

DIRECT TESTIMONY
OF
PAUL T. PATTERSON

DOCKET NO. R-2008-2028394

Presenting PECO's Revenue
Allocation and Rate Design

Date: March 31, 2008

1
2
3

**DIRECT TESTIMONY
OF
PAUL T. PATTERSON**

INTRODUCTION, PURPOSE OF TESTIMONY AND SPONSORED EXHIBITS

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

6 Ao My name is Paul T. Patterson. My business address is PECO Energy Company, 2301
7 Market Street, 15th Floor, Philadelphia, Pennsylvania 19101.

8 2. Q. **What is your current position within PECO Energy Company (PECO or the
9 Company) and what are your responsibilities in this position?**

10 No I am a Senior Rate Administrator for Retail Rates. In this position, I am responsible
11 for all aspects of PECO's rate analysis and strategy relating to its retail natural gas
12 delivery business.

13 3. Q. **Please describe your educational background and your experience in the energy
14 industry.**

15 Ao I have a Bachelor of Arts degree in Economics and a Bachelor of Science degree in
16 Industrial Engineering, both from Rutgers University. In addition to my
17 undergraduate degrees, I have a Masters of Business Administration from Temple
18 University.

19 I began my career in the energy industry in 1985 as an Engineer in PECO's Rate
20 Division. Since then, I have been with the company for my entire career in various
21 positions of increasing responsibility. My responsibilities have included preparing
22 and supervising PECO's base rate and tariff filings with the Pennsylvania Public

1 Utility Commission (the Commission), PECO’s financial planning and analysis, and
2 PECO’s load response programs.

3 4. Q. **What is the purpose of your direct testimony?**

4 mo The principal purpose of my testimony is two-fold. First, I will describe how PECO
5 proposes to allocate its claimed revenue increase among rate classes. In so doing, I
6 will explain the principles that guided PECO in developing its proposed revenue
7 allocation. Second, I will describe the changes PECO proposes in the rate design for
8 certain rate classes, and explain its reasons for those changes as well as the
9 development of the proposed new rates.

10 5. Q. **Please identify the exhibits that you are sponsoring.**

11 mo I am sponsoring the following exhibits:

12	Exhibit PTP- 1	Proposed Revenue Allocation, Net Income and Return at
13		Proposed Rates
14	Exhibit PTP-2	Relevant Tariff Pages (Blacklined to Show Changes)
15	Exhibit PTP-3	Comparison of Residential Customer Charges for
16		Pennsylvania Gas LDCs
17		
18	Exhibit PTP-4	Summary of Revenue at Present and Proposed Rates
19	Exhibit PTP-5	Proof of Revenue at Present Rates
20	Exhibit PTP-5A	Present Rates and Development of Proposed Rates for
21	through PTP-5L	each Rate Class
22		
23	Exhibit PTP-6	Proof of Revenue at Proposed Rates
24	Exhibit PTP-7A	Bill Comparisons at Various Usage Levels
25	through PTP-7P	
26		

II. REVENUE ALLOCATION

6. Q. Please state the principles that guided PECO in developing its proposed revenue allocation.

The proposed revenue allocation reflects a reasonable balance of accepted principles for designing utility rates. Specifically, PECO considered the following principles in developing its proposed revenue allocation:

- (1) The class cost of service study (Cost of Service Study) prepared by Mr. Howard Gorman and discussed in PECO Statement No. 8 should be used as a guide in allocating the proposed revenue increase among rate classes;
- (2) The proposed revenue allocation should move all rate classes closer to the cost of service indicated by the Cost of Service Study; and
- (3) Customer impacts should be considered, and PECO should attempt to avoid increases in revenue for major rate classes that, on a percentage basis, are disproportionate relative to the system average increase.

7. Q. Has an exhibit been prepared showing cost of service by rate class?

Yes. Exhibit HSG-1, which accompanies PECO Statement No. 8 and is sponsored by Mr. Gorman, shows the cost of service at the Company's system average rate of return for each rate class based on data for the twelve months ending December 31, 2008. In addition, Exhibit HSG-1 shows the increase or decrease, in dollars and as a percentage of class distribution revenues under present rates, that each rate class would have to receive in order for its revenues to equal its indicated class cost of service. PECO decided that it would not move all classes to their indicated cost of service in a single rate case because to do so would be inconsistent with the principle

1 of gradualism that has traditionally been applied in Pennsylvania. Nonetheless, the
2 results of the Cost of Service Study remain an important guide for evaluating the
3 proposed revenue allocation.

4 o Q. **What is the revenue allocation that PECO determined to be appropriate at this**
5 **time?**

6 mo The proposed revenue allocation is shown in Exhibit PTP-1. Specifically, this exhibit
7 shows: (1) distribution revenue at proposed rates for each rate class; and (2) the proposed
8 revenue increases for each rate class. The exhibit also shows the net income and the
9 return on rate base produced by each rate class at the proposed revenue allocation.

10 m Qm **Why is the proposed revenue allocation reasonable?**

11 mo The proposed revenue allocation is reasonable because it appropriately reflects the
12 three principles I discussed previously. Based on the results of Mr. Gorman's Cost of
13 Service Study, PECO's proposed revenue allocation moves the rate of return for each
14 rate class closer to the system average rate of return. Exhibit PTP-1 shows the
15 relative rates of return at proposed and present rates. Additionally, PECO's proposed
16 revenue allocation mitigates the impact on each major rate class while still making
17 meaningful movement toward each class' cost of service.

18 10. o **Please explain the significance of the relative rates of return shown in Exhibit**
19 **PTP-1 to which you previously referred.**

20 mo The relative rate of return is the ratio of the rate of return for a rate class to the system
21 average rate of return. Relative rates of return are commonly used to test whether a

1 proposed revenue allocation moves each rate class closer to, or at least no further
2 from, the system average rate of return. A relative rate of return of 1.00 would mean
3 the class rate of return equals the system average rate of return and, therefore, class
4 revenues equal the class cost of service. Conversely, relative rates of return that
5 depart from 1.00 indicate that the class rates of return are higher or lower than the
6 system average rate of return and, therefore, the classes are providing revenues higher
7 or lower than their indicated cost of service.

8 **11. Why is PECO proposing to establish rates for Rate TS-F (Gas Transportation**
9 **Service-Firm) and Rate TS-I (Gas Transportation Service-Interruptible) that**
10 **align with their indicated costs of service?**

11 ^{mo} PECO's proposal is a direct response to the Commission's regulations at 52 Pa. Code
12 Sections 60.2(3) and (4), which govern gas transportation. Those regulations
13 establish criteria for determining the maximum commodity rates for transporting
14 Pennsylvania and non-Pennsylvania-produced gas. Section 60.2(3) provides that the
15 maximum rate for non-Pennsylvania-produced gas may be as high as the weighted
16 average retail rate for gas sales service less the costs related to natural gas supply.
17 Section 60.2(4) provides that the maximum rate for transporting Pennsylvania-
18 produced gas should include only the cost of transportation determined by a cost of
19 service study. Applying these criteria, PECO calculated the maximum rates for
20 Pennsylvania-produced and non-Pennsylvania produced gas when its current
21 transportation rates were established. As a consequence, the currently effective Rate
22 TS-F contains different maximum commodity charges for Pennsylvania-produced and
23 non-Pennsylvania-produced natural gas. However, over 80% of the gas transported

1 under Rate TS-F is self-certified by customers or their agent suppliers as
2 Pennsylvania-produced. Because PECO is required to establish a maximum
3 commodity charge for Pennsylvania-produced gas that does not exceed the indicated
4 cost of service, it proposes cost-of-service based maximum rates for all gas
5 transported under Rates TS-F and TS-I, regardless of the state of origin of the
6 transported gas. This will simplify the administration of the Company's tariff and
7 assure equal treatment for all gas transported.

8 **12. Q. Please explain why the revenue produced by Rate TCS (Temperature Controlled**
9 **Service) remains the same under proposed rates as under existing rates.**

10 ^{no} Revenue from the Rate TCS class stays the same because that service is priced by
11 reference to the cost of alternative fuel available to the customer, which will not
12 change in response to any rate changes made in this case. Each month, the customer
13 is charged a fixed distribution charge plus a rate per Mcf equal to the price of
14 alternative fuel the customer is capable of consuming (subject to minimum and
15 maximum prices specified in the Company's Gas Service Tariff). From the price thus
16 computed, the Company subtracts: (1) its weighted average cost of flowing gas for
17 the month; and (2) its system average interstate pipeline demand charges per Mcf of
18 firm sales. These amounts are credited to the Company's purchased gas costs in
19 computing its Purchased Gas Cost (PGC) adjustment and, thereby, are returned to
20 PGC customers. What remains after subtracting (1) and (2) is the Company's
21 distribution revenue. Because this amount will not change because of any rate
22 changes made in this case, the revenue derived from Rate TCS is the same under
23 proposed and existing rates. As I mentioned previously, Rate TCS is subject to

1 minimum and maximum prices, which are derived from Rate GC (General Service -
2 Commercial and Industrial). However, given the economics of alternative fuel
3 pricing, the minimum and maximum set points almost never apply. Therefore, the
4 proposed increase in Rate GC will have no effect on the revenues produced by Rate
5 TCS customers.

6 13. **Q. Please explain why the revenue produced by Rate IS (Interruptible Service)**
7 **remains the same under proposed rates as under existing rates.**

8 mo The revenues under Rate IS do not change for the same reason there is no change in
9 Rate TCS revenues. Rate IS is also an interruptible gas sales rate keyed to a
10 customer's cost of alternative fuel. Each month, the customer is charged a fixed
11 distribution charge plus a rate per Mcf that is: (1) no less than PECO's commodity
12 cost of gas for the month plus three cents and applicable gross receipts tax; and (2) no
13 more than the price, on an equivalent BTU basis, of the alternative fuel the customer
14 is capable of consuming. From the price thus determined, PECO subtracts its
15 weighted average cost of flowing gas. The remainder, which constitutes PECO's
16 gross margin, is divided between PGC customers and shareholders. Specifically,
17 75% is credited to purchased gas costs and returned to PGC customers and 25% is
18 retained by the Company. Because the revenue produced by Rate IS will not change
19 based on rate changes made in this case, the Rate IS revenue is the same under
20 existing and proposed rates.

1 **III. RATE DESIGN**

2 14. **Q Explain in general how PECO proposes to change the charges within each rate**
3 **schedule to recover the revenue allocated to each rate class.**

4 mo PECO proposes to increase or decrease each of the charges within each rate schedule
5 in proportion to the revenue increase or decrease allocated to that rate class, subject to
6 rate design changes, which I discuss below, affecting Rates TS-F, TS-I, GC, MV-F
7 (Motor Vehicle Service - Firm), MV-I (Motor Vehicle Service - Interruptible) and
8 GR (General Service -Residential). PECO Exhibit PTP-2 consists of the relevant
9 pages of the Company's tariff that show, by strike-out and blacklining, all of the
10 proposed rate changes I discuss below. These changes include changes to the fixed
11 distribution charge (customer charge) and the variable distribution charge for each of
12 the affected rates.

13 15. **Qe What is the purpose for the changes to the fixed distribution charges (customer**
14 **charges)?**

15 mo These changes are proposed in an effort to align fixed distribution charges with
16 customer-classified costs.

17 16. **Why is it important to move fixed distribution charges closer to the customer-**
18 **classified costs?**

19 mo Customer-classified costs are, by definition, costs that vary based on the number of
20 customers, not by gas usage. As a consequence, customer-classified costs are, on
21 average, the same amount for each customer within a rate class. Accordingly,

1 customer-classified costs are appropriately recovered in the fixed distribution charge,
2 which is the same for each customer served under a given rate schedule. A utility
3 should, to the extent practicable, avoid including customer-classified costs in variable
4 distribution charges because to do so would make the recovery of customer-related
5 costs a function of customers' usage, which they clearly are not. Misplacing
6 customer costs in variable distribution charges has two adverse consequences. First,
7 it can create inappropriate intra-class subsidies, because some customers will pay
8 more than their share of customer-classified costs and others less, based on their
9 relative levels of usage each month. Second, because customer costs, which are a
10 fixed amount per customer, would be recovered in a charge that applies to usage,
11 which varies, the Company could recover either too little or too much of its customer-
12 related costs as a consequence of variations in customer usage. In summary, putting
13 customer costs in the wrong element of a rate can be unfair to both customers and the
14 utility. For these reasons, among others, customer-related costs in a utility's cost of
15 service should be charged to customers in a manner that appropriately reflects the
16 nature of the costs incurred subject to consideration of the principle of gradualism.

17 17. Q. What rate design changes are proposed for Rates TS-F and TS-I?

18 ^{AO} Two rate design changes are being proposed for Rates TS-F and TS-I. The first
19 change is the one I previously described in explaining why the total revenue
20 allocations for Rates TS-F and TS-I are being aligned with their indicated costs of
21 service. Specifically, the existing difference between the maximum variable
22 distribution charges for transporting Pennsylvania and non-Pennsylvania-produced
23 gas in Rate TS-F is being eliminated. As proposed by PECO, both Rates TS-F and

1 TS-I will have maximum variable distribution charges that are not differentiated
2 based on the state of origin of the gas transported, and those charges will be
3 calculated to produce revenues equal to the indicated costs of service for Rates TS-F
4 and TS-I.

5 The second rate design change affects the maximum monthly fixed distribution
6 charges. The monthly fixed distribution charges for customers with annual volumes
7 over 18,000 Mcf are reduced from \$477 to \$177 for Rate TS-F and to \$227 for Rate
8 TS-I. The monthly fixed distribution charges for customers with annual volumes
9 under 18,000 Mcf are reduced from \$401 to \$148 for Rate TS-F and to \$191 for Rate
10 TS-I. The proposed fixed distribution charges reflect the customer-related costs for
11 those rate schedules identified on Exhibit HSG-1C, which accompanies PECO
12 Statement No. 8. Exhibit HSG-1C isolates, by rate class, the costs typically included
13 in the fixed distribution customer charge in Pennsylvania. Additionally, the
14 "minimum" fixed distribution charge for customers who receive service on other rate
15 schedules through the same meter location will decrease from \$200 per month to \$95
16 per month. The balance of the proposed revenue allocation not recovered by the
17 fixed distribution charges will be recovered in the proposed volumetric charges.
18 Those charges were computed by increasing each of the current volumetric charges
19 by the same percentage, using separate computations for Rate TS-F and Rate TS-I,
20 calculated so that revenue at the proposed rates for each rate class equals the balance
21 of proposed class revenue.

22 18. **Q. What rate design change is proposed for Rate GC?**

1 ^{AO} For Rate GC, PECO proposes eliminating the separate fixed distribution charge
2 imposed under existing Rate GC on customers served at elevated pressures.
3 Currently, that charge is \$72.01 per month, while the fixed distribution charge for all
4 other Rate GC customers is \$14.40. At the time the pressure-differentiated fixed
5 distribution charges were introduced, those changes may have been justified by a
6 higher cost to serve customers at elevated pressures. However, at the present time,
7 there is no cost basis for imposing a higher fixed distribution charge simply because a
8 customer is served at elevated pressure. Under proposed rates, a single fixed
9 distribution charge of \$25 per month will apply to all customers served on Rate GC.
10 The fixed distribution charge proposed for Rate GC will recover approximately 67%
11 of that class' customer costs typically included in the customer charge in
12 Pennsylvania, which are \$37.05 as shown on Exhibit HSG-1C. The balance of the
13 proposed revenue allocation will be recovered in volumetric charges. Those charges
14 were computed by increasing each of the current volumetric charges by the same
15 percentage, which was calculated to produce the balance of proposed class revenue
16 not recovered by the fixed distribution charge.

17 19. Q. What rate design changes are proposed for Rates MV-F and MV-I?

18 ^{MO} Rate MV-F has pressure-differentiated fixed distribution charges of \$72.01 and
19 \$14.40 per month. Rate MV-I has pressure-differentiated fixed distribution charges
20 of \$71.05 and \$14.21 per month. Under proposed rates, a single fixed distribution
21 charge of \$30 per month will apply to all customers served on Rate MV-F and Rate
22 MV-I. For Rate MV-F, the balance of the proposed revenue is to be collected
23 through the proposed variable distribution charge.

1 **20. Q. What rate design-related change is proposed for Rate GR?**

2 No PECO proposes to increase the fixed distribution charge (i.e., customer charge) for
3 Rate GR to \$12.00. The fixed distribution charge recovers customer-related costs
4 which, as explained in greater detail in Mr. Gorman’s direct testimony (PECO
5 Statement No. 8), include the fixed costs (depreciation and pre-tax return) of meters
6 and service lines, operating and maintenance expense associated with those assets,
7 and meter reading, billing, and customer records and collections costs. As shown on
8 Exhibit HSG-1 C, for Rate GR, the costs typically included in the customer charge in
9 Pennsylvania are \$14.24 per customer per month. PECO’s existing fixed distribution
10 charge for Rate GR is \$7.20 per month. PECO proposes a fixed distribution charge
11 of \$12.00 per month which, while still below the indicated customer cost, makes
12 meaningful movement toward the customer-related portion of PECO’s cost of service
13 for this rate class. For the reasons I previously explained, it is important to move the
14 Rate GR fixed distribution charge closer to the customer-classified costs for this rate
15 schedule. The balance of the proposed revenue allocation will be recovered in the
16 proposed Rate GR volumetric charges. Those charges were computed by increasing
17 each of the current volumetric charges by the same percentage, which was calculated
18 to produce the balance of the proposed class revenue not recovered by the fixed
19 distribution charge.

20 **21. Q. How does PECO’s proposed fixed distribution charge for Rate GR compare to**
21 **the residential class customer charges of other local gas distribution companies**
22 **(LDCs) in Pennsylvania?**

1 no Exhibit PTP-3 is a chart comparing PECO’s proposed fixed distribution charge to the
2 residential customer charges of other major LDCs in Pennsylvania. As shown on
3 Exhibit PTP-3, the fixed distribution charge proposed by PECO approximates the
4 average of the existing customer charges of all major Pennsylvania gas LDCs.

5 22. **Q. How did you reflect the revenue from the proposed gas CAP rates in the**
6 **proposed rates for Rate GR?**

7 no The revenue under proposed rates for Rate GR includes revenue PECO will receive
8 from participants in its Customer Assistance Program (CAP). As explained by Mr.
9 Manus McHugh in PECO Statement No. 6, the proposed CAP Rider will produce a
10 pre-determined level of revenue from each CAP participant. Variations from this
11 revenue amount will be reconciled and either recovered or refunded, as applicable,
12 through changes in the Company’s Universal Service Fund Charge, which has been
13 established, with Commission approval, under Section 1307 of the Public Utility
14 Code. The expected annual revenue to be produced by CAP participants is
15 approximately \$15,396,000. In calculating the proposed rates for Rate GR, the total
16 proposed revenue was reduced by this amount and the customer counts and delivery
17 volumes were reduced by the amounts applicable to CAP participants.

18 **IV. REVENUE EFFECT BY RATE SCHEDULE,**
19 **PROOF OF REVENUES, AND SCALE-BACK**

20 23. **oo Have you prepared a summary of revenue at present and proposed rates for**
21 **each rate class?**

1 Yes. Exhibit PTP-4 shows the revenue at both present rates and proposed rates, as
2 well as the percentage increases each class will experience on an overall basis (cost of
3 gas included).

4 **24. Q. Have you prepared proofs of revenue with respect to PECO's present and**
5 **proposed rates?**

6 mo Yes. Exhibit PTP-5 is a proof of revenue with respect to PECO's present rates.
7 Exhibit PTP-6 is a proof of revenue showing that PECO's proposed rates, based on
8 pro forma billing determinants for the future test year, will produce PECO's
9 requested overall increase in revenue of \$98,267,000. Exhibits PTP 5A-5L provide
10 the detailed schedules that support Exhibit PTP-5 and Exhibit PTP-6.

11 **25. Q. Have you prepared an exhibit showing the effect of PECO's proposed rates upon**
12 **customers at different usage levels?**

13 mo Yes. The effect of the proposed rates on customers at different usage levels is shown
14 on Exhibits PTP-7A through PTP-7P. The bill frequency aspect of these exhibits is
15 based on actual 2007 usage for each class.

16 **26. Q. How does PECO propose to scale-back the proposed rates if it is granted less**
17 **than the revenue increase it requested?**

18 A. In the event it is granted less than its requested increase, PECO proposes that:

19 (1) The revenue increases proposed for all rate classes be reduced in proportion to
20 the proposed increase for each class, as illustrated on Exhibit PTP-8.

1 (2) The fixed distribution charges for all rate classes remain as proposed, and all
2 other rates and charges for all rate schedules be reduced proportionately to
3 produce the revenue target for each rate class.

4 27. Q. Does this conclude your direct testimony?

A. Yes, it does.