tax is based on transmission and distribution revenue,
7 purchased power revenue and forfeited discounts (i.e., late payment
8 charges). Accordingly, gross receipts tax was calculated separately by
9 function and was classified and allocated among rate classes on the basis
10 of taxable revenue.

11 **33. Q. How was income tax expense functionalized, classified and allocated**
12 **among rate classes?**

13 A. Income tax expense, calculated on the basis of revenue at present rates,
14 was functionalized, classified and calculated for each rate class using the
15 same methodology employed by Mr. Yin in PECO Exhibit BSY-1,
16 Schedule D-18.

17 **34. Q. How was revenue at present rates computed for each rate class?**

18 A. Distribution revenue at present rates is shown in the proof of revenues set
19 forth in PECO Exhibit MK-6. The total was assigned to the rate classes
20 based on the proof of revenues. Distribution revenue at present rates for
21 each rate class is shown on line 4 of PECO Exhibit JD-1.

1 Supply charge revenue, which consists of revenue collected under the
2 GSA tariffs for energy, administrative costs, and cash working capital,
3 was assigned to rate classes based on projected default service prices and
4 MWh of generation. For each rate class, and in total, supply charge
5 revenue equals the sum of the supply cost (including administrative costs),
6 gross receipts tax, and the revenue requirement for cash working capital.

7 Transmission charge revenue under the TSC was functionalized to
8 Transmission and allocated among the rate classes in proportion to costs
9 that are allocated on the basis of PJM's methodology. PJM allocates such
10 costs in proportion to contributions to the single coincident peak
11 experienced in the prior year. Revenue equals the sum of the cost plus the
12 revenue requirement for associated cash working capital.

13 Forfeited discount revenue was functionalized, classified and allocated in
14 the same ratio as the uncollectible accounts expense.

15 Rent for electric property represents pole rental revenue and was
16 functionalized, classified and allocated in the same ratio as the plant costs
17 for poles, towers and fixtures.

18 Decommissioning payments in the FPFTY represent PECO's transfer to
19 Exelon Generation Company of amounts that PECO collects from
20 customers for nuclear decommissioning expense. Both PECO's recovery
21 of these costs and the transfer of such funds to Exelon Generation
22 Company were approved in the Commission's Order approving the

1 Settlement of PECO's restructuring proceeding.⁵ This amount was
2 allocated among the rate classes in the same ratio as the revenue was
3 collected, which is in proportion to each class' billed kWh.

4 Other electric revenue was allocated among the rate classes based on
5 distribution plant.

6 **IV. DEVELOPMENT OF RATE CLASS**
7 **REVENUE REQUIREMENT**

8 **35. Q. How did you develop the revenue requirements for each class?**

9 A. The revenue requirements for each rate class were calculated using the
10 same method employed by Company witness Mr. Yin to compute the
11 overall revenue requirement for the FPFTY. Thus, the revenue
12 requirements for each rate class are the sum of that class' allocated
13 operating expenses, depreciation expense, general taxes, return on rate
14 base and income tax expense. Return on rate base for each rate class was
15 computed by multiplying the rate class' rate base by the proposed system
16 average rate of return. Income taxes included in the revenue requirement for
17 each rate class were computed directly by grossing up the required non-debt

⁵ *Application of PECO Energy Co. for Approval of its Restructuring Plan Under Section 2806 of the Public Utility Code and Joint Petition for Partial Settlement; Petition of Enron Energy Services Power, Inc. for Approval of an Electric Competition and Choice Plan and for Authority Pursuant to Section 2807(E)(C) of the Public Utility Code to Serve as the Provider of Last Resort in the Service Territory of PECO Energy Co.*, Docket Nos. R-00973953 and P-00971265, 1997 Pa. PUC LEXIS 51 at *120 (Dec. 23, 1997). On June 9, 2009, the Commission initiated an investigation at Docket No. I-2009-2101331 to determine whether or not it would be appropriate for PECO to continue the collection of nuclear decommissioning costs from retail customers after the expiration of PECO's rate caps on December 31, 2010 and reaffirmed its earlier holding in PECO's restructuring proceeding. *Investigation into PECO Energy Company's Electric Service Tariff PA P.U.C. No. 4*, 2010 Pa. PUC LEXIS 299 (Order entered July 22, 2010).

1 return on rate base for the class at the applicable statutory income tax rates.
2 PECO Exhibit JD-1, line 64, shows the total revenue requirements by rate
3 class reflecting the fully allocated distribution cost of service at the
4 proposed system average rate of return. PECO Exhibit JD-1, line 69,
5 shows the portion of the total revenue requirements PECO proposes to
6 collect in distribution rates.

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

9 A. The increase or decrease needed for each rate class was calculated by
10 comparing the revenue requirements for each rate class to the forecasted
11 revenue at present rates for that class for the FPFTY. This is the same
12 method used by Mr. Yin in PECO Exhibit BSY-1, Schedule A-1, with
13 respect to the overall revenue requirement and revenue deficiency. The
14 increases or (decreases) in rate class revenue needed to produce a rate of
15 return equal to the Company's proposed overall rate of return are shown in
16 PECO Exhibit JD-1 at line 120, which total \$142.5 million. The increases
17 or (decreases) in class distribution revenue are shown on line 70, which
18 total \$147.0 million. The (decrease) in Transmission revenue under the
19 TSC are shown on line 95, which total, on a net basis, (\$1.9) million, and
20 the (decrease) in Purchased Power revenue under the GSA of (\$2.5)
21 million is shown on line 83. In addition, forfeited discounts are expected
22 to increase by \$0.6 million as a result of the increase in distribution rates.

1 **V. RESULTS OF THE PECO COST-OF-SERVICE STUDY**

2 **37. Q. Please describe what is shown on PECO Exhibit JD-1.**

3 A. PECO Exhibit JD-1, which sets forth the substance of the COS study,
4 compares the revenue at current rates by rate class to the revenue
5 requirement allocated on a cost-of-service basis to each rate class. Net
6 income at present rates, shown on line 16, is computed by subtracting
7 operating expenses, depreciation and amortization, taxes other than
8 income taxes, and income taxes (lines 10 to 14) from revenue at present
9 rates (line 7). The return on rate base at present rates for each rate class is
10 shown on line 25, and the relative rates of return are shown on line 26.

11 Line 114 shows each rate class' revenue requirement (including revenue
12 from distribution charges, transmission charges, purchased power,
13 forfeited discounts and other revenue) at the proposed overall rate of
14 return. Line 107 shows operating expenses, line 108 shows depreciation
15 and amortization expense, line 110 shows gross receipts tax, and line 111
16 shows income tax expense. Line 104 shows operating income assuming
17 each rate class pays its full cost-of-service. Line 120 shows the increase
18 (decrease) in revenue needed for each rate class to produce revenues equal
19 to its revenue requirement at full cost of service and produce the system
20 average rate of return. Line 70 shows the increase (decrease) in
21 distribution revenue for each rate class to produce revenue from
22 distribution charges equal to its distribution revenue requirement at full
23 cost of service. Line 95 shows the increase (decrease) in transmission

1 revenue for each rate class to produce revenue from transmission charges
2 equal to its transmission revenue requirement at full cost of service.

3 **38. Q. What information is shown on PECO Exhibit JD-2.**

4 A. PECO Exhibit JD-2, as noted above, is the rate class cost of service and
5 shows the allocation of each element of measures of value also known as
6 rate base (RB schedules), operating expenses (E schedules), depreciation
7 expense (D schedules) and taxes (TO and TI schedules) among the rate
8 classes. This information is contained on the first 15 pages of the exhibit.

9 Also included in this exhibit are the external and internal allocators used
10 for the rate class allocations, which are shown on pages 15-31 of the
11 exhibit.

12 **39. Q. Please describe the information contained in PECO Exhibit JD-3.**

13 A. PECO Exhibit JD-3 contains the COS study by functional category and
14 classification. The summary appears on pages 1-6 and the account by
15 account allocation to functional category and classification is provided on
16 pages 7 to 33. Pages 33 to 66 of this exhibit provide the external and
17 internal allocators used for the exhibit.

18 **40. Q. Please describe what is shown in PECO Exhibit JD-4.**

19 A. PECO Exhibit JD-4 presents unitized revenue requirement for each rate
20 class. The unitized revenue requirements are the functionalized and
21 classified revenue requirements allocated to each class of service divided

1 by the appropriate units. For example demand-related cost is divided by
2 kW of demand, energy-related cost is divided by kWh, and customer-
3 related cost is divided by number of customers. The unit cost is provided
4 by classification and functional area.

5 **41. Q. Which costs were considered in developing the proposed customer**
6 **charges?**

7 A. The proposed customer charges are based on the specific customer-
8 classified costs in the PECO COS study that are approved for recovery in
9 customer charges. Customer related costs include all costs incurred to
10 attach a customer to the distribution system, to meter usage and to
11 maintain the customer's account. They include: (1) capital costs
12 associated with portions of the distribution system, services and meters,
13 and general plant supporting the functions identified above; and (2)
14 operating and maintenance expenses related to those assets described in
15 (1), associated administrative and general expense, metering and billing
16 expense and customer service and account expenses. Total customer costs
17 by rate class for the FPFTY are shown on PECO Exhibit JD-4, in the unit
18 cost analysis.

19 The costs typically considered in Pennsylvania in developing residential
20 customer charges exclude allocated portions of the distribution system.
21 PECO Exhibit JD-5 excludes the component shown on PECO Exhibit JD-
22 4 associated with the distribution system. The residential customer charge

1 includes the costs of the service and meter, meter reading-related expense,
2 billing expense, and customer accounting expense together with
3 appropriate pensions and benefits and payroll taxes that are part of the
4 applicable labor expenses. Also included are other supporting
5 administrative and general costs and associated general and common plant
6 and working capital.

7 **42. Q. Please briefly describe the Night Service Rider (“NSR”)?**

8 A. The NSR applies to distribution service provided to eligible commercial
9 and industrial customers for demand registered in off-peak hours that
10 exceeds their demand during on-peak hours (*i.e.*, 8:00 a.m. to 8:00 p.m.
11 daily (Friday is 4 p.m.) except Saturdays and Sundays). For example, if a
12 customer has an off-peak maximum demand of 200 kW and an on-peak
13 maximum demand of 190 kW, the 10 kW excess of the maximum off-
14 peak demand over the on-peak demand would be billed at the NSR rate,
15 not the standard tariff rate.

16 **43. Q. What costs were included in developing the NSR rate?**

17 A. In developing the NSR rate, I included the cost of overhead and
18 underground conductors, transformers, and the maintenance expenses
19 associated with those conductors and transformers and an allocable
20 portion of administrative and general expenses and the cost of common
21 and general plant. These costs are properly included in the NSR rate
22 because off-peak usage affects the size of conductors and transformers.

1 Those facilities serve load at the localized level and, therefore, do not
2 benefit from load diversity as does other plant, such as substations.

3 I excluded from the NSR rate the cost of substations, poles and
4 underground conduit because of the location of substations on the system.
5 The size of substations is affected by on-peak demand. The cost of poles
6 and conduit were also excluded because off-peak demand in excess of on-
7 peak demand is unlikely to affect the size of those facilities (PECO
8 Exhibit JD-6).

9 Mr. Kehl uses these costs to determine the appropriate charge for the NSR
10 as discussed in PECO Statement No. 7.

11 **44. Q. Please describe the information shown on PECO Exhibit JD-7.**

12 A. PECO Exhibit JD-7 shows the development of the external allocators,
13 which are described below and are used in the COS study. Except where
14 noted, all data are for the FPFTY.

15 **Index (page 1) – Table of External Allocators**

16 **Summary of External Allocator Values (page 2) - Class Allocation**

17 **Summary of External Allocator Values (page 3) - Functionalization**

18 **Conductors-Functional Splits (page 4) - Allocates the cost of Overhead**
19 **Conductors and Underground Conductors between Primary HT/Primary**
20 **and Secondary based on a study that the Company prepared to separate**

1 costs by voltage levels. The functional split for poles follows the
2 overhead conductor split, and the functional split for underground conduit
3 follows underground conductor split.

4 **Conductors-Primary Splits (page 5)** - Allocates the cost of Overhead
5 Conductors operating at primary voltage between Primary HT and
6 Primary based on the wire miles of those conductors. The same approach
7 was used for Underground Conductors. The functional split for poles
8 follows the overhead conductor split, and the functional split for
9 underground conduit follows underground conductor split.

10 **Service Costs (page 6)** - Computes investment in services for each rate
11 class at average replacement cost for the period 2014-2017. PECO does
12 not account for services separately and, therefore, has used estimated
13 replacement cost to allocate the account to the classes of service. In
14 addition, the services allocation factor reflects the fact that there are some
15 instances where multiple meters are served by a single service.

16 **Meter Costs (page 7)** - Meter costs are maintained separately for the
17 residential and C&I class for meters installed as part of the new AMI
18 system. Therefore, meter costs were directly assigned between residential
19 and C&I customers. AMI meter costs were allocated between the
20 commercial and industrial classes based on the number of meters. The
21 cost of replacing legacy MV-90 meters was allocated between the
22 commercial and industrial classes based on the number of MV-90 meters.

1 The unrecovered costs of legacy AMR meters were allocated among the
2 residential, commercial and industrial classes in the same proportion as
3 AMI meter costs.

4 **Customer Deposits (page 8)** - Allocates FPFTY customer deposits based
5 on the average customer deposit balances for each class as of the end of
6 2017.

7 **Acct 903 Allocator (page 9)** - Allocates costs associated with each
8 activity recorded in Account 903 – Customer Records and Collection
9 using an appropriate external allocator. Each activity, the cost of the
10 activity, and the allocator assigned to each is shown in a separate row.
11 Row 7 summarizes the costs by rate class. The weighted allocators are
12 shown on row 8. The separate allocations are necessary because some
13 costs are only applicable to specific rate classes.

14 **Acct 908 Allocator (page 10)** - Allocates the costs of each activity
15 recorded in Account 908 – Customer Assistance using an appropriate
16 external allocator. Rows 1-4 list each activity, the cost of the activity and
17 the allocator assigned to it. Row 5 summarizes the costs by rate class.
18 The allocators are on row 6.

19 **Write-Offs (page 11)** - Computes the Write-Off allocators using net
20 charge-offs for 2015-2017.

1 **Over 60-Day (page 12)** - Computes the Over 60-Day allocators. The
2 column “Over 60-Day Allocator” shows the percentage of PECO’s total
3 electric accounts receivable outstanding for more than two months for
4 each rate class at each month-end from July 2016 to June 2017.

5 **Purchase of Receivables (page 13)** - Computes the allocator used in the
6 COS study to allocate the POR portion of cash working capital.

7 **Demand Allocators (page 14)** - Computes the demand allocators used in
8 the COS study.

9 **MWh Sales at Voltage Levels (page 15)** - Computes MWh at the
10 different voltage levels based on projected 2019 sales at the meter and
11 appropriate loss factors for each rate class. The class loss factors are the
12 same as those set forth in the Company’s Electric Generation Supplier
13 Tariff.

14 **Customer and Location-Based Allocators (page 2)** – The customer-
15 based and location-based allocators are shown on page 2 at lines 8-12.
16 The location-based allocator (Location Secondary) shown on line 12 was
17 modified for Street Lighting to reflect 25% of each of the total locations
18 for the Lighting class. This adjustment was made to more accurately
19 reflect cost causation. Street lights are generally located where there are
20 existing Company facilities serving other load. In some cases, street lights
21 were installed after the grid was in place and, therefore, did not contribute
22 to the need for poles, conductors, or conduit to be installed. However, that

1 is not always the case and, in some instances, the system was built out for
2 the lights, for example, as on some bridges and some roads. Counting
3 each location as a separate customer would allocate too much cost to street
4 lighting. On the other hand, not counting any lighting locations as
5 customers would understate the costs allocated to street lighting. Even
6 where the system was in place before street lights were installed, it is
7 appropriate to allocate some cost to the Lighting class because the service
8 is benefiting from the poles, conductors, and conduit. I have, therefore,
9 applied a 25% factor to the number of locations to allocate a reasonable
10 level of cost to the Lighting class.

11 **45. Q. Please explain how the purchased power and transmission sections of**
12 **the COS study are used?**

13 A. In the cost of service summary there is a section for purchased power and
14 a section for transmission. These sections are used to derive the
15 unbundled cash working capital requirement that is recovered in the GSA
16 and the TSC. The revenue requirement associated with cash working
17 capital is used to develop a rate for the GSA and TSC. The total revenue
18 requirement used to develop the rate is the operating income consisting of
19 return, income taxes, and the associated gross receipts tax. I am providing
20 PECO Exhibit JD-8 to show the calculation of the unbundled cash
21 working capital rate for the GSA. PECO Exhibit JD-9 provides the
22 calculation of the unbundled cash working capital rate for the TSC. The
23 rate developed in PECO Exhibit JD-8 of \$0.00019 per kWh will replace

1 the rate of \$0.00034 per kWh currently in the GSA. The rate developed in
2 PECO Exhibit JD-9 of \$221 per MW-year will replace the current rate of
3 \$363 per MW-year in the TSC.

4 **46. Q. Please summarize your conclusions with respect to cost of service.**

5 A. The Company's COS study was prepared using an appropriate and well-
6 accepted cost of service method. The results of the Company's COS study
7 provide a reasonable allocation of PECO's cost of service among its rate
8 classes and are an appropriate guide for use in designing PECO's
9 proposed rates.

10 **VI. ANALYSIS OF HIGH VOLTAGE CUSTOMERS IN**
11 **ACCORDANCE WITH THE SETTLEMENT OF**
12 **PECO'S 2015 RATE CASE**

13 **47. Q. Since its last base rate proceeding in 2015, has the Company**
14 **performed further investigation of the distribution system costs for**
15 **customers served at 69 kV and higher?**

16 A. Yes. PECO first reviewed its billing records and identified 17 customers
17 receiving service at voltage levels of 69 kV and higher. The Company
18 then analyzed the configuration of those customers to more clearly define
19 the portion of substation facilities performing a distribution function for
20 those customers. Based on this review, PECO determined that high
21 voltage customers are served primarily by the higher voltage side of a
22 substation. However, a portion of the substation equipment (e.g., the
23 breaker to which a radial line connects) serves a distribution function. In

1 addition, under the FERC seven factor test,⁶ high voltage lines that serve
2 specific customers and are radial in nature are classified as distribution
3 plant. In fact, between 2009 and 2013, the Company transferred over \$16
4 million of plant operating at voltages of 69 kV and higher from its
5 transmission plant accounts to distribution Accounts 364 to 367 in order to
6 conform with the FERC seven factor test. That \$16 million is not the only
7 investment in distribution facilities operating at 69 kV and higher voltages
8 that is serving PECO's higher voltage customers.

9 **48. Q. Is PECO proposing any changes to the allocation of distribution costs**
10 **to customers served at 69 kV and higher?**

11 A. Yes. The Company currently provides a high voltage discount to account
12 for the way higher voltage customers use substation transformation.
13 However, based on its efforts to more clearly define the portion of the
14 distribution system used by high voltage customers, PECO is proposing to
15 increase the High Voltage Distribution Discount under Rate HT to \$1.29
16 per kW from the current rate of \$0.48 per kW to reflect removal of
17 customers served at 69 kV or higher from the allocation of distribution
18 substation equipment costs. Mr. Kehl discusses the changes to the High
19 Voltage Distribution Discount provided under Rate HT to customers that

⁶ See *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036, at 31,783-84 (1996), *order on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom., New York v. FERC*, 535 U.S. 1 (2002).

1 receive service at 69 kV and higher voltages in more detail in PECO
2 Statement No. 7.

3 **49. Q. Should PECO customers served at or within one span of a PECO-**
4 **owned substation or with intermittent renewable generation be**
5 **treated similarly to customers served at 69 kV or higher in the COS**
6 **study?**

7 A. No. Customers at or within one span of a PECO-owned substation are
8 served at voltages of 33 kV or lower and, thus, are still distribution
9 customers taking service from a distribution substation. This group of
10 customers should not be afforded special treatment, using the arbitrary
11 criterion of proximity to a Company-owned substation. That approach is
12 antithetical to the concept of a “class” cost-of-service study, which
13 allocates costs based on reasonable, discernible class usage characteristics
14 and not based on measures such as the length of a conductor that serves
15 one particular customer.

16 Similarly, customers with intermittent generation are no different than any
17 other customer served at the same voltage and require the same level of
18 investment in distribution facilities, including poles, wires, transformers,
19 and substation equipment. In fact, these customers are typically served by
20 the same distribution facilities before and after they add generation.

VII. CONCLUSION

1

2 **50. Q. Does this complete your direct testimony at this time?**

3 A. Yes, it does.

4