

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION

v.

PENNSYLVANIA ELECTRIC COMPANY :

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DOCKET NO. R-2014-2428743

DIRECT TESTIMONY

OF

ROGER D. COLTON

ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

NOVEMBER 24, 2014

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1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Roger Colton. My business address is 34 Warwick Road, Belmont, MA
3 02478.

4
5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

6 A. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General
7 Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to
8 a variety of federal and state agencies, consumer organizations and public utilities on rate
9 and customer service issues involving telephone, water/sewer, natural gas and electric
10 utilities.

11
12 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

13 A. I am testifying on behalf of the Office of Consumer Advocate (“OCA”).
14

15 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.**

16 A. I work primarily on low-income utility issues. This involves regulatory work on rate and
17 customer service issues, as well as research into low-income usage, payment patterns,
18 and affordability programs. At present, I am working on various projects in the states of
19 New York, Maryland, Pennsylvania, Florida, Michigan, Illinois, Iowa and Minnesota.
20 My clients include state agencies (e.g., Pennsylvania Office of Consumer Advocate,
21 Maryland Office of People’s Counsel, Iowa Department of Human Rights), federal
22 agencies (e.g., the U.S. Department of Health and Human Services), community-based
23 organizations (e.g., Natural Resources Defense Council, Energy Outreach Colorado, Fuel

1 Fund of Maryland), and private utilities (e.g., Unutil Corporation d/b/a Fitchburg Gas and
2 Electric Companies, Entergy Services, Xcel Energy d/b/a Public Service of Colorado).

3
4 In addition to state- and utility-specific work, I engage in national work throughout the
5 United States. For example, I am currently working on a national study of the equity of
6 utility energy efficiency investments in multi-family housing. In 2011, I worked with the
7 U.S. Department of Health and Human Services (the federal LIHEAP office) to advance
8 the review and utilization of the Home Energy Insecurity Scale as an outcomes
9 measurement tool for LIHEAP. In 2010, I completed (as one member of a team) work on
10 a national study of the responses of water utilities to the payment troubles of residential
11 customers for the U.S. Environmental Protection Agency and the Water Research
12 Foundation. In 2007, I was part of a team that performed a multi-sponsor public/private
13 national study of low-income energy assistance programs.

14
15 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

16 A. After receiving my undergraduate degree in 1975 (Iowa State University), I obtained
17 further training in both law and economics. I received my law degree in 1981 (University
18 of Florida). I received my Master's Degree (economics) from the MacGregor School in
19 1993.

20
21 **Q. HAVE YOU EVER PUBLISHED ON PUBLIC UTILITY REGULATORY**
22 **ISSUES?**

1 A. Yes. I have published more than 80 articles in scholarly and trade journals, primarily on
2 low-income utility and housing issues. I have published an equal number of technical
3 reports for various clients on energy, water, telecommunications and other associated
4 low-income utility issues. A list of my professional publications is appended in
5 Attachment A.

6
7 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY**
8 **COMMISSIONS?**

9 A. Yes. I have testified before the Pennsylvania Public Utility Commission (“PUC” or
10 “Commission”) on numerous occasions regarding utility issues affecting low-income
11 customers. I have also testified in regulatory proceedings in more than 30 states and
12 various Canadian provinces on a wide range of low-income utility issues. A list of my
13 appearances as an expert witness is included in Attachment A.

14
15 **Q. PLEASE STATE THE PURPOSE OF YOUR DIRECT TESTIMONY.**

16 A. The purpose of my Direct Testimony is three-fold:

- 17 ➤ First, I examine the reasonableness of the Companies’ proposed cost recovery
18 mechanism for their universal service programs (called the “Universal Service
19 Charge Rider” or “USC Rider”).
- 20 ➤ Second, I assess the impact that the Companies’ proposed customer charges will
21 have on low-use, low-income customers.

1 ➤ Finally, I will examine certain demographics within the service territories of the
2 Companies as they relate across-the-board to various OCA recommendations in
3 this proceeding.

4
5 **Part 1. Customer Assistance Program Cost Recovery.**

6 **Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR**
7 **TESTIMONY.**

8 A. In this section of my testimony, I explain the changes that need to be made in the USC
9 Riders through which FirstEnergy proposes to collect universal service costs for each of
10 its four utilities. The way in which the USC Riders are currently structured will over-
11 recover universal services costs. In addition, the proposed Riders allow for the recovery
12 of costs that should be subject to base rate recovery rather than recovery through the
13 Rider. The Rider I discuss in this part of my testimony is that which exists for
14 Metropolitan Edison (“ME”), Penelec (“PN”) and Penn Power (“PP”). A similar Rider is
15 proposed for West Penn Power (“WP”). (FirstEnergy Statement 3, page 33). The
16 proposed WP Rider is modelled on the Rider currently in effect for ME and PN.

17
18 **Q. DO YOU ADDRESS ANY UNIVERSAL SERVICE PROGRAM STRUCTURE**
19 **AND/OR OPERATIONAL ISSUES IN THIS SECTION?**

20 A. No. My testimony is limited solely to the rate issues involving universal service cost
21 recovery.

22

1 **A. Introduction to CAP Cost Recovery.**

2 **Q. PLEASE DESCRIBE THE ELEMENTS OF EACH BILL RENDERED TO LOW-**
 3 **INCOME CUSTOMERS WHO PARTICIPATE IN A CUSTOMER ASSISTANCE**
 4 **PROGRAM (“CAP”).**

5 A. The bill for a participant in each Company’s Customer Assistance Program (“CAP”)¹ can
 6 be divided into three parts:

7 1. The CAP bill: The CAP bill is the asked-to-pay amount for which the CAP
 8 participant bears payment responsibility.

9 2. The CAP credit: The CAP credit is the difference between the CAP
 10 participant’s bill at standard residential rates and the CAP bill (with some
 11 exceptions not relevant here).

12 3. The preprogram arrearages: The preprogram arrearages are the arrearages that
 13 exist on the CAP participant’s bill at the time the customer enrolls in CAP.
 14 These arrearages are “forgiven” over a multi-year period as CAP participants
 15 make complete payments toward their CAP bill.² The amount of forgiven
 16 arrears is referred to as the “arrearage forgiveness credits.”

17
 18 **Q. PLEASE EXPLAIN HOW THE FIRSTENERGY COMPANIES RECOVER**
 19 **THEIR CAP COSTS.**

¹ CAP is the generic terminology for low-income rate affordability programs pursuant to Pennsylvania PUC regulations. I will refer to the low-income rate assistance programs for each of FirstEnergy’s four utilities (ME, PN, PP and WP) by this generic term.

² The “deal” that the Pennsylvania PUC has made with CAP participants, in other words is this: as you make payments toward your current bill, which we have made affordable through CAP, we will “forgive” a pro rata share of the arrearages you incurred before you entered into the affordable rate program.

1 A. For purposes of this section, the CAP costs that I will be addressing are the costs
 2 associated with two of the program components I have identified immediately above:³ (1)
 3 the CAP credits;⁴ and (2) the arrearage forgiveness credits.⁵

4
 5 FirstEnergy proposes to collect the universal service costs of each of its four
 6 Pennsylvania utilities through a reconcilable surcharge.⁶ The Companies project their
 7 universal service costs based on historic participation rates in the various programs. On
 8 an annual basis, however, the Companies reconcile their actual CAP costs to the past
 9 CAP cost recovery and the surcharge is adjusted up or down for under- or over-
 10 collections respectively at that time. The USC Rider is charged only to residential
 11 customers. The USC Rider is collected only from CAP non-participants.

12
 13 **Q. PLEASE DISTINGUISH CAP PARTICIPANTS AND CAP NON-PARTICIPANTS**
 14 **FOR YOUR PURPOSES HERE.**

15 A. To understand the need for the offsets that I describe below, it is important to understand
 16 the difference between CAP participants and CAP non-participants. CAP participants are

³ All other CAP costs are set aside simply for this part of my testimony. I will address these costs later. These costs include indirect costs and administrative costs.

⁴ CAP credits are also sometimes referred to as the “CAP shortfall,” the shortfall between bills at standard residential rates and the bills rendered under the CAP.

⁵ To further explain the definition of the program costs I am going to discuss in my testimony, let me reference the PUC’s Bureau of Consumer Services (“BCS”) annual “Report on Universal Service Programs and Collections Performance.” The 2013 BCS universal service report (released in November 2014) addressed CAP *bills* at page 38; addressed CAP *credits* at page 39; addressed arrearage forgiveness credits at pages 39 - 40; and addressed CAP administrative costs at page 62. No cost recovery has ever been allowed for “indirect costs,” an issue that I will further address below.

⁶ See, e.g., OCA-ME-XII-1; OCA-PN-XII-1; OCA-PP-XII-1.

1 entirely “confirmed low-income customers.”⁷ CAP non-participants include everyone
2 else, primarily non-low-income customers. The offsets I identify are based on the
3 differences in payment patterns between confirmed low-income customers and non-low-
4 income customers.

5
6 **B. Adjusting CAP Credits for Over-Collection of Bad Debt.**

7 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
8 **TESTIMONY.**

9 A. In this section of my testimony, I explain why the Companies must make an adjustment
10 to reflect the over-collection of bad debt expenses if they are allowed to pass 100% of the
11 incremental CAP credits through their USC Rider. The Companies should offset their
12 CAP credits by an amount equal to a percentage of the incremental CAP credits. The
13 “incremental” CAP credits are those CAP credits associated with the number of CAP
14 participants above the “base” number used to establish rates in a base rate case such as
15 that which we are currently reviewing.

16
17 **Q. PLEASE IDENTIFY THE PART OF THE CAP COST RECOVERY TO WHICH**
18 **YOUR FIRST RECOMMENDED ADJUSTMENT APPLIES.**

19 A. As I described above, an electric bill for current service rendered to a CAP participant is
20 comprised of two parts:

⁷ The term “confirmed low-income customer” is a term-of-art in Pennsylvania utility regulation. See, 52 PA. Code sec. 54.72 (2014). (“*Confirmed low-income residential account*—Accounts where the EDC has obtained information that would reasonably place the customer in a low-income designation.”) See also, 52 PA. Code, sec. 62.2 (“*Confirmed low-income residential account*—Accounts where the NGDC has obtained information that would reasonably place the customer in a low-income designation. This information may include receipt of LIHEAP funds (Low-Income Home Energy Assistance Program), self-certification by the customer, income source or information obtained in § 56.97(b) (relating to procedures upon rate-payer or occupant contact prior to termination).”)

- 1 ➤ that portion of the bill that is at or below an affordable percentage of income
2 ("CAP Bill"), which is charged to the CAP participant; and
3 ➤ that portion of the bill that is above an affordable percentage of income ("CAP
4 Credit"), which is collected through the USC Rider from CAP non-participants.

5 The issue that I first discuss involves how the second part of the bill ("CAP Credit") is
6 treated.

7
8 **Q. PLEASE EXPLAIN HOW A LOW-INCOME CUSTOMER'S BILL IS TREATED**
9 ***BEFORE A CUSTOMER BECOMES A CAP PARTICIPANT.***

10 **A.** Before a low-income customer becomes a participant in CAP, the two parts of the bill are
11 not separately recognized. The low-income customer who is not in CAP receives a single
12 bill. When that customer cannot afford to pay his or her total bill, the amount of the bill
13 that remains unpaid eventually becomes uncollectible. For those low-income customers
14 that are not CAP participants, those uncollectible dollars are included in base rates.

15
16 The fact that bills to low-income customers who are not in CAP are not fully affordable is
17 reflected in the fact that the uncollectible rate for "confirmed low-income customers" is
18 much higher than the uncollectible rate for residential customers as a whole.⁸

19
20 **Q. HOW DOES THE TREATMENT OF THE BILL CHANGE WHEN THE**
21 **CUSTOMER ENROLLS IN CAP?**

⁸ OCA-ME-II-2, OCA-ME-II-4, OCA-ME-II-10; OCA-PN-II-2, OCA-PN-II-4, OCA-PN-II-10; OCA-PP-II-2, OCA-PP-II-4, OCA-PP-II-10; OCA-WP-II-2, OCA-WP-II-4, OCA-WP-II-10. See also, BCS 2013 Annual Report on Universal Service Programs and Collections Performance, at page 21 (gross write-offs: residential customers) and page 22 (gross write-offs: confirmed low-income customers).

1 A. When a customer enrolls in CAP, the two parts of the bill are separately recognized. In
2 contrast to the unified bill that I describe above, the CAP participant is provided an
3 affordable bill (“CAP Bill”), which the participant is expected to pay. The remainder of
4 the bill (“CAP Credit”) is charged to CAP residential non-participants through the USC
5 Rider. Accordingly, when a low-income customer enrolls in CAP, the portion of the bill
6 that the customer previously could not pay, and that was included as an uncollectible
7 expense in base rates, now becomes the CAP credit and is recovered on a dollar-for-
8 dollar basis through the reconcilable USC Rider.

9
10 **Q. IN SETTING BASE RATES, DO THE COMPANIES PRESENT A TEST YEAR**
11 **BASED ON A CERTAIN LEVEL OF CAP PARTICIPATION?**

12 A. Yes. In the current rate cases, the Companies estimate how many low-income customers
13 will participate in CAP. This estimate is referred to as the CAP “base” participation
14 number. The CAP base participation in these cases is: (1) 17,520 participants (ME); (2)
15 24,207 participants (PN); (3) 5,508 participants (PP); and (4) 21,680 participants (WP).
16 (Schedule RDC-3).

17
18 **Q. WHAT HAPPENS IF ACTUAL CAP PARTICIPATION EXCEEDS THE BASE**
19 **NUMBER OF CAP PARTICIPANTS?**

20 A. As CAP participation increases above the CAP base participation, a higher and higher
21 dollar amount is categorized as a CAP credit. As the dollar amount of the CAP credit
22 increases, the Companies are allowed to collect that increased amount of CAP credits

1 through their USC Rider (assuming those Riders are approved in this proceeding).⁹

2 When the USC Rider is reconciled to reflect actual CAP costs, the CAP credits passed
3 through the USC Rider will increase as CAP participation increases, even if CAP
4 participation increases above the base number.

5
6 **Q. IF THE RECOVERY OF CAP COSTS INCREASES THROUGH THE USC
7 RIDER AS CAP PARTICIPATION INCREASES, WHAT HAPPENS TO BASE
8 RATES?**

9 A. Base rates remain the same. It is important to remember that the Companies have already
10 set their base rates as though the unpaid bills from those customers above the CAP base
11 number will be a part of uncollectibles. Through their base rates, the Companies
12 continue to collect that uncollectible expense as though no net addition of CAP
13 participants has occurred.

14
15 **Q. WHY IS THAT SIGNIFICANT?**

16 A. Revenues must be one place or another. Customers (and their associated revenue) must be
17 in either the group of CAP non-participants or in the group of CAP participants. They
18 cannot be in both.

19
20 ➤ The Companies agreed through discovery that “for any given monthly billing, a
21 customer is either a CAP participant or is not a CAP participant; they cannot be
22 both places at once. A customer, in other words, cannot be both a participant and
23 a non-participant in the same month for purposes of billing.”¹⁰
24

⁹ See, e.g., OCA-ME-XII-1; OCA-PN-XII-1; OCA-PP-XII-1.

¹⁰ OCA-ME-II-6; OCA-PN-II-6; OCA-PP-II-6; OCA-WP-II-6.

1 ➤ The Companies further agreed through discovery that “in any given month, the
2 group of residential customers who receive a CAP bill and the group of customers
3 who do not receive a CAP bill are mutually exclusive groups. No group of
4 customers receives both a CAP bill and a non-CAP bill in the same month.”¹¹
5
6

7 **Q. GIVEN THIS INTERACTION BETWEEN BASE RATES AND THE RECOVERY**
8 **OF CAP CREDITS THROUGH THE USC RIDER, WHY WILL THE**
9 **FIRSTENERGY COMPANIES OVER-RECOVER THEIR BAD DEBT**
10 **EXPENSES?**

11 A. Since the USC Rider is reconcilable, as CAP participation increases, the Companies
12 collect the entire amount of increased CAP credits associated with any increased
13 participation as though that additional shortfall is a “new” expense. Even though the
14 Companies make an *upward* adjustment in the costs they collect through the USC Rider,
15 they are not required to make a corresponding *downward* adjustment to base rates to
16 remove those dollars that were already included in base rates, but are now instead being
17 collected through the USC Rider as part of the CAP credits.

18
19 In fact, however, the participation by low-income customers in CAP does not create
20 “new” costs. Instead, participation in CAP simply *moves* the unpaid bills out of the
21 group of customers known as “residential” customers and into the group of customers
22 known as “CAP participants.” To allow the dollars of CAP credits to be added to the
23 USC Rider without correspondingly adjusting for those dollars that already have been
24 included in base rates allows the Companies to collect those dollars in *both* places, thus
25 creating the over-collection to which I refer.

¹¹ OCA-ME-II-7, OCA-ME-II-8; OCA-PN-II-7, OCA-PN-II-8; OCA-PP-II-7, OCA-PP-II-8; OCA-WP-II-7, OCA-WP-II-8.

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Q. CAN YOU ILLUSTRATE HOW THIS OVER-COLLECTION OCCURS?

A. Yes. Let me assume a hypothetical utility system with 100 customers. In our hypothetical, 60 customers are non-low-income and 40 are confirmed low-income. In our hypothetical, none of these customers are members of CAP (i.e., the base CAP participation is 0). All customers have an average annual bill of \$800. The non-low-income customers have a bad debt rate of 20%. The confirmed low-income customers have a bad debt rate of 50%. Given this hypothetical, the utility in this hypothetical experiences \$9,600 in bad debt from the non-low-income customers (60 non-low-income customers x \$800 bill x 20% bad debt rate = \$48,000 x 0.20 = \$9,600) and \$16,000 in bad debt from its confirmed low-income customers (40 customers x \$800 bill x 50% bad debt rate = \$32,000 x 0.50 = \$16,000). The utility includes a total of \$25,600 in bad debt in base rates (\$9,600 non-low-income + \$16,000 confirmed low-income = \$25,600).

My discussion above talks about how the bad debt already embedded in rates for the low-income customers will be over-recovered if there is an incremental increase in the CAP participation. Let me change my hypothetical, therefore, to move the 40 confirmed low-income customers to CAP. The CAP participants in this hypothetical make a \$500 customer payment (called the “CAP Bill” as explained above), with the remaining \$300 (the “CAP Credit” as explained above) passed through to non-participating customers through the USC Rider. The CAP Credit collected from program non-participants through the USC Rider is thus \$12,000 (40 CAP participants x \$300 CAP credit = \$12,000), which is \$200 per non-

1 participant ($\$12,000 \text{ CAP Credit} / 60 \text{ non-participants} = \$200/\text{non-participant}$). As a result,
 2 the utility in this hypothetical will now experience the following bad debt:

- 3 ➤ It will experience the same \$9,600 in bad debt on the basic non-low-income bills (60
 4 customers x \$800 bill x 20% bad debt rate = $\$48,000 \times 20\% = \$9,600$).
- 5 ➤ It will experience a bad debt of \$2,400 on the CAP Credits charged to non-
 6 participants through the USC Rider ($\$200 \text{ per non-participant} \times 60 \text{ non-participants} \times$
 7 $20\% \text{ bad debt rate} = \$12,000 \times 20\% = \$2,400$).
- 8 ➤ It will experience a bad debt of \$10,000 on the CAP participant CAP Bills (40 CAP
 9 participants x \$500 CAP Bill x 50% bad debt rate = $\$20,000 \times 0.50 = \$10,000$).

10 Accordingly, the total bad debt expense in the second scenario is \$22,000 ($\$9,600 + \$2,400$
 11 $+ \$10,000$).

12
 13 **Q. WHAT REVENUE DOES THE COMPANY COLLECT IN THIS**
 14 **HYPOTHETICAL?**

15 A. As can be seen in the hypothetical scenario I describe, under the reconcilable USC Rider,
 16 the Companies will collect \$25,600 in bad debt expense while experiencing a bad debt
 17 expense of only \$22,000. The reason this result occurs is that the utility is over-collecting
 18 the bad debt associated with the incremental increase in CAP participation. In the
 19 hypothetical above, the over-collection reaches \$3,600.¹²

20

¹² The source of this \$3,600 is evident: the amount by which the CAP participant bad debt decreases by reducing low-income bills ($\$16,000 - \$10,000 = \$6,000$), minus the amount by which non-participant bad debt increases by moving those dollars to non-participant bills through the USC Rider ($\$6,000 - \$2,400 = \$3,600$).

1 **Q. HOW DO YOU KNOW THAT MOVING CONFIRMED LOW-INCOME**
2 **CUSTOMERS TO CAP MOVES COSTS RATHER THAN CREATING NEW**
3 **COSTS?**

4 A. Schedule KMS-5 (p.1) for each FirstEnergy utility (ME, PN, PP, WP) presents the
5 Companies' respective calculations of Test Year revenues from the residential class. In
6 contrast, in response to interrogatories OCA directed to the Companies, each FirstEnergy
7 company provided the corresponding Test Year revenues with CAP customers
8 removed.¹³ Schedule RDC-1 presents the Test Year residential revenues (with CAP
9 customers included) compared to Test Year residential revenues (with CAP customers
10 excluded) for both the RS (Residential Service) and RT (Residential Time-of-Day)
11 classes. The Schedule further presents the bills that would have been rendered to CAP
12 participants at standard residential rates.¹⁴ As the Schedule demonstrates, when
13 customers are moved to CAP, the revenues associated with these customers move with
14 them.

15
16 Conversely, the revenues to CAP participants, if billed at standard residential rates,
17 would be a sub-part of the overall residential revenues.¹⁵ Similarly, Schedule RDC-2
18 documents that CAP consumption is one component of total residential consumption.

¹³ OCA-ME-XII-10; OCA-PN-XII-10; OCA-PP-XII-10; OCA-WP-XII-6.

¹⁴ OCA-ME-XII-11; OCA-PN-XII-11; OCA-XII-PP-11; OCA-WP-XII-7.

¹⁵ Penelec appears to have made an unexplained change in calculating CAP revenues at standard residential rates. That company's calculation of CAP charges at existing standard residential rates (\$9,786,773) is \$650,648 more than the difference between residential revenues with and without CAP participants. So, too, does Penn Power appear to have made an unexplained change, with CAP charges at existing standard rates \$262,629 more than the difference between residential revenues with and without CAP participants. In all other instances, the difference is \$0.

1 When a customer enrolls in CAP, the consumption (and thus the billing) for that
2 customer is removed from the residential billings and moved to the CAP billings.

3

4 **Q. WHY IS THIS SIGNIFICANT FOR COST RECOVERY PURPOSES?**

5 A. These schedules demonstrate that, as I discuss above, CAP does not create *new* costs. It
6 merely moves costs from the residential non-participant population overall (to be
7 collected through base rates) to the CAP participant population (to be collected through
8 the USC Rider). To allow costs to be included in *both* places allows for an over-recovery.

9

10 **Q. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE NEED TO**
11 **ELIMINATE THIS OVER-RECOVERY?**

12 A. Yes. The Commission set forth its policy on bad debt in its CAP Policy Statement.
13 According to the Commission's CAP Policy Statement:

14 In evaluating utility CAPs for ratemaking purposes, the Commission will
15 consider both revenue and expense impacts. Revenue impact considerations
16 include a comparison between the amount of revenue collected from CAP
17 participants prior to and during their enrollment in the CAP. CAP expense
18 impacts include both the expenses associated with operating the CAPs as well
19 as the potential decrease of customary utility operating expenses. ***Operating***
20 ***expenses include . . . uncollectible accounts expense for writing off bad debt***
21 ***for these customers.*** When making CAP-related expense adjustments and
22 projections, utilities should indicate whether a customer's participation in a
23 CAP produced an immediate reduction in customary utility expenses and a
24 reduction in future customary expenses pertaining to that account.

25

26 Pennsylvania PUC, CAP Policy Statement, Section 69.266, 52 Pa. Code §69.266 (Supp.
27 389, April 2007) (emphasis added). Moreover, in examining a proposed bad debt offset
28 in a rate case involving the Philadelphia Gas Works ("PGW"), the PUC reiterated that

1 “the Commission’s CAP Policy Statement provides that the cost offset at issue should be
2 considered.”¹⁶

3

4 **Q. HAVE THE FIRSTENERGY COMPANIES IMPLEMENTED A MECHANISM**
5 **TO ADDRESS THE OVER-RECOVERY OF BAD DEBT EXPENSE IN THEIR**
6 **USC RIDERS?**

7 A. No.¹⁷ The USC Riders proposed by the Companies do not include a mechanism to
8 prevent the over-recovery of bad debt costs as identified above.¹⁸

9

10 **Q. PLEASE SUMMARIZE THE BASIS FOR YOUR RECOMMENDED BAD DEBT**
11 **OFFSET.**

12 A. The Companies should recover their costs only once. With CAP Credits, the Companies
13 should only recover the incremental costs imposed as a result of a customer’s
14 participation in CAP. Uncollectible expenses associated with residential customers that
15 are not CAP participants are recovered in base rates. When a customer becomes a CAP
16 participant, the portion of the bill which is no longer billed to that participant (i.e., the

¹⁶ Pennsylvania PUC v. Philadelphia Gas Works, R-0006193, slip opinion, at 39, citing CAP Policy Statement (Order entered September 28, 2007). In reviewing the ALJ opinion, the Commission noted: “The ALJs also found that PGW never addressed whether double recovery is or is not possible when participation exceeds projections in CRP. Rather, PGW makes generalities of other reasons for increases in the CRP expense. The ALJs believe that the OCA made a convincing argument that double recovery is a possibility and can be alleviated by implementing a mechanism for reconciliation and that PGW did not provide a persuasive argument that the current practice guards against double recovery.” *Id.* The Commission held: “We find the ALJs recommendation to be supported by the record as well as Section 1408 of the Code. Accordingly, we find OCA’s argument to be convincing. Double recovery of uncollectible accounts expense is a possibility and can be alleviated by implementing a mechanism for reconciliation.” *Id.*, at 42.

¹⁷ OCA-ME-XII-1, OCA-ME-XII-2 and OCA-ME-XII-3; OCA-PN-XII-1, OCA-PN-XII-2 and OCA-PN-XII-3; OCA-PP-XII-1, OCA-PP-XII-2 and OCA-PP-XII-3.

¹⁸ West Penn Power has not previously had a USC Rider. However, the *proposed* WPP USC Rider is modelled on the USC Rider of Met Ed and Penelec. (FirstEnergy Statement 3, p. 33). It thus does not propose to incorporate a bad debt offset.

1 CAP Credit), is instead collected from non-participants through the USC Rider. As those
2 dollars are added to the USC Rider, they should be correspondingly subtracted from base
3 rates.

4
5 **Q. IS THIS WHAT YOU RECOMMEND?**

6 A. No. It is impracticable to adjust base rates for each customer that enrolls in CAP above
7 the “base” number of CAP participants. Accordingly, rather than reducing base rates to
8 reflect the number of CAP participants above the base number, I propose to leave those
9 costs in base rates and to allow the Companies to collect only the *net* amount through the
10 USC Rider. The Companies, in other words, should only be allowed to recover the
11 incremental costs imposed on the Companies as a result of a customer’s participation in
12 CAP. Dollars of CAP credits that are already included in the Companies’ uncollectible
13 expenses are not incremental costs to the Companies and should not be recovered *again*
14 through the universal service surcharge.

15
16 **Q. IS THERE A SPECIFIC DOLLAR OFFSET TO BE APPLIED AGAINST CAP**
17 **CREDITS THAT YOU PROPOSE FOR THE USC RIDERS IN THIS**
18 **PROCEEDING?**

19 A. No. The exact dollar adjustment will depend on the incremental change in the number of
20 CAP participants and changes in the average CAP bill. Instead of making a single dollar
21 adjustment, the over-recovery should be prevented by adopting a percentage offset to any
22 incremental increase in CAP Credits to be passed through the Companies’ USC Riders
23 when those Riders are periodically reconciled. The exact dollar offset to be applied would

1 depend on the extent to which the actual number of CAP participants exceeds the base
 2 number of CAP participants and the amount of the CAP Credits the Companies seek to
 3 recover. The adjustment should be made in the reconciliation process. The offset should
 4 be equal to the difference in the bad debt percentage for confirmed low-income
 5 customers¹⁹ and the bad debt percentage for residential customers.²⁰

6
 7 **Q. WHAT OFFSET IS APPROPRIATE?**

8 A. The reconciliation process should reduce the CAP Credits for each Company by an
 9 amount equal to the percentage over-collection of bad debt associated with the CAP
 10 credits arising from the incremental number of CAP participants beyond the base number
 11 of CAP participants as set forth in Schedule RDC-3. The percentage bad debt offset for
 12 CAP Credits is set forth in Schedule RDC-3. I have incorporated these figures into the
 13 red-lined version of the USC Rider for each Company. (Schedule RDC-4).

14
 15 **C. Adjusting Arrearage Forgiveness Credits for Over-Collection of Bad Debt.**

16
 17 **Q. PLEASE EXPLAIN THE CAP ARREARAGE FORGIVENESS PROGRAM.**

18 A. Customers who enroll in CAP with a pre-existing arrearage are eligible for forgiveness of
 19 1/36 of those arrearages each month.²¹ The requirement for the monthly arrearage
 20 forgiveness is that the bill must be paid in full. There are no proposals to change the
 21 arrearage forgiveness program in this base rate case.

¹⁹ The 2013 bad debt percentage for confirmed low-income customers is reported at page 22 of the 2013 annual BCS Report on Universal Service Programs and Collections Performance.

²⁰ The 2013 bad debt percentage for residential customers is reported at page 21 of the 2013 annual BCS Report on Universal Service Programs and Collections Performance.

²¹ Universal Service and Energy Conservation Plan (2015 – 2017), at page 11 (ME, PN, PP, WP).

1

2 **Q. PLEASE EXPLAIN THE BASIS FOR YOUR RECOMMENDED ADJUSTMENT**
3 **TO CAP ARREARAGE FORGIVENESS CREDITS TO AVOID THE OVER-**
4 **COLLECTION OF BAD DEBT.**

5 A. The basis for adopting an offset to prevent the over-recovery of arrearage forgiveness
6 credits is the same as the basis for adopting an offset to prevent the over-recovery of CAP
7 credits. The existing arrears of customers who will become CAP participants above the
8 base CAP participation rate used in this proceeding are already included in base rates.
9 When low-income customers that are not CAP participants at the time of the base rate
10 case become CAP participants in the future, those pre-existing arrears will become
11 subject to forgiveness. To the extent that those pre-existing arrears are actually
12 forgiven,²² they will be collected from residential non-participants through the USC
13 Rider.

14

15 Even though the Companies make an *upward* adjustment in the costs they collect through
16 the USC rider to reflect the forgiven arrears, they are not required to make a
17 corresponding *downward* adjustment to their base rates. In fact, however, the
18 participation by low-income customers in CAP does not create “new” costs through
19 arrearage forgiveness. Instead, participation in CAP simply *moves* the unpaid bills out of
20 the receivables attributable to the group of customers known as “residential” customers
21 and into the “arrearage forgiveness” attributable to the group of customers known as
22 “CAP participants.”

²² If a CAP participant does not earn his or her arrearage forgiveness, the pre-existing arrears do not get collected through the USC Rider and are thus not subject to any cost offset.

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To allow the dollars of arrearage forgiveness credits to be added to the USC Rider without correspondingly subtracting those dollars from base rates allows the Companies to collect those dollars *both* places, thus creating the over-collection to which I refer above.

Q. IS THERE A SPECIFIC ARREARAGE FORGIVENESS DOLLAR OFFSET THAT YOU PROPOSE FOR THE RATES IN THIS PROCEEDING?

A. No. As with the cost recovery of CAP credits, there is no single dollar offset. Rather, what is required is for the Commission to modify the language of the USC Riders presented in this rate case to prevent the over-recovery of costs.

Q. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE NEED TO PREVENT THE OVER-RECOVERY OF ARREARAGE FORGIVENESS COSTS THROUGH A UNIVERSAL SERVICE RIDER?

A. Yes. In its CAP cost recovery order, the Commission specifically addressed the issue, stating:

There is some merit in reasoning that arrearage forgiveness amounts should not be recovered separately because these are amounts that, but for the existence of the CAP program, would be included within the utility's claim for uncollectible expenses. The law requires "full recovery" of CAP costs, but not "double recovery." At the same time, utilities should have the opportunity to demonstrate when they seek to establish a surcharge that arrearage forgiveness costs are not completely covered by uncollectible expenses. *The utilities should bear the burden of proving that allowing*

1 recovery of their claim for arrearage forgiveness costs will not give them
2 double-recovery of these costs.²³
3

4 (emphasis added). The FirstEnergy companies have made no showing as required by this
5 Commission order.

6
7 The reconciliation process should offset the arrearage forgiveness credits by an amount
8 equal to the bad debt offset percentages set forth in Schedule RDC-3. The percentage
9 offset should be applied to the total arrearage forgiveness credits. I have incorporated the
10 appropriate offset percentages into the red-lined USC Riders. (Schedule RDC-4).
11

12 **D. Adjusting CAP Cost Recovery for a Working Capital Offset for CAP Credits.**

13 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
14 **TESTIMONY.**

15 A. In this section of my testimony, I quantify the working capital offset that should be
16 applied to the CAP credits that the Companies propose to collect through their USC
17 Riders. The working capital offsets reflect the fact that rather than the billed revenue
18 recovered as CAP credits being charged to confirmed low-income customers, that billed
19 revenue will instead be collected through the USC Rider charged to CAP non-participants
20 who are primarily non-low-income customers. Since these CAP non-participants have a
21 more favorable payment profile regarding timely and complete payments, there will be
22 less working capital associated with the billings. This reduction in working capital
23 should be reflected in the CAP cost recovery.

²³ Final Investigatory Order, at 38 – 39.

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Q. IS RECOGNIZING THE WORKING CAPITAL COST-OFFSETS CONSISTENT WITH THE COMMISSION’S CAP POLICY STATEMENT?

A. Yes. The Commission has stated:

In evaluating utility CAPs for ratemaking purposes, the Commission will consider both revenue and expense impacts. Revenue impact considerations include a comparison between the amount of revenue collected from CAP participants prior to and during their enrollment in the CAP. CAP expense impacts include both the expenses associated with operating the CAPs as well as the potential decrease of customary utility operating expenses. *Operating expenses include the return requirement on cash working capital for carrying arrearages . . .* When making CAP-related expense adjustments and projections, utilities should indicate whether a customer’s participation in a CAP produced an immediate reduction in customary utility expenses and a reduction in future customary expenses pertaining to that account.

Pennsylvania PUC, CAP Policy Statement, Section 69.266, 52 Pa. Code §69.266 (Supp. 389, April 2007) (emphasis added).

Q. PLEASE EXPLAIN THE CONCEPTUAL BASIS FOR THE WORKING CAPITAL OFFSET.

A. Without the CAP, the portion of low-income bills that exceeds the affordable percentage of income payments (i.e., that portion that will be the “CAP Credit”) would be charged to low-income customers. Under the CAP, that portion of low-income bills that exceeds the affordable percentage of income payments will instead be charged to non-low-income customers. Since non-low-income customers have a better payment profile—they pay more of their bills and they pay their bills in a more timely fashion—moving these dollars from low-income bills to non-low-income bills will be collected in a more complete and timely fashion, and will thus generate a working capital savings. The Companies are

1 entitled to recovery of their universal service costs. But the Commission has made clear
2 that they are entitled only to their costs net of any offsetting expense reductions.²⁴

3
4 **Q. PLEASE EXPLAIN THE BASIS FOR CONCLUDING THAT LOW-INCOME**
5 **CUSTOMERS HAVE A POORER PAYMENT PROFILE THAN NON-LOW-**
6 **INCOME CUSTOMERS.**

7 A. The PUC's Bureau of Consumer Services publishes an annual report on Universal
8 Service Programs and Collections Performance. That annual BCS report differentiates
9 collections performance based on "confirmed low-income customers" and on all
10 residential customers.²⁵ According to the most recent BCS report, for each FirstEnergy
11 utility, confirmed low-income customers exhibit greater payment difficulties. Confirmed
12 low-income customers, among other things: (1) have a proportionately greater number of
13 customers in arrears; (2) have a proportionately greater number of dollars in arrears; and
14 (3) have a higher dollar level of arrears.

15
16 As one example of the collections performance between low-income customers and all
17 residential customers, for each FirstEnergy utility, the percentage of revenue in arrears,
18 along with the average level of arrears, was as follows for 2013, the most recent data
19 published by BCS (published in November 2014):
20

²⁴ As quoted above, the PUC stated: "In evaluating utility CAPs for ratemaking purposes, the Commission will consider both revenue and expense impacts . . . CAP expense impacts include both the expenses associated with operating the CAPs as well as the potential decrease of customer utility operating expenses."

²⁵ The BCS comparison is *not* between confirmed low-income customers and *non*-low-income customers. It is between confirmed low-income customers and *all* residential customers (a population that includes the confirmed low-income group as one of its component parts).

Confirmed Low-Income vs. All Residential
(FirstEnergy companies—Pennsylvania) (2013)

	Percentage Revenue in Debt		Average Arrears	
	All Residential ²⁶	Confirmed Low-Income ²⁷	All Residential ²⁸	Confirmed Low-Income ²⁹
Metropolitan Edison	4.2%	33.0%	\$527.69	\$684.57
Pennsylvania Electric Co.	4.4%	29.9%	\$456.99	\$583.83
Penn Power Co.	3.6%	28.4%	\$468.44	\$605.27
West Penn Power Co.	2.5%	35.4%	\$283.90	\$392.83

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There can be no question but that confirmed low-income customers for each of the FirstEnergy utilities impose disproportionate payment difficulties on the respective utility. In each instance, the confirmed low-income population is disproportionately in arrears. The data below compares the percentage of total customers represented by confirmed low-income customers to the percentage of total customers in debt represented by those confirmed low-income customers. For example, while confirmed low-income customers represent 12.6% of all residential customers for Metropolitan Edison, they represent 67.2% of all of Met Ed’s residential customers in arrears. While confirmed low-income customers represent 13.1% of all residential customers for Pennsylvania Power, they represent 71.2% of all of Penn Power’s residential customers in arrears. The same pattern holds true for all four FirstEnergy utilities.

²⁶ BCS 2013 annual Report on Universal Service Programs and Collections Performance, at page 29.

²⁷ BCS 2013 annual Report on Universal Service Programs and Collections Performance, at page 49.

²⁸ BCS 2013 annual Report on Universal Service Programs and Collections Performance, at page 16.

²⁹ BCS 2013 annual Report on Universal Service Programs and Collections Performance, at page 51.

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Confirmed Low-Income: Percentage of All Customers vs. Percentage of Customers in Arrears (FirstEnergy companies—Pennsylvania) (2013)

	LI Percentage of All Residential Customers ³⁰	LI Percentage of Residential Customers in Arrears ³¹
Metropolitan Edison	12.6%	67.2%
Pennsylvania Electric Co.	15.5%	72.2%
Penn Power Co.	13.1%	71.2%
West Penn Power Co.	7.3%	63.6%

2

3 **Q. WHY IS THIS SIGNIFICANT FOR PURPOSES OF THE USC RIDERS FOR**
 4 **THE FOUR FIRSTENERGY UTILITIES?**

5 A. Through the Companies' CAP programs, the Companies remove part of the billings to
 6 confirmed low-income customers and move that billing to the general residential
 7 population. This occurs through the CAP Credit. The CAP Credit is the portion of the
 8 bill that is no longer charged to CAP participants (who are all confirmed low-income
 9 customers) and instead is recovered through the USC Rider charged to residential non-
 10 participants.

11

12 As a result of moving this revenue from a more-payment-troubled population to a less-
 13 payment-troubled population, to the extent that the CAP participation exceeds the base
 14 number of CAP participants in the test year, there will be an over-collection of working
 15 capital expenses.

³⁰ BCS 2013 annual Report on Universal Service Programs and Collections Performance, at page 7.

³¹ BCS 2013 annual Report on Universal Service Programs and Collections Performance, at page 18.

1

2 **Q. IS THERE A SPECIFIC WORKING CAPITAL DOLLAR OFFSET THAT YOU**
3 **PROPOSE FOR THE RATES IN THIS PROCEEDING?**

4 A. No. As I explain with respect to the bad debt offsets, the impact of exceeding the base
5 number of CAP participants for purposes of the cost recovery of CAP credits requires no
6 single dollar offset. The amount of the offset depends on the number of actual CAP
7 participants exceeding the base number of CAP participants and the level of the CAP
8 credits sought to be recovered. What is needed, therefore, is for the Commission to
9 modify the USC Rider to prevent the over-recovery of working capital costs by adopting
10 a percentage offset for incremental CAP Credit costs collected through the USC Rider.

11

12 **Q. HOW DID YOU CALCULATE THE WORKING CAPITAL OFFSET FOR CAP**
13 **CREDITS?**

14 A. I begin with the difference between the percentage of confirmed low-income dollars in
15 arrears and the percentage of total residential dollars in arrears as described above. I then
16 distribute those arrears over “aging buckets”³² as reported by each FirstEnergy company
17 in response to discovery for residential customers.³³ As arrears get older, they impose a
18 greater working capital expense. I thus calculate a working capital offset for each aging

³² While none of the Companies have performed collectability studies for their residential arrears, each of the Companies acknowledged that the collectability of arrears varies based on the age of the arrears. OCA-ME-II-22; OCA-PN-II-22; OCA-PP-II-22; OCA-WP-II-22.

³³ OCA-ME-II-41; OCA-PN-II-41; OCA-PP-II-41; OCA-WP-II-41.

1 bucket.³⁴ The appropriate working capital offset is the sum of the offset for each “aging
2 bucket.”

3
4 The reconciliation process included in the USC Riders should thus offset the CAP Credit
5 costs by an amount equal to the working capital offset percentages set forth in Schedule
6 RDC-3. The percentage offset should be applied to the total CAP Credits associated with
7 the incremental number of CAP participants.

8
9 **E. Adjusting CAP Cost Recovery for a Working Capital Offset for Arrearage**
10 **Forgiveness Credits.**

11
12 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
13 **TESTIMONY.**

14 A. In this section of my testimony, I explain that the arrearage forgiveness credits to be
15 collected through the USC Riders should be subject to a working capital offset. A
16 working capital offset should be imposed for incremental arrearage forgiveness credits
17 for the same reasons that such an offset should be imposed for incremental CAP Credits.

18
19 **Q. IS THE WORKING CAPITAL OFFSET FOR INCREMENTAL ARREARAGE**
20 **FORGIVENESS CREDITS CALCULATED IN THE SAME MANNER AS THE**
21 **WORKING CAPITAL OFFSET FOR CAP CREDITS?**

22 A. Yes. The calculation methodology is the same. The percentage of billing in arrears is
23 determined for the credits at issue using the confirmed low-income percentage and the
24 residential percentage as the input data. Those billings in arrears are then distributed into

³⁴ I use the following buckets: 31-60 days in arrears; 61-90 days in arrears; 91-120 days in arrears; and 121 or more days in arrears.

1 “aging buckets” using the distribution provided by each Company in response to
 2 discovery. The reduction in working capital is then used as the offset percentage. The
 3 only difference between the calculation of the CAP Credit working capital offset and the
 4 Arrearage Forgiveness Credit working capital offset is the proportion of confirmed low-
 5 income billings in arrears. For Arrearage Forgiveness Credits, by definition, 100% of the
 6 confirmed low-income billings are in arrears without the CAP program.³⁵ As a result, the
 7 working capital offset for incremental arrearage forgiveness credits will be somewhat
 8 higher than the corresponding offset for incremental CAP Credits. The appropriate
 9 working capital offset for incremental Arrearage Forgiveness Credits is set forth in
 10 Schedule RDC-3.

11
 12 **F. Indirect Universal Service Costs.**

13 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
 14 **TESTIMONY.**

15 A. In this section of my testimony, I explain why the FirstEnergy companies should not be
 16 permitted to collect “indirect” universal service costs through their respective USC
 17 Riders.

18
 19 **Q. DO THE CURRENT AND PROPOSED USC RIDERS ALLOW FOR THE**
 20 **INCLUSION OF “INDIRECT” COSTS TO BE COLLECTED?**

21 A. Yes. Consider that:

³⁵ This occurs “by definition” since Arrearage Forgiveness Credits are limited to dollars of pre-existing arrears. If a bill is not in arrears at the time the customer enrolls in CAP, that bill is not subject to the arrearage forgiveness program.

1 ➤ For Metropolitan Edison, Penelec and Penn Power, the respective USC Riders
2 allows each of these companies to collect, through the Rider, “Universal
3 Service Program Costs, which are the estimated direct, *indirect* and
4 administrative costs to be incurred by the Company to provide Universal
5 Service to Customers. . .” (emphasis added).

6 ➤ Similarly, for West Penn Power Company, the proposed USC Rider allows
7 that company to collect, through the Rider, “Universal Service Program Costs,
8 which are the estimated direct, *indirect* and administrative costs to be incurred
9 by the Company to provide Universal Service to Customers. . .” (emphasis
10 added).

11 Moreover, each USC Rider provides that the respective Companies may collect “indirect
12 costs” not only for the CAP, but for *all* universal service programs, including (1) the
13 Customer Assistance and Referral for Evaluation of Services (“CARES”) program; (2)
14 the Customer Assistance Program (“CAP”); (3) Fuel Fund Administration; (4) the
15 Gatekeeper Program; (5) the WARM (formerly LIURP) Program; and (6) any other
16 replacement or Commission-mandated Universal Service Programs.

17
18 **Q. HAVE THE COMPANIES DEFINED WHAT CONSTITUTES AN “INDIRECT”**
19 **COST FOR UNIVERSAL SERVICE PROGRAMS THAT CAN BE COLLECTED**
20 **THROUGH THEIR RESPECTIVE USC RIDERS?**

1 A. No.³⁶ Indeed, the FirstEnergy companies have not included any “indirect” costs in their
2 universal service cost recovery to date.³⁷ Nor does West Penn Power project any indirect
3 costs to be collected through its proposed USC Rider.³⁸

4
5 **Q. WHY THEN DO YOU OBJECT TO THE PERMISSION GRANTED TO THE**
6 **FIRSTENERGY UTILITIES TO INCLUDE “INDIRECT” UNIVERSAL**
7 **SERVICE COSTS IN THEIR USC RIDER?**

8 A. Whether or not the Companies have historically collected any “indirect” costs to date is
9 beside the point. The USC Rider for which each company is seeking approval gives each
10 company the *permission* to include indirect costs without limitation. Indirect costs are,
11 by definition, not incremental costs incurred as a result of a universal service program.
12 Accordingly, indirect costs are already included in base rates, which is where they should
13 be collected. By granting permission to the FirstEnergy companies to collect indirect
14 costs for universal service programs, should any one or more of them choose to exercise
15 that authority in the future, they would be allowed to include these additional costs in the
16 USC Rider and no mechanism would exist to take those costs out of base rates.

17

18 No justification has been provided to permit “indirect” cost recovery through the USC
19 Riders. The authority to do so should be removed from the USC Riders.

20

³⁶ OCA-ME-XII-6, OCA-ME-XII-9; OCA-PN-XII-6, OCA-PN-XII-9; OCA-PP-XII-6, OCA-PP-XII-9; OCA-WP-XII-3.

³⁷ OCA-ME-XII-5, OCA-ME-XII-8, OCA-ME-XII-16(a); OCA-PN-XII-5, OCA-PN-XII-8, OCA-PN-XII-16(a); OCA-PP-XII-5, OCA-PP-XII-8, OCA-PP-XII-15(a).

³⁸ OCA-WP-XII-2, OCA-WP-XII-5, OCA-WP-XII-12(a).

G. Administrative Costs.

1
2 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
3 **TESTIMONY.**

4 A. In this section of my testimony, I propose to more clearly define the administrative costs
5 that the FirstEnergy utilities may collect through their respective USC Riders. The
6 administrative costs to be collected through the USC Riders should be only those
7 incremental administrative costs that are directly attributable to the implementation of
8 universal service programs. A cost is directly attributable to the universal service
9 program when it would not have been incurred but-for the existence of the program.

10
11 **Q. WHAT STAFF IS DEVOTED TO THE UNIVERSAL SERVICE PROGRAMS OF**
12 **THE FIRSTENERGY UTILITIES?**

13 A. The most recent three-year Universal Service and Energy Conservation (“USEC”) plans
14 filed by each of the four FirstEnergy utilities all present identical language regarding the
15 “organization structure” of each utility’s CAP: “A portion of the following employees’
16 time supports this program: Manager—Compliance and Human Services; Senior
17 Administrative Assistant; Supervisor—Human Services – Universal Service; Senior
18 Business Analyst (2); Associate Business Analyst (2); Advanced Customer Accounting
19 Associate (2).”³⁹

20
21 No definition of what “portion” of each employee’s time is devoted to the CAP.

22 Moreover, no definition is provided of how each employee “supports” the CAP. Finally,
23 when asked to provide a line-item breakdown of the administrative costs collected

³⁹ USEC plan, page 15 for each utility (ME, PN, PP, WP).

1 through each of the Companies' respective USC Riders, none of the Companies could do
2 so.⁴⁰

3
4 **Q. ARE YOU SUGGESTING THAT THE FIRSTENERGY UNIVERSAL SERVICE**
5 **INITIATIVES ARE INAPPROPRIATELY STAFFED?**

6 A. No. The only issue I present here involves the structure of the recovery of administrative
7 costs through the USC Riders. The administrative cost recovery is addressed by the
8 structure and language of the USC Riders that the Companies are asking the Commission
9 to approve in these base rate proceedings.

10
11 **Q. WHAT PROBLEM PRESENTS ITSELF IN THE FIRSTENERGY USC RIDERS**
12 **REGARDING THE RECOVERY OF ADMINISTRATIVE COSTS?**

13 A. The USC Riders are to allow the recovery of administrative costs that are not already
14 included in base rates. In deciding upon whether riders were appropriate for CAP costs
15 in 2006,⁴¹ the Commission directed that decisions be made on a case-by-case basis. “. . .
16 [U]tilities are free to propose quarterly or annual reconciliation, and other parties are free
17 to contest the proposal. The Commission will then make a decision based upon the
18 record of each case.”⁴² The Commission did note in that CAP cost recovery order,
19 however, that “surcharges have been used principally by natural gas and electric

⁴⁰ OCA-ME-XII-4, OCA-ME-XII-7; OCA-PN-XII-4, OCA-PN-XII-7; OCA-PP-XII-4, OCA-PP-XII-7. Since West Penn Power (“WP”) has not previously had a USC Rider, no similar request was propounded to that company.

⁴¹ Pennsylvania PUC, Customer Assistance Programs: Funding Levels and Cost Recovery Mechanisms, Docket M-00051923, Final Investigatory Order (issued October 19, 2006).

⁴² Final Investigatory Order, at 23.

1 companies to recover certain expenses not covered in their base rates.⁴³ Moreover, in
 2 its Order regarding the FirstEnergy merger, the Commission noted in approving a
 3 Universal Service Rider that “the ALJs, therefore, recommended the removal of all the
 4 revenues and expenses that are associated with universal service costs from base rates. .
 5 ⁴⁴

6
 7 In seeking an increase in their base rates in this proceeding, none of the Companies have
 8 presented a demonstration that they have complied with the policies set forth in either the
 9 CAP cost recovery order or in the Merger order. Given that failure, I propose that the
 10 USC Rider be modified to incorporate a cost exclusion for administrative costs to be
 11 collected through the Rider for those administrative costs not explicitly excluded from
 12 base rates.

13
 14 **Q. WHY DO YOU CONCLUDE THIS IS NECESSARY?**

15 A. The CAP administrative costs that the three Companies having Riders (ME, PN, PP) have
 16 recovered through their respective USC Riders have varied widely by year. The most
 17 recent three years (2011, 2012, and 2013) of administrative costs recovered by the three
 18 Companies having USC Riders include:⁴⁵

19
 20

⁴³ Final Investigatory Order, at 23 (emphasis added).

⁴⁴ Pennsylvania Public Utility Commission, et al. v. Metropolitan Edison Company, Docket No. R-00061366 (consolidated cases), at 180 (Order issued January 11, 2007).

⁴⁵ OCA-ME-XII-7; OCA-PN-XII-7; OCA-PP-XII-7.

1

Administrative Costs Recovered through USC Rider (2011 – 2013)

	2011	2012	2013
Met Ed	\$1,101,663	\$1,450,362	\$332,820
Penelec	\$1,533,366	\$1,809,138	\$494,301
Penn Power	\$2,236,624	\$2,783,362	\$706,710

2

3

In each case, the administrative costs vary substantially from year-to-year even though the internal staffing structure has remained the same. To the extent that additional administrative costs are collected through the USC Rider because a larger “portion” of each employee’s time is devoted to “support” the CAP, the Companies are collecting costs that have already been included in base rates, in direct contravention of the Commission’s CAP cost recovery order and in direct contravention of the PUC’s FirstEnergy merger order.

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Without incorporating the limitations that the Commission has previously articulated directly into the USC Riders, additional dollars can be allocated to the USC Rider simply by redefining what constitutes a “support” function. Moreover, while the Companies have identified the particular staff which they say are devoted to “support” the CAP in the three-year USEC plans, there is no limitation in the USC Riders that *only* the costs of those in-house staff are subject to recovery through the USC Rider. The costs of other staff would already have been included in base rates. Allowing recovery of additional staff, or of a higher “portion” of staff time, through the USC Rider would thus involve an

1 over-collection. As the Commission explicitly stated in its CAP cost recovery order,
2 “The law requires ‘full recovery’ of CAP costs, but not ‘double recovery.’”⁴⁶

3
4 **Q. DO YOU PROPOSE A COMPLETE EXCLUSION OF UNIVERSAL SERVICE**
5 **ADMINISTRATIVE COSTS FROM BASE RATES IN THIS PROCEEDING?**

6 A. No. What I propose is to incorporate into the USC Rider the Commission policy on
7 administrative cost recovery. To the extent that in-house CAP administrative costs have
8 not been specifically excluded from base rates in a base rate proceeding such as we now
9 face, those in-house administrative costs are not subject to further recovery through the
10 USC Rider.

11
12 **H. Summary.**

13 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS IN THIS SECTION OF**
14 **YOUR TESTIMONY.**

15 A. I recommend that the FirstEnergy companies be required to implement the following
16 actions regarding their respective USC Riders.

- 17 ➤ Each respective USC Rider should incorporate a bad debt offset for CAP Credits
18 at a level set forth in Schedule RDC-3.
- 19 ➤ Each respective USC Rider should incorporate a working capital offset for CAP
20 Credits at a level set forth in Schedule RDC-3.
- 21 ➤ Each respective USC Rider should incorporate a bad debt offset for Arrearage
22 Forgiveness Credits at a level set forth in Schedule RDC-3.

⁴⁶ Final Investigatory Order, at 38.

- 1 ➤ Each respective USC Rider should incorporate a working capital offset for
2 Arrearage Forgiveness Credits at a level as set forth in Schedule RDC-3.
- 3 ➤ Each respective USC Rider should exclude permission for utilities to include
4 “indirect” costs as a recoverable universal service cost.
- 5 ➤ Each respective USC Rider should incorporate the Commission-stated policy that
6 in-house administrative costs that have not been explicitly excluded from base
7 rates are not subject to cost recovery through the USC Rider.

8 A red-line version of the respective USC Riders setting forth these modifications for each
9 Company is presented in Schedule RDC-4.

10

11

PART 2. Residential Customer Charges.

12

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

13

A. In this section of my testimony, I discuss the impact that the Companies’ proposed
14 increased residential customer charges will have on the ability of low-income customers
15 to control the level of their bills through the implementation of usage reduction measures.
16 I do this in two steps. First, I document how the Companies’ increased customer charges
17 create substantial impediments to the ability of low-income households to control their
18 bill through usage reduction. Second, I document why these rate design impediments are
19 significant given the already-limited ability of low-income customers to implement usage
20 reduction measures without external help.

21

22

Based on the data and analysis presented below, I recommend that the residential
23 customer charges recommended by OCA witness Clarence Johnson be adopted.

1

2

A. The Proposed Customer Charge and Low-Income Consumption.

3

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

4

A. In this section of my testimony, I document that low-income customers tend to have lower consumption than do residential customers generally. As a result, the proposed increase in the Companies' customer charges will have a disproportionately adverse impact on the customers that have the least ability to afford them.

8

9

Q. DO ANY OF THE FIRSTENERGY COMPANIES HAVE INFORMATION ON THE RELATIVE ELECTRICITY CONSUMPTION OF THEIR CONFIRMED LOW-INCOME CUSTOMERS?

10

11

12

A. No. The OCA requested that the Companies provide average monthly consumption for their confirmed low-income population. Each Company responded that it did not track such information.⁴⁷

13

14

15

16

Q. DO ANY OF THE FIRSTENERGY COMPANIES HAVE INFORMATION EXAMINING THE RELATIONSHIP BETWEEN INCOME AND ELECTRICITY USAGE?

17

18

19

A. No. The OCA requested that the Companies provide "all empirical studies within the custody or control of the Company showing the relationship between income and electricity consumption." Each Company responded that "the Company is not in custody

20

21

⁴⁷ OCA-ME-II-32(b); OCA-PN-II-32(b); OCA-PP-II-32(b); OCA-WP-II-32(b).

1 or control of any studies regarding this topic.”⁴⁸ None of the FirstEnergy Companies had
 2 any study using data from its own Company;⁴⁹ using data from any affiliate;⁵⁰ using data
 3 from any utility in Pennsylvania;⁵¹ or using any data from a utility whether or not in
 4 Pennsylvania.⁵²

5
 6 **Q. DO THE FIRSTENERGY COMPANIES HAVE DATA ALLOWING YOU TO**
 7 **DETERMINE THE RELATIVE CONSUMPTION OF LOW-INCOME**
 8 **CUSTOMERS AND RESIDENTIAL CUSTOMERS GENERALLY?**

9 A. Yes. Each Company was asked to provide the average monthly consumption of its
 10 LIHEAP recipient population. LIHEAP is the federal Low-Income Home Energy
 11 Assistance Program. In Pennsylvania, LIHEAP is targeted toward space heating
 12 customers. It is, therefore, not appropriate to use the LIHEAP population as a surrogate
 13 for low-income customers for *all* months when comparing consumption to the residential
 14 customer base in general. Making that comparison would involve comparing a low-
 15 income LIHEAP population that is primarily electric space-heating with a residential
 16 population that is primarily not space heating. The comparison to make, therefore, is the
 17 LIHEAP consumption in the non-heating months to the residential population in non-
 18 heating months. Each Company reports that its low-income electric non-heating
 19 consumption is noticeably lower than the electric non-heating consumption for residential

⁴⁸ OCA-ME-II-30; OCA-PN-II-30; OCA-PP-II-30; OCA-WP-II-30.

⁴⁹ OCA-ME-II-30(a); OCA-PN-II-30(a); OCA-PP-II-30(a); OCA-WP-II-30(a).

⁵⁰ OCA-ME-II-30(b); OCA-PN-II-30(b); OCA-PP-II-30(b); OCA-WP-II-30(b).

⁵¹ OCA-ME-II-30(c); OCA-PN-II-30(c); OCA-PP-II-30(c); OCA-WP-II-30(c).

⁵² OCA-ME-II-30(d); OCA-PN-II-30(d); OCA-PP-II-30(d); OCA-WP-II-30(d).

1 customers generally. The data from the FirstEnergy utilities is set forth in Schedule
2 RDC-5.

3
4 **Q. IS THERE REASON TO BELIEVE THAT THIS COMPANY DATA UNDER-**
5 **STATES THE USAGE DIFFERENCE BETWEEN LOW-INCOME CUSTOMERS**
6 **AND RESIDENTIAL CUSTOMERS GENERALLY?**

7 A. Yes. The consumption of LIHEAP recipients is generally higher than the consumption of
8 low-income customers generally. This is in part due to the fact that payment-troubled
9 customers tend to be referred to LIHEAP, and there is an association between higher
10 usage and payment-troubled status. This is in part due also to the fact that customers
11 with higher usage tend to more frequently seek financial assistance through programs
12 such as LIHEAP. Accordingly, to the extent that the usage of LIHEAP customers is
13 lower than the usage of residential customers generally, one can conclude that there
14 would be an even greater difference between low-income customers generally and
15 residential customers.

16
17 **Q. ARE THE CONSUMPTION PATTERNS FOR THE FIRSTENERGY**
18 **COMPANIES CONSISTENT WITH OTHER DATA YOU HAVE REVIEWED?**

19 A. Yes. In my work, I routinely use data published by the U.S. Department of Energy
20 (“DOE”) as gathered through its quadrennial Residential Energy Consumption Survey
21 (“RECS”). The most recent RECS data that has been published is from 2009 (the 2013
22 data is not yet publicly available). The electricity usage data from the RECS confirms
23 that the results that are evident in the FirstEnergy numbers are what would generally be

1 expected to appear. The RECS data is presented in Schedule RDC-6. The RECS data
2 shows:

- 3 ➤ As income increases, so, too, does electricity consumption increase.
- 4 ➤ As income as a percent of the Federal Poverty Level increases, so, too, does
5 electricity consumption increase.
- 6 ➤ Owner-occupied housing units have higher electricity consumption than do
7 renter-occupied housing units.⁵³
- 8 ➤ Occupants of single-family housing units have higher electricity consumption
9 than do occupants of multi-family housing units.⁵⁴
- 10 ➤ Occupants of larger housing units have higher electricity consumption than do
11 occupants of smaller housing units.⁵⁵

12 I conclude from the RECS data, from my experience and training, and from U.S. Census
13 data specific to each FirstEnergy utility, that low-income households tend to have lower
14 electricity consumption than do residential customers generally.

15
16 **Q. WHY ARE THESE USAGE PATTERNS USEFUL IN ASSESSING THE**
17 **REASONABLENESS OF THE COMPANIES' PROPOSALS TO INCREASE**
18 **THEIR RESPECTIVE CUSTOMER CHARGES?**

⁵³ My review of Census data for the four FirstEnergy utilities, as defined by the communities which each utility serves (OCA-ME-II-34; OCA-PN-II-34; OCA-PP-II-34; OCA-WP-II-34), finds that low-income households disproportionately tend to be renters.

⁵⁴ My review of Census data for the four FirstEnergy utilities, as defined by the communities which each utility serves (OCA-ME-II-34; OCA-PN-II-34; OCA-PP-II-34; OCA-WP-II-34), finds that low-income households disproportionately tend to be occupants of multi-family housing.

⁵⁵ My review of Census data for the four FirstEnergy utilities, as defined by the communities which each utility serves (OCA-ME-II-34; OCA-PN-II-34; OCA-PP-II-34; OCA-WP-II-34), finds that low-income households disproportionately tend to be occupants of smaller housing units.

1 A. The proposed increases in the respective customer charges impose disproportionately
2 high rate increases on low-use customers. As elsewhere, low-use customers in the four
3 FirstEnergy utility service territories tend also to be low-income customers. As a result,
4 through their increased customer charges, the Companies propose to increase their rates
5 the most to those who can least afford to pay those rate increases.

6
7 P. The unreasonableness of imposing the highest rate increases is evident from the facts, as
8 reported by the PUC's Bureau of Consumer Services (and as I discussed in more detail
9 above), that for all four FirstEnergy companies: (1) a disproportionate number of low-
10 income customers are in arrears when compared to residential customers generally; (2) a
11 disproportionate portion of the dollars of billed revenue to low-income customers are in
12 arrears when compared to residential customers generally; (3) a disproportionate number
13 of low-income customers are disconnected each year for nonpayment; and (4) a
14 disproportionate number of low-income customers have their bills written-off as
15 uncollectibles (both in terms of number of accounts written off and number of dollars
16 written off). Not only are proportionately more confirmed low-income customers in
17 arrears, but those who are in arrears, are *deeper* in arrears. The Companies propose to
18 respond to these circumstances by *raising* rates the most to these customers.

19
20 **Q. DOES THE PROPOSAL TO INCREASE CUSTOMER CHARGES HAVE A**
21 **RATE IMPACT ON REMAINING CUSTOMERS?**

22 A. Yes. The Companies are proposing to impose the highest rate increases on those
23 customers who can least afford to pay the rate increases. This proposal comes despite the

1 Companies' knowledge of the fact that imposing higher rates will result in higher
 2 collection costs. According to the Bureau of Consumer Services annual Report on
 3 Universal Service Programs and Collections Performance, in 2013, confirmed low-
 4 income customers imposed collection costs far disproportionate to their incidence in the
 5 general population. For Met Ed, for example, while Confirmed Low-Income customers
 6 represented 12.6% of the total residential customer base, they caused 66.1% of the
 7 Company's collection costs. While Penelec's Confirmed Low-Income customers
 8 represented 15.5% of the total residential customer base, they caused 69.4% of the
 9 collection costs. Similar results appertain for the other two FirstEnergy Companies as
 10 well (Penn Power and West Penn Power).

11
 Confirmed Low-Income: Incidence in Residential Population and Percent of Collections Expenses
 Attributable to Them: FirstEnergy Companies (Pennsylvania) (2013)

	ME	PN	PP	WP
Pct Confirmed LI of Residential customers ⁵⁶	12.6%	15.5%	13.1%	7.3%
Pct Collections Expenses Attributable to Confirmed LI ⁵⁷	66.1%	69.4%	67.3%	57.6%

12
 13 **Q. WHAT DO YOU CONCLUDE?**

14 A. Despite this data, the four FirstEnergy Companies respond to these payment troubles by
 15 proposing to impose the highest rate increases on precisely the populations that are
 16 suffering the most payment troubles. Rather than approving the customer charge
 17 proposals of the Companies, the Commission should instead approve the customer charge
 18 recommendation of OCA witness Clarence Johnson.

⁵⁶ Pennsylvania PUC, Bureau of Consumer Services. 2013 annual Report on Universal Service Programs and Collections Performance, at page 7.

⁵⁷ Pennsylvania PUC, Bureau of Consumer Services. 2013 annual Report on Universal Service Programs and Collections Performance, at page 23.

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B. The Proposed Customer Charges and Usage Reduction.

Q. DOES THE COMPANIES' PROPOSED CHANGE IN RATE DESIGN HAVE AN IMPACT ON THE ABILITY OF LOW-INCOME CUSTOMERS TO PURSUE USAGE REDUCTION THROUGH ENERGY EFFICIENCY INVESTMENTS?

A. Yes. In addition to the collection consequences I discussed above, the proposed increase in the Companies' residential customer charges will have a significant adverse impact on the ability of low-income customers in particular to pursue conservation measures to reduce their consumption. The Companies' proposed customer charges increase the proportion of a monthly bill that cannot be reduced through decreased consumption. As a result, the Companies' proposed increases in their customer charges substantially decrease the ability of low-income customers to manage the affordability of their bills by reducing consumption.

In this section of my testimony, I document that low-income customers, who will be disproportionately harmed by the proposed increased customer charges, are not the primary contributors to the reduced electricity consumption giving rise to the desire to collect more of the Companies' fixed costs through the customer charge. The data below shows that, while some low-income customers have pursued energy efficiency improvements, the participation of low-income customers in such activities is disproportionately low. While conservation activities resulting in diminished sales do not primarily arise from low-income customers, in other words, the burden of the Companies' responses disproportionately fall upon them. The harms that an increased

1 customer charge imposes on low-income customers, in other words, are in response to
 2 decreasing revenue to which these low-income customers did not contribute.

3
 4 Given the importance of usage reduction not only in promoting affordability, but in
 5 controlling the universal service program costs to non-participating residential ratepayers,
 6 increasing the impediments to low-income usage reduction generates even further
 7 adverse impacts on both low-income customers (decreased affordability) and non-low-
 8 income customers (increased universal service costs).

9
 10 **Q. ARE LOW-INCOME HOUSEHOLDS LIKELY TO BE THE HOUSEHOLDS**
 11 **THAT ARE CAUSING AVERAGE RESIDENTIAL ELECTRICITY USAGE TO**
 12 **DECREASE?**

13 A. No. While both the FirstEnergy companies (through their Low-Income Usage Reduction
 14 Programs, “LIURP”) and the Commonwealth of Pennsylvania (through the
 15 Weatherization Assistance Program, “WAP”) administer effective low-income usage
 16 reduction programs, these programs reach a fraction of the total number of low-income
 17 households.

18
 19 According to the USEC program plans submitted by the FirstEnergy companies in 2014,
 20 through the LIURP programs in the 2015 program year:

- 21 ➤ Met Ed will treat 1,475 low-income housing units, out of the 53,649 low-income
 22 customers the Company has identified as needing LIURP assistance;⁵⁸

⁵⁸ Met Ed USEC plan, at pages 22 – 23.

- 1 ➤ Penelec will treat 2,255 low-income housing units, out of the 79,219 low-income
2 customers the Company has identified as needing LIURP assistance;⁵⁹
- 3 ➤ Penn Power will treat 835 low-income housing units, out of the 17,593 low-
4 income customers the Company has identified as needing LIURP assistance;⁶⁰
- 5 ➤ West Penn Power will treat 925 low-income housing units, out of the 86,346
6 confirmed low-income the Company has identified as needing LIURP
7 assistance.⁶¹

8 Even over time, because of the small number of units treated through LIURP, the impact
9 of the companies' LIURP efforts, combined with the usage reduction impacts of WAP,
10 will not have a substantial impact on the aggregate average usage of the low-income
11 customers in the respective service territories of the FirstEnergy utilities.

12

13 **Q. ASIDE FROM LIURP AND WAP, HAVE YOU CONSIDERED THE EXTENT TO**
14 **WHICH LOW-INCOME HOUSEHOLDS ENGAGE IN ENERGY EFFICIENCY**
15 **MEASURES ON THEIR OWN INITIATIVE?**

16 **A.** Yes. The U.S. Department of Energy's Energy Information Administration
17 ("DOE/EIA") publishes such data in its periodic Residential Energy Consumption Survey
18 ("RECS"). Using the 2009 RECS data,⁶² I have examined the extent to which low-
19 income households have engaged in specific energy efficiency investments that would
20 likely reduce energy consumption. I examined seven specific energy efficiency

⁵⁹ Penelec USEC plan, at pages 22 – 23.

⁶⁰ Penn Power USEC plan, at pages 22 – 23.

⁶¹ West Penn Power USEC plan, at pages 22 and 24.

⁶² As I previously discussed, the 2013 RECS data has not yet been made publicly available by DOE/EIA.

1 investments: (1) well insulated home; (2) adequately insulated home; (3) insulation age
2 less than 10 years old; (4) heating equipment age less than 10 years old; (5) hot water
3 heater age less than 10 years old; (6) programmable thermostat; and (7) weather-stripping
4 age less than 10 years. In addition, I considered eight related electric measures that are
5 commonly viewed as typical energy efficiency investments: (1) Energy Star refrigerator;
6 (2) refrigerator age 10 years old or less; (3) Energy Star dishwasher (of households using
7 dishwashers); (4) Energy Star clothes washers (of households using clothes washers); (5)
8 programmable air conditioner thermostats (of households using central air conditioning);
9 (6) Energy Star window air conditioners (of households using window air conditioners);
10 (7) CFL lights (of lights burning four or more hours per day); and (8) CFL lights (of
11 lights burning one or more hours per day). I considered one negative efficiency factor,
12 whether the home was “drafty” most or all of the time. Finally, I considered the age of
13 the home (home built subsequent to 2000).

14
15 I examined data for the Mid-Atlantic Census Division,⁶³ which includes Pennsylvania,
16 New York and New Jersey. I examined both the population with income less than 150%
17 of Federal Poverty Level (“FPL”) and the population with income less than 100% of
18 FPL, in addition to the population with income greater than 150% of FPL.

19
20 **Q. WHAT DID YOU FIND?**

⁶³ While the RECS reports some state-specific data for Pennsylvania, the sample size was insufficiently large to allow me to segregate out low-income households exclusively for Pennsylvania.

1 A. Not surprisingly, low-income homes have far fewer efficiency measures than do non-
2 low-income homes. The data is set forth in Schedule RDC-7. The data in Schedule 7
3 (page 1 of 2) shows:

- 4 ➤ Non-low-income households live in recently-constructed homes at twice the
5 rate as low-income households do.
- 6 ➤ While there are moderately more recent heating systems (i.e., less than 10
7 years old) in the non-low-income population, there are substantially more very
8 old heating systems (i.e., more than 15 years old) in the low-income
9 population.
- 10 ➤ Low-income households have a substantially lower rate of programmable
11 thermostats installed for their primary heating system.
- 12 ➤ While non-low-income households report “adequate” insulation at a modestly
13 higher rate, there are substantially fewer “well-insulated” homes in the low-
14 income population. Low-income households have recent insulation (less than
15 ten years old) at half the rate as non-low-income households.
- 16 ➤ Low-income households report that their home is “drafty” most or all of the
17 time at twice the rate that non-low-income households do.
- 18 ➤ Low-income households have had weather-stripping recently installed at a
19 substantially lower rate than non-low-income households have.

20
21 **Q. WERE THE RESULTS FOR ELECTRIC USAGE REDUCTION MEASURES**
22 **SUBSTANTIALLY DIFFERENT?**

23 A. No. I show in schedule RDC-7 (page 2 of 2) that:

- 1 ➤ While there are only moderately more proportions of refrigerators purchased
- 2 in the last ten years for higher income households, there are significantly
- 3 fewer Energy Star refrigerators in the low-income population.
- 4 ➤ The penetration of both Energy Star dishwashers and Energy Star clothes
- 5 washers in the higher income households is 1.5 times the penetration in the
- 6 low-income households.
- 7 ➤ Higher income households using central air conditioning systems have a
- 8 higher penetration of programmable thermostats for those systems than do
- 9 low-income households.
- 10 ➤ The penetration of Energy Star window air conditioning units in the higher
- 11 income households is nearly twice that of the population below 100% of
- 12 Poverty, and substantially more than the population below 150% of Poverty.
- 13 ➤ The percentage of lights bulbs that are energy efficient CFLs, whether those
- 14 lights are burning for four or more hours a day or burning for one or more
- 15 hours a day, is noticeably greater in the higher income population.

17 **Q. ARE THESE RESULTS CONSISTENT WITH RESEARCH YOU HAVE**
 18 **OTHERWISE PERFORMED REGARDING MARKET BARRIERS TO LOW-**
 19 **INCOME PURSUIT OF ENERGY EFFICIENCY MEASURES?**

20 **A.** Yes. I have studied low-income market barriers for energy efficiency in some detail over
 21 the past 25-plus years. I have found that low-income households face market barriers that
 22 are different from, and more extensive than, those which residential households face in
 23 general. These market barriers impede the availability of energy efficiency to low-income

1 customers, even if such efficiency would be an effective, and cost-effective, mechanism to
2 use in controlling home energy costs.

3
4 **Q. PLEASE SUMMARIZE WHAT YOU FOUND BASED ON THE ABOVE**
5 **DISCUSSION.**

6 A. The above discussion documents the fact that, while usage reduction occurs to a limited
7 extent within the low-income population, low-income households engage in
8 disproportionately fewer energy efficiency investments than non-low-income households
9 do. Despite the fact that low-income customers are not the primary cause of the
10 Companies' desire to seek greater revenue stability by moving a higher proportion of
11 total charges to the fixed monthly customer charge, the proposed increases to the monthly
12 customer charges impose a larger adverse impact on low-income customers.

13
14 Finally, the data clearly supports the conclusion that low-income households face the
15 most barriers to implementing energy efficiency measures on their home, and the LIURP
16 expenditures of all four FirstEnergy companies treat only a fraction of the low-income
17 households needing energy efficiency investments.

18
19 The substantial increase that the Companies propose for their customer charges will even
20 further impede the ability of low-income households to reduce their bills by reducing
21 their consumption. This occurs because the Companies propose to move a higher
22 proportion of cost recovery to a fixed bill component that cannot be reduced as a result of
23 reduced usage. This inability to reduce consumption through energy efficiency

1 investments harms both low-income low-use households and the non-participants who
 2 will pay higher costs through the USC Riders as a result.

3

4 **PART 3. Income Trends for the FirstEnergy Service Territories.**

5 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
 6 **TESTIMONY.**

7 A. In this section of my testimony, I examine income data for low-income households living
 8 in the FirstEnergy service territories. This data supports the recommendations of nearly
 9 all OCA witnesses. The data should be considered whether considering the range of
 10 reasonableness for the return on equity based on a balancing of ratepayer and investor
 11 interests; the reasonableness of the proposed rate designs; the quality of customer service;
 12 or the need to carefully review the revenue requirement adjustments found to be
 13 appropriate.

14

15 **Q. DO PENNSYLVANIA UTILITIES REPORT THE NUMBER OF LOW-INCOME**
 16 **CUSTOMERS THEY SERVE?**

17 A. Yes. The PUC’s Bureau of Consumer Services publishes the number of estimated low-
 18 income customers for Pennsylvania utilities in its annual Report on Universal Service
 19 Programs and Collections Performance. Schedule RDC-8 presents both (1) the number
 20 of estimated low-income customers, and (2) the percentage of total customers estimated
 21 to be low-income.⁶⁴ The data in Schedule RDC-8 shows that both the absolute number of

⁶⁴ The *estimated* low-income customer population is to be contrasted to the *confirmed* low-income customer population discussed above.

1 low-income customers, and the relative percentage of customers who are low-income,
2 have grown for each FirstEnergy company.

3 ➤ Metropolitan Edison has nearly 53,000 more low-income customers in its
4 service territory in 2013 than it had ten years ago (2003). Its low-income
5 population has grown by more than 30,000 in just the past three years.

6 ➤ Penelec has more than 50,000 additional low-income customers in its service
7 territory in 2013 than it had in 2003. It has experienced a growth of nearly
8 9,000 low-income customers simply from 2011 to 2013.

9 ➤ Penn Power has seen a growth of nearly 10,000 low-income customers from
10 2003 to 2013, and more than 3,300 from 2011 to 2013.

11 ➤ West Penn Power has seen a growth in its low-income customer base of more
12 than 10,000 customers just from 2011 to 2013.

13
14 **Q. DO THESE FIGURES REFLECT THE FULL EXTENT OF POVERTY IN THE**
15 **FIRSTENERGY SERVICE TERRITORIES?**

16 **A.** No. A single aggregate number does not fully reflect the needs of customers in the
17 service territories of the four utilities. Schedule RDC-9 presents a disaggregation of
18 Poverty for each of the FirstEnergy companies. As this Schedule indicates, the
19 penetration of deep poverty is extensive in the FirstEnergy service territories. For three
20 FirstEnergy companies (ME, PN, WP), the proportion of the low-income population with
21 income below 50% of Poverty (i.e., deep poverty) exceeds the proportion of the low-
22 income population with income between 125% and 149% of Poverty Level. In each of
23 these three service territories, also, the proportion of the low-income population with

1 income below 100% of Poverty exceeds 10% (with West Penn Power's proportion below
2 100% of Poverty at 9.7%).

3
4 **Q. DOES "POVERTY LEVEL" FULLY CAPTURE THE EXTENT OF THE LOW-**
5 **INCOME POPULATION THAT IS FACING PAYMENT DIFFICULTIES?**

6 A. No. Federal Poverty Level is a measure of low-income status taking into account
7 household size. Poverty Level reflects the fact that a 3-person household with an annual
8 income of \$10,000 is, in fact, "poorer" than a 1-person household with an annual income
9 of \$10,000. In addition to Poverty Level, an assessment of low-income status should
10 consider absolute dollars of income as well. Schedule RDC-10 presents data for the four
11 FirstEnergy service territories by annual income levels. This Schedule documents that
12 between 1-in-7 (ME: 13.6%) and nearly 1-in-4 (PN: 22.2%) households in the
13 FirstEnergy service territories have annual incomes of less than \$20,000. Between
14 roughly 1-in-10 (ME: 9.0%; PP: 10.7%) and nearly 1-in-6 (PN: 15.2%) households in the
15 FirstEnergy service territories have annual incomes of less than \$15,000. Between one-
16 quarter and one-third of the customers of the FirstEnergy companies have annual income
17 less than \$30,000.

18
19 **Q. CAN YOU PLACE THESE INCOMES FOR THE FIRSTENERGY SERVICE**
20 **TERRITORIES IN THE CONTEXT OF WHAT IT TAKES TO HAVE A**
21 **MINIMALLY ADEQUATE INCOME?**

22 A. Yes. Every two years, the University of Washington's School of Social Work prepares a
23 study of "self-sufficiency" incomes in Pennsylvania for PathWays PA. The self-

1 sufficiency standard measures how much income a family of a certain composition in a
2 given place needs in order to adequately meet their basic needs without public or private
3 assistance. Schedule RDC-11 presents the number of customers for each FirstEnergy
4 company by county, along with the 2012 – 2013 self-sufficiency incomes for each of
5 those counties by family composition. In every county in which one of the FirstEnergy
6 utilities has customers, the self-sufficiency incomes are significantly higher than the
7 actual incomes reported above (for all but a one-adult household).

8
9 **Q. WHAT DO YOU CONCLUDE?**

10 A. It is evident from this data:

- 11 ➤ how and why a substantial number of FirstEnergy customers have, and will
12 continue to have, payment difficulties;
- 13 ➤ how and why a substantial number of FirstEnergy customers find, will
14 continue to find, it difficult, if not impossible, to implement usage reduction
15 measures; and
- 16 ➤ how and why a substantial number of FirstEnergy customers will be seriously
17 harmed by the rate increases proposed in this proceeding; by the return on
18 equity requested in this proceeding; by the rate designs and residential
19 customer charges proposed in this proceeding; and by the failure of the
20 respective companies to adequately address service quality as has been
21 documented in this proceeding.

22
23 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

1 A. Yes, it does.

2

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Colton Schedules

Schedule RDC-1

Residential Revenues with and without CAP Customers (ME, PN, PP, WP)

Existing Rates	Rate RS (Residential Service)				Rate RT (Residential Service Time of Day)			
	ME	PN	PP /a/	WP	ME	PN	PP /b/	WP
1 Total base distribution charges: With CAP	\$151,766,723	\$168,575,068	\$43,168,938	\$173,515,031	\$20,502,148	\$12,837,836	\$6,201,648	xxx
2 Total base distribution charges: No CAP	\$145,168,808	\$159,438,703	\$41,307,531	\$165,034,600	\$20,148,954	\$12,492,016	\$6,059,537	xxx
3 Difference (Line 1 minus Line 2) /c/	\$6,597,915	\$9,136,365	\$1,861,407	\$8,480,431	\$353,194	\$345,820	\$142,111	xxx
4 CAP charges at standard rates /c/	\$6,597,915	\$9,786,773	\$2,124,036	\$8,480,431	\$353,194	\$345,820	\$159,472	xxx
Proposed Rates	ME	PN	PP /a/	WP	ME	PN	PP /b/	WP
5 Total base distribution charges: With CAP	\$262,107,622	\$264,494,011	\$66,269,371	\$264,833,528	\$37,752,143	\$18,299,193	\$12,894,837	xxx
6 Total base distribution charges: No CAP	\$250,684,311	\$250,130,703	\$63,396,199	\$251,859,419	\$37,093,998	\$17,807,921	\$12,598,236	xxx
7 Difference (Line 5 minus Line 6)	\$11,423,311	\$14,363,308	\$2,873,172	\$12,974,109	\$658,145	\$491,272	\$296,601	xxx
8 CAP charges at standard rates	\$11,423,211	\$14,363,308	\$2,873,172	\$12,974,109	\$658,145	\$491,272	\$296,602	xxx

/a/ Includes Residential Service and Residential Controlled Water Heating Service.

/b/ PP includes Rate RH, not Rate RT.

/c/ Unexplained differences are presented in the shaded cells.

Usage With and Without CAP

Usage

	ME	PN	PP	WP
Residential with CAP /a/	4,659,445,780	4,117,159,711	1,344,242,245	7,276,447,206
Residential without CAP /b/	4,447,309,016	3,884,814,770	1,285,223,532	6,898,057,587
Difference	212,136,764	232,344,941	59,018,713	378,389,619
CAP Stand-alone Consumption /c/	212,136,764	232,344,941	59,018,713	378,389,619
Difference	0	0	0	0

/a/ SOURCE: Company Exhibit KMS-5, page 1 (billing units).

/b/ OCA-ME-XII-10; OCA-PN-XII-10; OCA-PP-XII-10; OCA-WP-XII-6.

/c/ OCA-ME-XII-11/OCA-ME-XII-14; OCA-PN-XII-11/OCA-PN-XII-13; OCA-PP-XII-11/OCA-PP-XII-13; OCA-WP-XII-7/OCA-WP-XII-10.

Universal Service Cost Offsets by Company

	Base Number of CAP Participants			CAP Credit Offset			Arrearage Forgiveness Offset		
	2014 Average CAP Participants	Projected CAP Growth Rate	Base CAP Participants (Col 1 x Col 2)	CAP Credit Bad Debt Offset	CAP Credit Working Capital Offset	Total CAP Credit Offset (4 + 5)	Arrearage Forgiveness Bad Debt Offset	Arrearage Forgiveness Working Capital Offset	Total Arrearage Forgiveness Offset (7 + 8)
ME	17,256 /a/	1.53% /e/	17,520	7.4%	20.6%	28.0%	10.8%	48.7%	59.5%
PN	23,842 /b/	1.53% /f/	24,207	5.8%	17.9%	23.7%	7.0%	48.5%	55.5%
PP	5,425 /c/	1.53% /g/	5,508	5.4%	17.0%	22.4%	7.8%	48.8%	56.6%
WPP	21,680 /d/	0.00% /h/	21,680	6.7%	18.3%	25.0%	15.2%	50.7%	65.9%
	/a/ OCA-ME-11-12. /b/ OCA-PN-11-12.	/c/ OCA-PP-11-12. /d/ OCA-WP-11-12.			/e/ OCA-ME-11-27. /f/ OCA-PN-11-27.			/g/ OCA-PP-11-27. /h/ OCA-WP-11-27.	

**METROPOLITAN EDISON
UNIVERSAL SERVICE COST RIDER**

Universal Service Charge (“USC”) shall be applied to each kilowatt-hour delivered during a billing month to all Customers served under residential retail rate schedules under this Tariff, determined to the nearest one-thousandth of a cent per kilowatt-hour. The USC shall be non-bypassable.

For services rendered January 1, 2014 through December 31, 2014 the USC shall be equal to .339 cents per kWh for all kWh. The USC shall be included in the distribution charges of the monthly bill.

The USC shall be calculated in accordance with the formula set forth below:

$$\text{USC} = [(\text{USC}/\text{SRes}) - (\text{E}/\text{SRes})] \times [1/(1-\text{T})]$$

Where:

USC = The charge in mills per kilowatt-hour to be applied to each kilowatt-hour delivered to all Customers served under residential retail rate schedules under this Tariff.

USC = Universal Service Program Costs, which are the estimated direct, ~~indirect~~ and administrative costs to be incurred by the Company to provide Universal Service to Customers for the USC Computational Year for the following programs (“Universal Service Programs”) subject to the limitations stated below:

- Customer Assistance and Referral for Evaluation of Services (“CARES”) Program
- Customer Assistance Program (“CAP”)
- Fuel Fund Administration
- Gatekeeper Program
- WARM (formerly LIURP) Program
- Any other replacement or Commission-mandated Universal Service Programs.

SRes = The Company’s projected retail kilowatt-hour sales for the projected USC billing period for Customers served under residential retail rate schedules under this Tariff.

E = The over or under-collection of Universal Service Program costs that result from the billing of the USC during the USC Reconciliation Year (an over-collection is denoted by a positive E and an under-collection by a negative E), including applicable interest. Interest shall be computed monthly as provided for in 41 P.S. § 202, the legal statutory interest rate, from the month the over or under-collection occurs to the month that the over-collection is refunded to or the under-collection is recovered from Customers.

T = The Pennsylvania gross receipts rate in effect during the billing month expressed in decimal form as reflected in the Company’s base rates.

Rider C (continued)

Universal Service Cost Limitations:

1. In the event that CAP participation in the preceding year exceeded 17,520 on an average annual basis, actual recoverable costs shall reflect CAP Credits and actual pre-program Arrearage Forgiveness Credits for all customers up to the 17,520 participation level. For any and all CAP customers exceeding the 17,520 participation level on an average annual basis, the Company shall offset the actual CAP Credits by 28.0% and shall offset the actual Pre-program Arrearage Forgiveness Credits by 59.5%.
2. For all universal service programs, in-house administrative costs that have not been explicitly removed from base rates in the most recent base rate proceeding shall not be subject to recovery through this Rider.

All capitalized terms not otherwise defined in this Rider shall have the definitions specified in Section 2 of this Tariff. For purposes of this Rider, the following additional definitions shall apply:

1. USC Computational Year - the 12 month period from January 1 through December 31 of each calendar year.
2. USC Reconciliation Year - the period from November 1 through October 31 immediately preceding the USC Computational Year.

The USC shall be filed with the Commission by December 1 of each year. The USC shall become effective the following January 1, unless otherwise ordered by the Commission, and shall remain in effect for a period of one year, unless revised on an interim basis subject to the approval of the Commission. Upon determination that the USC rates, if left unchanged, would result in material over or under-collection of all Universal Service Program Costs incurred or expected to be incurred during the current 12-month period ending December 31, the Company may request the Commission for interim revisions to the USC to become effective thirty (30) days from the date of filing, unless otherwise ordered by the Commission.

The Company shall file a report of collections under the USC within forty-five (45) days following the conclusion of each Computational Year quarter.

The USC shall be subject to review and audit by the Commission.

**PENNSYLVANIA ELECTRIC COMPANY
UNIVERSAL SERVICE COST RIDER**

Universal Service Charge (“USC”) shall be applied to each kilowatt-hour delivered during a billing month to all Customers served under residential retail rate schedules under this Tariff, determined to the nearest one-thousandth of a cent per kilowatt-hour. The USC shall be non-bypassable.

For services rendered January 1, 2014 through December 31, 2014 the USC shall be equal to .339 cents per kWh for all kWh. The USC shall be included in the distribution charges of the monthly bill.

The USC shall be calculated in accordance with the formula set forth below:

$$\text{USC} = [(\text{USC}/\text{SRes}) - (\text{E}/\text{SRes})] \times [1/(1-\text{T})]$$

Where:

USC = The charge in mills per kilowatt-hour to be applied to each kilowatt-hour delivered to all Customers served under residential retail rate schedules under this Tariff.

USC = Universal Service Program Costs, which are the estimated direct, ~~indirect~~ and administrative costs to be incurred by the Company to provide Universal Service to Customers for the USC Computational Year for the following programs (“Universal Service Programs”) subject to the limitations stated below:

- Customer Assistance and Referral for Evaluation of Services (“CARES”) Program
- Customer Assistance Program (“CAP”)
- Fuel Fund Administration
- Gatekeeper Program
- WARM (formerly LIURP) Program
- Any other replacement or Commission-mandated Universal Service Programs.

SRes = The Company’s projected retail kilowatt-hour sales for the projected USC billing period for Customers served under residential retail rate schedules under this Tariff.

E = The over or under-collection of Universal Service Program costs that result from the billing of the USC during the USC Reconciliation Year (an over-collection is denoted by a positive E and an under-collection by a negative E), including applicable interest. Interest shall be computed monthly as provided for in 41 P.S. § 202, the legal statutory interest rate, from the month the over or under-collection occurs to the month that the over-collection is refunded to or the under-collection is recovered from Customers.

T = The Pennsylvania gross receipts rate in effect during the billing month expressed in decimal form as reflected in the Company’s base rates.

Rider C (continued)

Universal Service Cost Limitations:

3. In the event that CAP participation in the preceding year exceeded 24,207 on an average annual basis, actual recoverable costs shall reflect CAP Credits and actual pre-program Arrearage Forgiveness Credits for all customers up to the 24,207 participation level. For any and all CAP customers exceeding the 24,207 participation level on an average annual basis, the Company shall offset the actual CAP Credits by 23.7% and shall offset the actual Pre-program Arrearage Forgiveness Credits by 55.5%.
4. For all universal service programs, in-house administrative costs that have not been explicitly removed from base rates in the most recent base rate proceeding shall not be subject to recovery through this Rider.

All capitalized terms not otherwise defined in this Rider shall have the definitions specified in Section 2 of this Tariff. For purposes of this Rider, the following additional definitions shall apply:

3. USC Computational Year - the 12 month period from January 1 through December 31 of each calendar year.
4. USC Reconciliation Year - the period from November 1 through October 31 immediately preceding the USC Computational Year.

The USC shall be filed with the Commission by December 1 of each year. The USC shall become effective the following January 1, unless otherwise ordered by the Commission, and shall remain in effect for a period of one year, unless revised on an interim basis subject to the approval of the Commission. Upon determination that the USC rates, if left unchanged, would result in material over or under-collection of all Universal Service Program Costs incurred or expected to be incurred during the current 12-month period ending December 31, the Company may request the Commission for interim revisions to the USC to become effective thirty (30) days from the date of filing, unless otherwise ordered by the Commission.

The Company shall file a report of collections under the USC within forty-five (45) days following the conclusion of each Computational Year quarter.

The USC shall be subject to review and audit by the Commission.

**PENNSYLVANIA POWER COMPANY
UNIVERSAL SERVICE COST RIDER**

Universal Service Charge (“USC”) shall be applied to each kilowatt-hour delivered during a billing month to all Customers served under residential retail rate schedules under this Tariff, determined to the nearest one-thousandth of a cent per kilowatt-hour. The USC shall be non-bypassable.

For services rendered January 1, 2014 through December 31, 2014 the USC shall be equal to .339 cents per kWh for all kWh. The USC shall be included in the distribution charges of the monthly bill.

The USC shall be calculated in accordance with the formula set forth below:

$$\text{USC} = [(\text{USC}/\text{SRes}) - (\text{E}/\text{SRes})] \times [1/(1-\text{T})]$$

Where:

USC = The charge in mills per kilowatt-hour to be applied to each kilowatt-hour delivered to all Customers served under residential retail rate schedules under this Tariff.

USC = Universal Service Program Costs, which are the estimated direct, ~~indirect~~ and administrative costs to be incurred by the Company to provide Universal Service to Customers for the USC Computational Year for the following programs (“Universal Service Programs”) subject to the limitations stated below:

- Customer Assistance and Referral for Evaluation of Services (“CARES”) Program
- Customer Assistance Program (“CAP”)
- Fuel Fund Administration
- Gatekeeper Program
- WARM (formerly LIURP) Program
- Any other replacement or Commission-mandated Universal Service Programs.

SRes = The Company’s projected retail kilowatt-hour sales for the projected USC billing period for Customers served under residential retail rate schedules under this Tariff.

E = The over or under-collection of Universal Service Program costs that result from the billing of the USC during the USC Reconciliation Year (an over-collection is denoted by a positive E and an under-collection by a negative E), including applicable interest. Interest shall be computed monthly as provided for in 41 P.S. § 202, the legal statutory interest rate, from the month the over or under-collection occurs to the month that the over-collection is refunded to or the under-collection is recovered from Customers.

T = The Pennsylvania gross receipts rate in effect during the billing month expressed in decimal form as reflected in the Company’s base rates.

Rider C (continued)

Universal Service Cost Limitations:

5. In the event that CAP participation in the preceding year exceeded 5,508 on an average annual basis, actual recoverable costs shall reflect CAP Credits and actual pre-program Arrearage Forgiveness Credits for all customers up to the 5,508 participation level. For any and all CAP customers exceeding the 5,508 participation level on an average annual basis, the Company shall offset the actual CAP Credits by 22.4% and shall offset the actual Pre-program Arrearage Forgiveness Credits by 56.6%.
6. For all universal service programs, in-house administrative costs that have not been explicitly removed from base rates in the most recent base rate proceeding shall not be subject to recovery through this Rider.

All capitalized terms not otherwise defined in this Rider shall have the definitions specified in Section 2 of this Tariff. For purposes of this Rider, the following additional definitions shall apply:

5. USC Computational Year - the 12 month period from January 1 through December 31 of each calendar year.
6. USC Reconciliation Year - the period from November 1 through October 31 immediately preceding the USC Computational Year.

The USC shall be filed with the Commission by December 1 of each year. The USC shall become effective the following January 1, unless otherwise ordered by the Commission, and shall remain in effect for a period of one year, unless revised on an interim basis subject to the approval of the Commission. Upon determination that the USC rates, if left unchanged, would result in material over or under-collection of all Universal Service Program Costs incurred or expected to be incurred during the current 12-month period ending December 31, the Company may request the Commission for interim revisions to the USC to become effective thirty (30) days from the date of filing, unless otherwise ordered by the Commission.

The Company shall file a report of collections under the USC within forty-five (45) days following the conclusion of each Computational Year quarter.

The USC shall be subject to review and audit by the Commission.

**PENNSYLVANIA ELECTRIC COMPANY
UNIVERSAL SERVICE COST RIDER**

Universal Service Charge (“USC”) shall be applied to each kilowatt-hour delivered during a billing month to all Customers served under residential retail rate schedules under this Tariff, determined to the nearest one-thousandth of a cent per kilowatt-hour. The USC shall be non-bypassable.

For services rendered January 1, 2014 through December 31, 2014 the USC shall be equal to .339 cents per kWh for all kWh. The USC shall be included in the distribution charges of the monthly bill.

The USC shall be calculated in accordance with the formula set forth below:

$$\text{USC} = [(\text{USC}/\text{SRes}) - (\text{E}/\text{SRes})] \times [1/(1-\text{T})]$$

Where:

USC = The charge in mills per kilowatt-hour to be applied to each kilowatt-hour delivered to all Customers served under residential retail rate schedules under this Tariff.

USC = Universal Service Program Costs, which are the estimated direct, ~~indirect~~ and administrative costs to be incurred by the Company to provide Universal Service to Customers for the USC Computational Year for the following programs (“Universal Service Programs”) subject to the limitations stated below:

- Customer Assistance and Referral for Evaluation of Services (“CARES”) Program
- Customer Assistance Program (“CAP”)
- Fuel Fund Administration
- Gatekeeper Program
- WARM (formerly LIURP) Program
- Any other replacement or Commission-mandated Universal Service Programs.

SRes = The Company’s projected retail kilowatt-hour sales for the projected USC billing period for Customers served under residential retail rate schedules under this Tariff.

E = The over or under-collection of Universal Service Program costs that result from the billing of the USC during the USC Reconciliation Year (an over-collection is denoted by a positive E and an under-collection by a negative E), including applicable interest. Interest shall be computed monthly as provided for in 41 P.S. § 202, the legal statutory interest rate, from the month the over or under-collection occurs to the month that the over-collection is refunded to or the under-collection is recovered from Customers.

T = The Pennsylvania gross receipts rate in effect during the billing month expressed in decimal form as reflected in the Company’s base rates.

Rider C (continued)

Universal Service Cost Limitations:

7. In the event that CAP participation in the preceding year exceeded 21,680 on an average annual basis, actual recoverable costs shall reflect CAP Credits and actual pre-program Arrearage Forgiveness Credits for all customers up to the 21,680 participation level. For any and all CAP customers exceeding the 21,680 participation level on an average annual basis, the Company shall offset the actual CAP Credits by 25.0% and shall offset the actual Pre-program Arrearage Forgiveness Credits by 65.9%.
8. For all universal service programs, in-house administrative costs that have not been explicitly removed from base rates in the most recent base rate proceeding shall not be subject to recovery through this Rider.

All capitalized terms not otherwise defined in this Rider shall have the definitions specified in Section 2 of this Tariff. For purposes of this Rider, the following additional definitions shall apply:

7. USC Computational Year - the 12 month period from January 1 through December 31 of each calendar year.
8. USC Reconciliation Year - the period from November 1 through October 31 immediately preceding the USC Computational Year.

The USC shall be filed with the Commission by December 1 of each year. The USC shall become effective the following January 1, unless otherwise ordered by the Commission, and shall remain in effect for a period of one year, unless revised on an interim basis subject to the approval of the Commission. Upon determination that the USC rates, if left unchanged, would result in material over or under-collection of all Universal Service Program Costs incurred or expected to be incurred during the current 12-month period ending December 31, the Company may request the Commission for interim revisions to the USC to become effective thirty (30) days from the date of filing, unless otherwise ordered by the Commission.

The Company shall file a report of collections under the USC within forty-five (45) days following the conclusion of each Computational Year quarter.

The USC shall be subject to review and audit by the Commission.

Average Consumption (kWh) for LIHEAP Customers and Residential Customers (non-heating months)

FirstEnergy (Pennsylvania) (September 2012 – August 2014)

	Met Ed			Penelec			Penn Power			West Penn Power		
	LIHEAP	Res	Pct /c/	LIHEAP	Res	Pct /c/	LIHEAP	Res	Pct /c/	LIHEAP	Res	Pct /c/
Non-heating 2012 – 2013 /a/	865	972	89%	670	762	88%	989	1,133	87%	973	1,037	94%
Non-Heating 2013 – 2014 /b/	852	938	91%	651	747	87%	933	1,104	85%	931	994	94%

SOURCE:

LIHEAP: OCA-II-ME-32(a); OCA-II-PN-32(a); OCA-II-PP-32(a); OCA-II-WP-32(a).

Residential: OCA-II-ME-32(e); OCA-II-PN-32(e); OCA-II-PP-32(e); OCA-II-WP-32(e).

NOTES:

/a/ September – November 2012 & May – August 2013.

/b/ September – November 2013 & May – August 2014.

/c/ Percentage LIHEAP usage is of residential usage (e.g., ME: 865 / 972 = 0.89).

Northeast Residential Electricity Consumption (2009)

2009 Annual Household Income	KWh Usage	Income Relative to Poverty Line	KWh Usage	Ownership of Housing Unit	KWh Usage	Total Square Footage of Unit	KWh Usage
Less than \$20,000	5,541			Owned	9,541	Fewer than 500	3,161
\$20,000 to \$39,999	6,922	Below 100 Percent	6,232	Single-Family	10,011	500 to 999	4,963
\$40,000 to \$59,000	7,381			Multi-Family	5,718	1,000 to 1,499	7,002
\$60,000 to \$79,999	8,443	100 to 150 Percent	6,542	Rented	5,654	1,500 to 1,999	8,581
\$80,000 to \$99,999	9,706			Single-Family	8,985	2,000 to 2,499	8,657
\$100,000 to \$119,999	10,503	Above 150 Percent	8,554	Multi-Family	4,868	2,500 to 2,999	9,487
\$120,000 or More	11,577					3,000 to 3,499	10,233
						3,500 to 3,999	12,161
						4,000 or More	12,191

SOURCE: Northeast (2009). Residential Energy Consumption Survey ("RECS"), Table CE2.2.

Energy Efficiency Attributes by Ratio of Income to Federal Poverty Level

Energy Efficiency Attribute	Ratio of Income to Federal Poverty Level		
	Over 150%	Under 150%	Under 100%
Home built subsequent to 2000	9.3%	4.1%	4.2%
Heating system less than 10 years old	43.4%	36.1%	37.2%
Heating system more than 15 years old	39.1%	51.5%	52.0%
Programmable Thermostat for main heating	41.5%	14.4%	14.5%
Water heater age less than 10 years old	63.5%	59.1%	59.0%
Adequately insulated home	44.3%	38.6%	41.4%
Well-Insulated home	37.3%	31.7%	30.6%
Insulation age less than 10 years old	16.3%	8.3%	8.1%
Home drafty either all or most of the time /a/	13.2%	25.3%	25.1%
Home drafty all the time	5.9%	13.7%	12.1%
Home drafty most of the time	7.3%	11.6%	13.0%
Weather-stripping age less than 10 years old	26.9%	16.7%	11.4%

/a/ This is not a separately reported data point. It is the sum of the two preceding data points.

Energy Efficiency Attributes by Ratio of Income to Federal Poverty Level

Energy Efficiency Attribute	Ratio of Income to Federal Poverty Level		
	Over 150%	Under 150%	Under 100%
Refrigerator less than 10 years old	66.8%	64.0%	63.4%
Energy Star refrigerator	42.9%	27.7%	22.3%
Energy Star dishwasher /a/	47.3%	31.9%	30.0%
Energy Star clothes washer /a/	47.7%	36.9%	32.8%
Programmable thermostat for central air /a/	60.5%	47.9%	54.0%
Energy Star window air conditioning /a/	51.8%	37.5%	27.4%
Percent of 4 hour lights that are CFLs	45.8%	40.7%	40.9%
Percent of 1 hour lights that are CFLs	46.1%	42.5%	43.0%

/a/ Of those households having each respective appliance.

Schedule RDC-8

Number and Percent of Estimated Low-Income Customers: FirstEnergy Utilities (Pennsylvania) (2003 – 2013)

Company	Number of Estimated Low-Income Customers											Growth	
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2003-2013	2011-2013
GPU (Met Ed 2003)	66,094	67,089	68,108	69,026	69,537	70,203	98,073	98,599	88,681	112,233	118,937	52,843	30,256
Penelec (2003+)	118,024	118,352	118,380	118,242	118,279	118,249	153,444	153,977	159,460	162,717	168,092	50,068	8,632
Penn Power	28,119	28,282	28,378	28,499	28,557	28,538	35,354	35,459	34,459	36,918	37,776	9,657	3,317
West Penn Power (2011+)	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	161,716	169,049	171,987	xxx	10,271

Company	Percent of Estimated Low-Income Customers												
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
GPU (Met Ed 2003)	14.60%	14.60%	14.60%	14.50%	14.50%	14.50%	20.20%	20.30%	18.2%	23.0%	24.4%	9.8%	6.2%
Penelec (2003+)	23.50%	23.50%	23.40%	23.40%	23.40%	23.40%	30.40%	30.50%	31.5%	32.2%	33.3%	9.8%	1.8%
Penn Power	20.60%	20.60%	20.50%	20.50%	20.50%	20.40%	25.30%	25.30%	24.6%	26.2%	26.8%	6.2%	2.2%
West Penn Power (2011+)	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	26.3%	27.4%	27.8%	xxx	1.5%

SOURCE: Pennsylvania PUC, Bureau of Consumer Services, Report on Universal Service Programs and Collections Performance (annual).

Schedule RDC-9

2012	Ratio of Income to Poverty Level: FirstEnergy Companies					
	Under 50%	50 ~ 99%	100 - 124%	125 - 149%	150 ~ 184%	185 - 199%
Metropolitan Edison	4.3%	5.8%	3.4%	3.7%	5.8%	2.4%
Penelec	6.2%	9.3%	5.2%	5.3%	7.7%	3.5%
Penn Power	3.8%	5.8%	3.5%	4.1%	5.7%	2.4%
West Penn Power	5.1%	6.5%	4.1%	4.2%	6.3%	2.8%

SOURCE: American Community Survey (2012) (5-year data). Table C17002.

Households by Annual Household Income: FirstEnergy Companies (Pennsylvania) (2012)

	Less than \$10,000	\$10,000 - \$14,999	\$15,000 - \$19,999	\$20,000 - \$24,999	\$25,000 - \$29,999	\$30,000 - \$34,999	\$35,000 - \$39,999	\$40,000 - \$44,999	\$45,000 - \$49,999
Met Ed	4.7%	4.3%	4.6%	4.7%	5.0%	5.1%	4.8%	4.7%	4.2%
Penelec	7.9%	7.2%	7.0%	6.8%	6.6%	6.1%	5.6%	5.5%	4.9%
Penn Power	5.4%	5.3%	5.7%	5.1%	5.5%	4.9%	4.7%	4.7%	4.4%
West Penn Power	6.2%	5.5%	5.9%	5.9%	5.7%	5.5%	5.0%	5.1%	4.5%

	Below \$15,000	Below \$20,000	Below \$25,000	Below \$30,000
Met Ed	9.0%	13.6%	18.3%	23.3%
Penelec	15.2%	22.2%	28.9%	35.5%
Penn Power	10.7%	16.4%	21.5%	27.0%
West Penn Power	11.8%	17.7%	23.6%	29.2%

SOURCE: American Community Survey (2012) (5 year data). Table B19001.

Schedule RDC-11

Self-Sufficient Income by County (Pennsylvania: 2012) and Customers By County (FirstEnergy Companies—Pennsylvania)

County	Residential Customers by County and FE Company				Self-Sufficient Income by Household Type									
	ME	PN	PP	WP	Total	Adult	Adult + Infant	Adult + Preschooler	Adult + Infant + Preschooler	Adult + School-age +teenager	Adult + Infant + Preschooler +School-age	2 Adults + Infant + Preschooler	2 Adults + Preschooler + School-age	
Adams	28,542			1,501	30,043	\$19,669	\$31,568	\$35,462	\$44,608	\$35,130	\$59,979	\$52,009	\$53,708	
Allegheny /a/		18,132		68,129	86,261	\$17,854	\$33,301	\$37,388	\$49,288	\$33,719	\$64,358	\$54,758	\$54,275	
Armstrong		98		29,469	29,567	\$18,198	\$29,224	\$29,904	\$40,456	\$28,102	\$52,191	\$48,427	\$46,816	
Beaver			12,201		12,201	\$18,265	\$33,896	\$33,573	\$46,521	\$29,716	\$57,886	\$53,913	\$49,987	
Bedford		9,579		3,937	13,516	\$17,322	\$28,757	\$27,536	\$37,842	\$27,888	\$50,040	\$46,214	\$44,173	
Berks	121,927				121,927	\$21,369	\$38,095	\$40,330	\$51,886	\$37,335	\$67,019	\$59,646	\$57,727	
Blair		47,242		21	47,263	\$17,503	\$27,829	\$29,701	\$38,029	\$28,809	\$51,509	\$46,355	\$46,768	
Bradford		19,069			19,069	\$17,612	\$29,539	\$29,321	\$40,630	\$26,010	\$51,397	\$48,441	\$45,646	
Bucks	4,994				4,994	\$27,434	\$47,050	\$50,267	\$63,911	\$49,761	\$83,890	\$72,316	\$71,863	
Butler		1	26,299	42,371	68,671	\$19,949	\$35,431	\$37,082	\$48,378	\$32,864	\$60,619	\$55,771	\$53,088	
Cambria		54,789			54,789	\$16,962	\$26,939	\$27,819	\$35,977	\$25,991	\$48,314	\$45,159	\$43,284	
Cameron				3,421	3,421	\$17,304	\$28,285	\$28,916	\$39,211	\$26,247	\$51,466	\$47,035	\$45,354	
Centre /b/		4,321		49,042	53,363	\$18,778	\$31,933	\$38,001	\$48,243	\$32,935	\$61,655	\$55,182	\$55,514	
Chester	1,093				1,093	\$29,176	\$50,764	\$53,410	\$68,930	\$50,711	\$88,690	\$77,251	\$73,992	
Clarion		4,780		8,687	13,467	\$17,814	\$28,784	\$29,208	\$39,840	\$28,142	\$52,260	\$47,827	\$46,720	
Clearfield		29,167			29,167	\$17,089	\$27,275	\$28,881	\$37,865	\$27,572	\$52,378	\$46,349	\$46,250	
Clinton				2,529	2,529	\$17,808	\$30,156	\$31,640	\$42,521	\$28,143	\$52,974	\$49,574	\$47,564	
Crawford		21,681	6,478		28,159	\$17,879	\$29,404	\$30,805	\$41,538	\$26,506	\$52,623	\$48,816	\$46,400	
Cumberland	9,939	4,828			14,767	\$19,225	\$35,244	\$38,430	\$49,817	\$31,559	\$61,891	\$56,856	\$53,561	
Dauphin	5,891			15,771	21,662	\$19,205	\$34,234	\$38,133	\$48,792	\$34,591	\$63,102	\$55,797	\$55,461	
Elk				0	0	\$17,370	\$28,320	\$28,195	\$38,308	\$27,917	\$51,530	\$46,668	\$45,868	
Erie		102,967			102,967	\$18,221	\$33,056	\$35,889	\$46,490	\$33,646	\$59,646	\$53,598	\$53,560	
Fayette				59,859	59,859	\$17,329	\$30,861	\$30,740	\$43,253	\$29,655	\$55,477	\$50,646	\$48,983	

Self-Sufficient Income by County (Pennsylvania: 2012) and Customers By County (FirstEnergy Companies—Pennsylvania)

County	Residential Customers by County and FE Company				Self-Sufficient Income by Household Type									
	ME	PN	PP	WP	Total	Adult	Adult + Infant	Adult + Preschooler	Adult + Infant + Preschooler	Adult + School-age +teenager	Adult + Infant + Preschooler +School-age	2 Adults + Infant + Preschooler	2 Adults + Preschooler + School-age	
Forest	3,449	3,449			3,449	\$17,618	\$28,746	\$29,463	\$39,754	\$26,914	\$51,557	\$47,630	\$45,925	
Franklin	4,931	4,931		46,359	51,290	\$18,231	\$31,225	\$32,420	\$42,829	\$29,987	\$54,657	\$50,245	\$48,475	
Fulton				4,973	4,973	\$17,521	\$27,997	\$29,189	\$38,318	\$28,355	\$50,396	\$46,906	\$46,392	
Greene				16,071	16,071	\$17,649	\$31,840	\$32,075	\$45,137	\$30,167	\$57,615	\$52,373	\$50,541	
Huntingdon		11,235		1	11,236	\$16,756	\$27,398	\$30,794	\$39,964	\$26,815	\$51,837	\$47,658	\$47,009	
Indiana		21,503		1,325	22,828	\$17,515	\$28,427	\$32,319	\$42,568	\$28,199	\$53,518	\$49,904	\$49,156	
Jefferson		13,879		41	13,920	\$17,243	\$28,472	\$28,055	\$38,066	\$24,692	\$49,386	\$46,629	\$42,380	
Juniata		700			700	\$16,784	\$26,681	\$25,697	\$33,892	\$25,743	\$48,233	\$42,068	\$41,249	
Lancaster	1,912				1,912	\$20,695	\$36,059	\$39,326	\$49,903	\$35,630	\$63,698	\$57,331	\$56,169	
Lawrence			35,119		35,119	NA	NA	NA	NA	NA	NA	NA	NA	
Lebanon	49,533				49,533	\$18,797	\$32,711	\$36,012	\$46,127	\$32,380	\$59,910	\$53,730	\$52,754	
Lehigh	3,575				3,575	\$23,430	\$38,606	\$41,115	\$51,290	\$40,091	\$66,573	\$58,686	\$58,229	
Lycoming		721		489	1,210	\$19,699	\$33,407	\$33,792	\$44,471	\$29,383	\$55,150	\$51,761	\$47,986	
McKean		14,031		4,406	18,437	\$17,897	\$28,089	\$29,117	\$37,904	\$27,182	\$50,385	\$46,512	\$43,348	
Mercer			47,417		47,417	\$18,322	\$32,434	\$35,139	\$46,289	\$31,415	\$58,680	\$53,648	\$52,284	
Mifflin		18,737			18,737	\$16,708	\$27,136	\$28,700	\$37,903	\$27,334	\$51,280	\$46,241	\$46,167	
Monroe	20,272				20,272	\$20,956	\$37,870	\$37,424	\$49,002	\$36,514	\$62,931	\$56,515	\$54,307	
Montgomery	10,355				10,355	\$28,595	\$49,804	\$52,278	\$67,390	\$50,879	\$87,935	\$76,187	\$74,057	
Northampton	55,602				55,602	\$23,595	\$40,797	\$40,835	\$53,037	\$40,403	\$68,407	\$60,549	\$58,176	
Perry		979			979	\$17,534	\$29,106	\$32,709	\$42,544	\$29,939	\$55,094	\$49,673	\$49,849	
Pike	13,810				13,810	\$24,199	\$40,271	\$40,952	\$42,189	\$39,655	\$68,074	\$59,624	\$57,544	
Potter		2,479		2,536	5,015	\$17,592	\$28,813	\$28,929	\$40,138	\$25,515	\$51,820	\$47,867	\$45,216	
Somerset		25,995		223	26,218	\$17,153	\$27,583	\$27,353	\$36,104	\$25,504	\$47,740	\$45,296	\$42,407	
Sullivan		2,882			2,882	\$17,218	\$28,245	\$28,719	\$39,215	\$26,326	\$50,994	\$47,067	\$45,470	

Self-Sufficient Income by County (Pennsylvania: 2012) and Customers By County (FirstEnergy Companies—Pennsylvania)

County	Residential Customers by County and FE Company					Self-Sufficient Income by Household Type									
	ME	PN	PP	WP	Total	Adult	Adult + Infant	Adult + Preschooler	Adult + Infant + Preschooler	Adult + School-age +teenager	Adult + Infant + Preschooler +School-age	2 Adults + Infant + Preschooler	2 Adults + Preschooler + School-age		
Susquehanna	11,532				11,532	\$17,485	\$29,900	\$29,320	\$41,034	\$27,591	\$51,957	\$48,600	\$46,397		
Tioga	13,584				13,584	\$17,703	\$27,911	\$29,232	\$39,141	\$27,604	\$52,174	\$46,936	\$46,549		
Venango	18,415	26			18,441	\$17,418	\$31,256	\$32,439	\$44,467	\$31,731	\$58,344	\$51,703	\$51,521		
Warren	14,716				14,716	\$17,676	\$29,488	\$30,469	\$40,790	\$24,487	\$50,079	\$48,690	\$43,755		
Washington				89,616	89,616	\$17,953	\$34,402	\$35,061	\$48,450	\$32,879	\$62,540	\$55,842	\$53,940		
Wayne		2,946			2,946	\$17,229	\$29,794	\$30,222	\$41,343	\$30,295	\$54,461	\$48,773	\$48,754		
Westmoreland		1,987		155,695	157,682	\$18,176	\$34,116	\$33,914	\$47,076	\$31,458	\$59,859	\$54,469	\$51,700		
Wyoming		6,873			6,873	\$18,215	\$30,608	\$32,079	\$42,795	\$28,550	\$54,017	\$50,104	\$48,108		
York	149,548				149,548	\$19,853	\$34,849	\$36,767	\$47,128	\$35,627	\$60,650	\$54,437	\$54,300		

/a/ Excluding Pittsburgh.
/b/ Excluding State College.

SOURCE:

1. Customers by county by utility: OCA-ME-II-33; OCA-PN-II-33; OCA-PP-II-33; OCA-WP-II-33.
2. Self-sufficiency incomes: Diana Pierce, Ph.D. (October 2012). Overlooked and Undercounted: How the Great Recession Impacted Household Self-Sufficiency in Pennsylvania, PathWays PA: Holmes (PA). Previous self-sufficiency reports for Pennsylvania have been prepared in: 1997, 1999, 2001, 2004, 2006, 2008, and 2010.

Attachment A: Colton Vitae

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EDUCATION:

J.D. (Order of the Coif), University of Florida (1981)

M.A. (Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975) (journalism, political science, speech)

PROFESSIONAL EXPERIENCE:

Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 - present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including: regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer), government budgeting, and planning and zoning.

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory and legislative bodies in more than three dozen states. He is particularly noted for creative program design and implementation within tight budget constraints.

National Consumer Law Center (NCLC): 1986 - 1994

As a staff attorney with NCLC, Colton worked on low-income energy and utility issues. He pioneered cost-justifications for low-income affordable energy rates, as well as developing models to quantify the non-energy benefits (*e.g.*, reduced credit and collection costs, reduced working capital) of low-income energy efficiency. He designed and implemented low-income affordable rate and fuel assistance programs across the country. Colton was charged with developing new practical and theoretical underpinnings for solutions to low-income energy problems.

Community Action Research Group (CARG): 1981 - 1985

As staff attorney for this non-profit research and consulting organization, Colton worked primarily on energy and utility issues. He provided legal representation to low-income persons on public utility issues; provided legal and technical assistance to consumer and labor organizations; and provided legal and technical assistance to a variety of state and local governments nationwide on natural gas, electric, and telecommunications issues. He routinely appeared as an expert witness before regulatory agencies and legislative committees regarding energy and telecommunications issues.

PROFESSIONAL AFFILIATIONS:

Coordinator: BelmontBudget.org (Belmont's Community Budget Forum)
Coordinator: Belmont Affordable Shelter Fund (BASF)
Chair: Belmont Solar Initiative Oversight Committee
Co-Chair: Belmont Energy Committee
Member: Massachusetts Municipal Energy Group (Mass Municipal Association)
Past Chair: Housing Work Group, Belmont (MA) Comprehensive Planning Process
Past Member: Board of Directors, Belmont Housing Trust, Inc.
Past Chair: Waverley Square Fire Station Re-use Study Committee (Belmont MA)
Past Member: Belmont (MA) Energy and Facilities Work Group
Past Member: Belmont (MA) Uplands Advisory Committee
Past Member: Advisory Board: Fair Housing Center of Greater Boston.
Past Chair: Fair Housing Committee, Town of Belmont (MA)
Past Member: Aggregation Advisory Committee, New York State Energy Research and Development Authority.
Past Member: Board of Directors, Vermont Energy Investment Corporation.
Past Member: Board of Directors, National Fuel Funds Network
Past Member: Board of Directors, Affordable Comfort, Inc. (ACI)
Past Member: National Advisory Committee, U.S. Department of Health and Human Services, Administration for Children and Families, Performance Goals for Low-Income Home Energy Assistance.
Past Member: Editorial Advisory Board, International Library, *Public Utility Law Anthology*.
Past Member: ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort HVAC Systems for Multiple Occupancy Buildings*
Past Member: National Advisory Committee, U.S. Department of Housing and Urban Development, Calculation of Utility Allowances for Public Housing.
Past Member: National Advisory Board: Energy Financing Alternatives for Subsidized Housing, New York State Energy Research and Development Authority.

PROFESSIONAL ASSOCIATIONS:

National Association of Housing and Redevelopment Officials (NAHRO)
Association for Enterprise Opportunity (AEO)
Iowa State Bar Association
Energy Bar Association
Association for Institutional Thought (AFIT)

Association for Evolutionary Economics (AEE)
Society for the Study of Social Problems (SSSO)
International Society for Policy Studies
Association for Social Economics

BOOKS

Colton, *et al.*, *Access to Utility Service*, National Consumer Law Center: Boston (4th edition 2008).

Colton, *et al.*, *Tenants' Rights to Utility Service*, National Consumer Law Center: Boston (1994).

Colton, *The Regulation of Rural Electric Cooperatives*, National Consumer Law Center: Boston (1992).

JOURNAL PUBLICATIONS

Colton (January 2015, Forthcoming). "Owning up to the Problem: Limiting the Use of an Assets Test for Determining Home Energy Assistance Eligibility." *Clearinghouse Review*.

Colton (November 2003). "Winter Weather Payments: The Impact of Iowa's Winter Utility Shutoff Moratorium on Utility Bill Payments by Low-Income Customers." 16(9) *Electricity Journal* 59.

Colton (March 2002). "Energy Consumption and Expenditures by Low-Income Households," 15(3) *Electricity Journal* 70.

Colton, Roger and Stephen Colton (Spring 2002). "An Alternative to Regulation in the Control of Occupational Exposure to Tuberculosis in Homeless Shelters," *New Solutions: Journal of Environmental and Occupational Health Policy*.

Colton (2001). "The Lawfulness of Utility Actions Seeking to Impose as a Condition of Service Liability for a Roommate's Debt Incurred at a Prior Address," *Clearinghouse Review*.

Colton (2001). "Limiting The "Family Necessaries" Doctrine as a Means of Imposing Third Party Liability for Utility Bills," *Clearinghouse Review*.

Colton (2001). "Prepayment Utility Meters and the Low-Income Consumer." *Journal of Housing and Community Development Law* (American Bar Association).

Colton, Brown and Ackermann (June 2000). "Mergers and the Public Interest: Saving the Savings for the Poorest Customers." *Public Utilities Fortnightly*.

Colton. (2000). "Aggregation and the Low-Income Consumer." *LEAP Newsletter*.

Colton. (1999). "Challenging Entrance and Transfer Fees in Mobile Home Park Lot Rentals." *Clearinghouse Review*.

Colton and Adams (1999). "Y2K and Communities of Color," *Media Alert: The Quarterly Publication of the National Black Media Coalition*.

Colton and Sheehan (1999). "The Problem of Mass Evictions in Mobile Home Parks Subject to Conversion." *Journal of Housing and Community Development Law* (American Bar Association).

Colton (1999). "Utility Rate Classifications and Group Homes as "Residential" Customers," *Clearinghouse Review*.

Colton (1998). "Provider of Last Resort: Lessons from the Insurance Industry." *The Electricity Journal*.

Colton and Adams (1998). "Fingerprints for Check Cashing: Where Lies the Real Fraud," *Media Alert: The Quarterly Publication of the National Black Media Coalition*.

Colton. (1998). "Universal Service: A Performance-Based Measure for a Competitive Industry," *Public Utilities Fortnightly*.

Colton, Roger and Stephen Colton (1998). "Evaluating Hospital Mergers," *17 Health Affairs* 5:260.

Colton. (1998). "Supportive Housing Facilities as "Low-Income Residential" Customers for Energy Efficiency Purposes," *7 Journal of Housing and Community Development Law* 406 (American Bar Association).

Colton, Frisof and King. (1998). "Lessons for the Health Care Industry from America's Experience with Public Utilities." *18 Journal of Public Health Policy* 389.

Colton (1997). "Fair Housing and Affordable Housing: Availability, Distribution and Quality." 1997 *Colloqui: Cornell Journal of Planning and Urban Issues* 9.

Colton, (1997). "Competition Comes to Electricity: Industry Gains, People and the Environment Lose," *Dollars and Sense*.

Colton (1996). "The Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility And Childhood Education in Missouri." *2 Journal on Children and Poverty* 23.

Colton and Sheehan. (1995). "Utility Franchise Charges and the Rental of City Property." *72 New Jersey Municipalities* 9:10.

Colton. (1995). "Arguing Against Utilities' Claims of Federal Preemption of Customer-Service Regulations." *29 Clearinghouse Review* 772.

Colton and Labella. (1995). "Landlord Failure to Resolve Shared Meter Problems Breaches Tenant's Right to Quiet Enjoyment." *29 Clearinghouse Review* 536.

Colton and Morrissey. (1995). "Tenants' Rights to Pretermination Notice in Cases of Landlords' Nonpayment of Utilities". *29 Clearinghouse Review* 277.

Colton. (1995). "The Perverse Incentives of Fair Market Rents." *52 Journal of Housing and Community Development* 6.

Colton (1994). "Energy Efficiency and Low-Income Housing: Energy Policy Hurts the Poor." XVI *ShelterForce: The Journal of Affordable Housing Strategies* 9.

Colton (1994). "The Use of Consumer Credit Reports in Establishing Creditworthiness for Utility Deposits." *Clearinghouse Review*.

Colton (1994). "Institutional and Regulatory Issues Affecting Bank Product Diversification Into the Sale of Insurance," *Journal of the American Society of CLU and ChFC*.

Colton. (1993). "The Use of State Utility Regulations to Control the 'Unregulated' Utility." *27 Clearinghouse Review* 443.

Colton and Smith. (1993). "The Duty of a Public Utility to Mitigate 'Damages' from Nonpayment through the Offer of Conservation Programs." 3 *Boston University Public Interest Law Journal* 239.

Colton and Sheehan. (1993). "Cash for Clunkers Program Can Hurt the Poor," 19 *State Legislatures: National Conference of State Legislatures* 5:33.

Colton. (1993). "Consumer Information and Workable Competition in the Telecommunications Industry." XXVII *Journal of Economic Issues* 775.

Colton and Sheehan. (1992). "Mobile Home Rent Control: Protecting Local Regulation," *Land Use Law and Zoning Digest*.

Colton and Smith. (1992 - 1993). "Co-op Membership and Utility Shutoffs: Service Protections that Arise as an Incident of REC Membership." 29 *Idaho Law Review* 1, reprinted, XV *Public Utilities Law Anthology* 451.

Colton and Smith. (1992). "Protections for the Low-Income Customer of Unregulated Utilities: Federal Fuel Assistance as More than Cash Grants." 13 *Hamline University Journal of Public Law and Policy* 263.

Colton (1992). "CHAS: The Energy Connection," 49 *The Journal of Housing* 35, reprinted, 19 *Current Municipal Problems* 173.

Colton (March 1991). "A Cost-Based Response to Low-Income Energy Problems." *Public Utilities Fortnightly*.

Colton. (1991). "Protecting Against the Harms of the Mistaken Utility Undercharge." 39 *Washington University Journal of Urban and Contemporary Law* 99, reprinted, XIV *Public Utilities Anthology* 787.

Colton. (1990). "Customer Consumption Patterns within an Income-Based Energy Assistance Program." 24 *Journal of Economic Issues* 1079

Colton (1990). "Heightening the Burden of Proof in Utility Shutoff Cases Involving Allegations of Fraud." 33 *Howard L. Review* 137.

Colton (1990). "When the Phone Company is not the Phone Company: Credit Reporting in the Post-Divestiture Era." 24 *Clearinghouse Review* 98.

Colton (1990). "Discrimination as a Sword: Use of an 'Effects Test' in Utility Litigation." 37 *Washington University Journal of Urban and Contemporary Law* 97, reprinted, XIII *Public Utilities Anthology* 813.

Colton (1989). "Statutes of Limitations: Barring the Delinquent Disconnection of Utility Service." 23 *Clearinghouse Review* 2.

Colton & Sheehan. (1989). "Raising Local Revenue through Utility Franchise Fees: When the Fee Fits, Foot It." 21 *The Urban Lawyer* 55, reprinted, XII *Public Utilities Anthology* 653, reprinted, Freilich and Bushek (1995). *Exactions, Impacts Fees and Dedications: Shaping Land Use Development and Funding Infrastructure in the Dolan Era*, American Bar Association: Chicago.

Colton (1989). "Unlawful Utility Disconnections as a Tort: Gaining Compensation for the Harms of Unlawful Shutoffs." 22 *Clearinghouse Review* 609.

Colton, Sheehan & Uehling. (1987). "Seven cum Eleven: Rolling the Toxic Dice in the U.S. Supreme Court," 14 *Boston College Environmental L. Rev.* 345.

Colton & Sheehan. (1987). "A New Basis for Conservation Programs for the Poor: Expanding the Concept of Avoided Costs," 21 *Clearinghouse Review* 135.

Colton & Fisher. (1987). "Public Inducement of Local Economic Development: Legal Constraints on Government Equity Funding Programs." 31 *Washington University J. of Urban and Contemporary Law* 45.

Colton & Sheehan. (1986). "The Illinois Review of Natural Gas Procurement Practices: Permissible Regulation or Federally Preempted Activity?" 35 *DePaul Law Review* 317, reprinted, IX *Public Utilities Anthology* 221.

Colton (1986). "Utility Involvement in Energy Management: The Role of a State Power Plant Certification Statute." 16 *Environmental Law* 175, reprinted, IX *Public Utilities Anthology* 381.

Colton (1986). "Utility Service for Tenants of Delinquent Landlords," 20 *Clearinghouse Review* 554.

Colton (1985). "Municipal Utility Financing of Energy Conservation: Can Loans only be Made through an IOU?" 64 *Nebraska Law Review* 189.

Colton (1985). "Excess Capacity: A Case Study in Ratemaking Theory and Application." 20 *Tulsa Law Journal* 402, reprinted, VIII *Public Utilities Anthology* 739.

Colton (1985). "Conservation, Cost-Containment and Full Energy Service Corporations: Iowa's New Definition of 'Reasonably Adequate Utility Service.'" 34 *Drake Law Journal* 1.

Colton (1982). "Mandatory Utility Financing of Conservation and Solar Measures." 3 *Solar Law Reporter* 167.

Colton (1982). "The Use of Canons of Statutory Construction: A Case Study from Iowa, or When Does 'GHOTI' Spell 'Fish'?" 5 *Seton Hall Legislative Journal* 149.

Colton (1977). "The Case for a Broad Construction of 'Use' in Section 4(f) of the Department of Transportation Act." 21 *St. Louis Law Journal* 113.

Colton (1984). "Prudence, Planning and Principled Ratemaking." 35 *Hastings Law Journal* 721.

Colton (1983). "Excess Capacity: Who Gets the Charge from the Power Plant?" 33 *Hastings Law Journal* 1133.

Colton (1983). "Old McDonald (Inc.) Has a Farm. . . Maybe, or Nebraska's Corporate Farm Ban; Is it Constitutional?" 6 *University of Arkansas at Little Rock Law Review* 247.

OTHER PUBLICATIONS

Colton (2014). *Assessing Rooftop Solar PV Glare in Dense Urban Residential Neighborhoods: Determining Whether and How Much of a Problem*, submitted to American Planning Association: Chicago (IL).

Colton (2013). *White Paper: Utility Communications with Residential Customers and Vulnerable Residential Customers In Response to Severe Weather-Related Outages*, prepared for Pennsylvania Office of Consumer Advocate.

Colton (2013). *Massachusetts Analysis of Impediments to Fair Housing: Fiscal Zoning and the "Childproofing" of a Community*, presented to Massachusetts Department of Housing and Community Development.

Colton (2013). *Home Energy Affordability in New York: The Affordability Gap (2012)*, prepared for New York State Energy Research and Development Authority (NYSERDA).

Colton (2013). *Home Energy Affordability in Connecticut: The Affordability Gap (2012)*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2013). *Owning up to the Problem: Limiting the Use of an Assets Test for Determining Home Energy Assistance Eligibility*.

Colton (2013). *Privacy Protections for Consumer Information Held by Minnesota Rate-Regulated Utilities*, prepared for Legal Services Advocacy Project (St. Paul, MN).

Colton (2013). *Proposal for the Use of Pervious Pavement for Repaving the Belmont High School Parking Lot*, prepared for Sustainable Belmont: Belmont (MA).

Colton (2012). *Home Energy Affordability in New York: 2011*, prepared for the New York State Energy Research and Development Authority (NYSERDA) (Albany NY).

Colton (2012). *A Fuel Assistance Tracking Mechanism: Measuring the Impact of Changes in Weather and Prices on the Bill Payment Coverage Capacity of LIHEAP*, prepared for Iowa Department of Human Rights: Des Moines (IA).

Colton (2012). *Home Energy Affordability Gap: 2012: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2012). *Attributes of Massachusetts Gas/Electric Arrearage Management Programs (AMPS): 2011 Program Year*, prepared for Fisher, Sheehan & Colton, Public Finance and General Economics, Belmont (MA).

Colton (2012). *Customer and Housing Unit Characteristics in the Fitchburg Gas and Electric Service Territory*, prepared for Unutil Corporation, d/b/a Fitchburg Gas and Electric Company (Portsmouth, NH).

Colton (2012). *Final Report on Xcel Energy's Pilot Energy Assistance Program*, prepared for Xcel Energy (Denver, CO).

Colton (2012). *Home Energy Affordability Gap: 2011: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2011). *Home Energy Affordability in Idaho: Low-Income Energy Affordability Needs and Resources*, prepared for Community Action Partnership of Idaho (Boise, ID).

Colton (2011). *Home Energy Affordability Gap in New York*, prepared for the New York State Energy Research Development Authority (NYSERDA) (Albany, NY).

Colton (2011). *Home Energy Affordability Gap: 2010: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2011). *Section 8 Utility Allowances and Changes in Home Energy Prices in Pennsylvania*, prepared for Pennsylvania Utility Law Project: Harrisburg (PA).

Colton (2010). *Interim Report on Xcel Energy's Pilot Energy Assistance Program*, prepared for Xcel Energy (Denver, CO).

Colton (2010). *Home Energy Affordability Gap: 2009: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2010). *Home Energy Affordability in Manitoba: A Low-Income Affordability Program for Manitoba Hydro*, prepared for Resource Conservation of Manitoba, Winnipeg (MAN).

Colton (2009). *Mirror, Mirror on the Wall: How Well Does Belmont's Town Meeting Reflect the Community at Large*, prepared for Fisher, Sheehan & Colton, Public Finance and General Economics, Belmont (MA).

Colton (2009). *An Outcomes Planning Approach to Serving TPU Low-Income Customers*, prepared for Tacoma Public Utilities, Tacoma (WA).

Colton (2009). *An Outcome Evaluation of Indiana's Low-Income Rate Affordability Programs: 2008 – 2009*, prepared for Citizens Gas and Coke Utility, Northern Indiana Public Service Company, Vectren Energy Delivery Indianapolis (IN).

Roger Colton (2009). *The Earned Income Tax Credit (EITC) as "Energy Assistance" in Pennsylvania*, prepared for Pennsylvania Utility Law Project (PULP).

Colton (2009). *Energy Efficiency as a Homebuyer Affordability Tool in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *Energy Efficient Utility Allowances as a Usage Reduction Tool in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *Home Energy Consumption Expenditures by Income (Pennsylvania)*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *The Contribution of Utility Bills to the Unaffordability of Low-Income Rental Housing in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *The Integration of Federal LIHEAP Benefits with Ratepayer-Funded Percentage of Income Payment Programs (PIPPs): Legal and Policy Questions Involving the Distribution of Benefits*, prepared for Pennsylvania Office of Consumer Advocate, Harrisburg (PA).

Colton (2008). *Home Energy Affordability in Indiana: Current Needs and Future Potentials*, prepared for Indiana Community Action Association.

Colton (2008). *Public Health Outcomes Associated with Energy Poverty: An Analysis of Behavioral Risk Factor Surveillance System (BRFSS) Data from Iowa*, prepared for Iowa Department of Human Rights.

Colton (2008). *Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2007*, prepared for Coalition to Keep Indiana Warm.

Colton (2008). *Inverted Block Tariffs and Universal Lifeline Rates: Their Use and Usability in Delivering Low-Income Electric Rate Relief*, prepared for Hydro-Quebec.

Colton (2007). *Best Practices: Low-Income Affordability Programs, Articulating and Applying Rating Criteria*, prepared for Hydro-Quebec.

Colton (2007). *An Outcome Evaluation of Indiana's Low-Income Rate Affordability Programs*, performed for Citizens Gas & Coke Utility, Vectren Energy Delivery, Northern Indiana Public Service Company.

Colton (2007). *A Multi-state Study of Low-Income Programs*, in collaboration with Apprise, Inc., prepared for multiple study sponsors.

Colton (2007). *The Law and Economics of Determining Hot Water Energy Use in Calculating Utility Allowances for Public and Assisted Housing*.

Colton (2007). ***Comments of Belmont Housing Trust on Energy Conservation Standards for Residential Furnaces and Boilers***, Belmont Housing Trust (Belmont MA).

Colton (2006). ***Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2006***, prepared for Coalition to Keep Indiana Warm.

Colton (2006). ***Home Energy Affordability in Maryland: Necessary Regulatory and Legislative Actions***, prepared for the Maryland Office of Peoples Counsel.

Colton (2006). ***A Ratepayer Funded Home Energy Affordability Program for Low-Income Households: A Universal Service Program for Ontario's Energy Utilities***, prepared for the Low-Income Energy Network (Toronto).

Colton (2006). ***Georgia REACH Project Energize: Final Program Evaluation***, prepared for the Georgia Department of Human Resources.

Colton (2006). ***Experimental Low-Income Program (ELIP): Empire District Electric Company, Final Program Evaluation***, prepared for Empire District Electric Company.

Colton (2006). ***Municipal Aggregation for Retail Natural Gas and Electric Service: Potentials, Pitfalls and Policy Implications***, prepared for Maryland Office of Peoples Counsel.

Colton (2005). ***Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2005***, prepared for Coalition to Keep Indiana Warm.

Colton (2005). ***Impact Evaluation of NIPSCO Winter Warmth Program***, prepared for Northern Indiana Public Service Company.

Colton (2005). ***A Water Affordability Program for the Detroit Water and Sewer Department***, prepared for Michigan Poverty Law Center.

Colton (2004). ***Paid but Unaffordable: The Consequences of Energy Poverty in Missouri***, prepared for the National Low-Income Home Energy Consortium.

Sheehan and Colton (2004). ***Fair Housing Plan: An Analysis of Impediments and Strategies on How to Address Them: Washington County/Beaverton (OR)***, prepared for Washington County Department of Community Development.

Colton (2004). ***Controlling Tuberculosis in Fulton County (GA) Homeless Shelters: A Needs Assessment***, prepared for the Georgia Department of Human Resources, Division of Public Health.

Colton (2003). ***The Impact of Missouri Gas Energy's Experimental Low-Income Rate (ELIR) On Utility Bill Payments by Low-Income Customers: Preliminary Assessment***, prepared for Missouri Gas Energy.

Colton (2003). ***The Economic Development Impacts of Home Energy Assistance: The Energy States***, prepared for Energy Services, Inc.

Colton (2003). ***Energy Efficiency as an Affordable Housing Tool in Colorado***, prepared for Colorado Energy Assistance Foundation.

Colton (2003). ***The Discriminatory Impact of Conditioning Iowa's Winter Utility Shutoff Protections on the Receipt of LIHEAP***.

Colton (2003). ***The Economic Development Impacts of Home Energy Assistance in Colorado***, Colorado Energy Assistance Foundation.

Colton (2003). *Measuring the Outcomes of Home Energy Assistance through a Home Energy Insecurity Scale*, prepared for the U.S. Department of Health and Human Services, Administration for Children and Families.

Colton (2002). *Low-Income Home Energy Affordability in Maryland*, prepared for Office of Peoples Counsel.

Colton (2002). *Winter Weather Payments: The Impact of Iowa's Winter Utility Shutoff Moratorium On Utility Bill Payments by Low-Income Customer*, prepared for Iowa Department of Human Rights.

Colton (2002). *A Fragile Income: Deferred Payment Plans and the Ability-to-Pay of Working Poor Utility Customers*, prepared for National Fuel Funds Network.

Colton (2002). *Credit where Credit is Due: Public Utilities and the Earned Income Tax Credit for Working Poor Utility Customers*, prepared for National Fuel Funds Network.

Colton (2002). *Payments Problems, Income Status, Weather and Prices: Costs and Savings of a Capped Bill Program*, prepared for WeatherWise.

Colton (2001). *Integrating Government-Funded and Ratepayer-Funded Low-Income Energy Assistance Programs*, prepared for U.S. Department of Health and Human Services (HHS) and Oak Ridge National Laboratory.

Colton (2001). *In Harm's Way: Home Heating, Fire Hazards, and Low-Income Households*, prepared for National Fuel Funds Network.

Colton (2001). *Structuring Low-income Affordability Programs Funded through System Benefits Charges: A Case Study from New Hampshire*, prepared for Oak Ridge National Laboratory.

Colton (2001). *System Benefits Charges: Why All Customer Classes Should Pay*.

Colton (2001). *Reducing Energy Distress: "Seeing RED" Project Evaluation* (evaluation of Iowa REACH project), prepared for Iowa Department of Human Rights.

Colton (2001). *Group Buying of Propane and Fuel Oil in New York State: A Feasibility Study*, prepared for New York State Community Action Association.

Colton (2000). *Establishing Telecommunications Lifeline Eligibility: The Use of Public Benefit Programs and its Impact on Lawful Immigrants*, prepared for Dayton (OH) Legal Aide.

Colton (2000). *Outreach Strategies for Iowa's LIHEAP Program Innovation in Improved Targeting*, prepared for Iowa Department of Human Rights.

Colton (1999). *Integration of LIHEAP with Energy Assistance Programs Created through Electric and/or Natural Gas Restructuring*, prepared for U.S. Department of Health and Human Services, Administration for Children and Families (Nov. 1999).

Colton (1999). *Fair Housing in the Suburbs: The Role of a Merged Fleet Boston in The Diversification of the Suburbs: Report to the Federal Reserve Board Concerning the Merger of BankBoston Corp. and Fleet Financial Group*, prepared for Belmont Fair Housing Committee/Belmont Housing Partnership.

Colton (1999). *Measuring LIHEAP's Results: Responding to Home Energy Unaffordability*, prepared for Iowa Department of Human Resources.

Colton (1999). ***Monitoring the Impact of Electric Restructuring on Low-Income Consumers: The What, How and Why of Data Collection***, prepared for U.S. Department of Health and Human Services, Administration for Children and Families.

Colton (1999). ***Developing Consumer Education Programs in a Restructured Electric Industry***, prepared for Central Missouri Counties Community Development Corporation.

Colton (1999). ***Electric Restructuring and the Low-Income Consumer: Legislative Implications for Colorado***, prepared for Colorado General Assembly.

Colton (1998). ***Low-Income Electric Rate Affordability in Virginia: Funding Low-Income Assistance***, prepared for Virginia Council Against Poverty.

Colton and Alexander (1998). ***The Implications of an Increased Federal Role in the Regulation of Electricity on State Regulation of Consumer Protection and Universal Service Programs***.

R. Colton and S. Colton (1998). ***The Occupational Control of Tuberculosis in Homeless Shelters***, prepared for the U.S. Occupational Safety and Health Administration.

Colton (1998). ***Consumer Aggregation and Sophisticated Purchasing: Electric Restructuring Lessons from the Health Care Industry***.

Colton (1998). ***The Connection Between Affordable Housing and Educational Excellence in Belmont***, prepared for Belmont Fair Housing Committee.

Colton (1998). ***Serving the Affordable Housing Needs of Belmont's Older Residents***, prepared for Belmont Fair Housing Committee.

Colton (1998). ***The Costs of a Universal Service Fund in Minnesota: Electric and Natural Gas***, prepared for the Energy Cents Coalition.

Colton (1998). ***Controlling the Occupational Exposure to Tuberculosis in Homeless Shelters: Applying Federal OSHA Standards to Volunteers***, prepared for the U.S. Occupational Safety and Health Administration.

Colton (1998). ***Natural Gas Prices by Customer Class Pre- and Post-Deregulation: A State-by-State Briefing Guide***.

Colton (1997). ***Public Housing Utility Allowances for the Metro Dade Housing Agency, prepared for Legal Services Corporation of Greater Miami***.

Colton (1997). ***Low-Income Energy Needs in Maryland: An Overview***, prepared for Maryland Office of Peoples Counsel.

Colton (1997). ***Non-Energy Benefits from Low-Income Fuel Assistance***.

Colton (1997). ***Structuring a Public Purpose Distribution Fee for Missouri***, prepared for Missouri Department of Natural Resources.

Colton (1997). ***The Low-Income Interest in Utility Mergers and Acquisitions***.

Colton (1997). ***The Obligation to Serve and a Restructured Electric Industry***, prepared for U.S. Department of Energy, Oak Ridge National Laboratory.

Colton (1997). *Structuring and Evaluating a Direct Vendor Payment Shadow Billing Program for Publicly Assisted Housing in Houston*, prepared under contract to Gulf Coast Legal Foundation (with funding by Houston Lighting Company).

Colton (1997). *The For-Profit Conversion of the New England Education Loan Marketing Corporation: Lessons from Non-Profit Hospital Conversions*.

Colton (1997). *Rental Housing Affordability in Burlington, Vermont: A Report to the Burlington City Council*..

Colton (1997). *Structuring a "Wires Charge" for New Hampshire: A Framework for Administration and Operation*, prepared under contract to the New Hampshire Community Action Association.

Colton (1997). *Electric Industry Restructuring the Regulation of Electric Service Providers: The Role of the Fair Housing Act*.

Colton (1996). *Mountains States Legal Foundation: Leading Light or Flickering Flame?*.

Colton (1996). *Wrong Way Street: Reversing the Subsidy Flowing From Low-Income Customers in a Competitive Electric Industry*.

Colton (1996). *Setting Income Eligibility for Fuel Assistance and Energy Efficiency Programs in a Competitive Electric Industry: The Marginal Impacts of Increasing Household Income*.

Colton (1996). *Fair Housing and Affordable Housing in Belmont, Massachusetts: Data on Availability, Distribution and Quality*.

Colton (1996). *Accounting for Utility Allowances for Heating Costs in Setting LIHEAP Benefits in Washington State*.

Colton (1996). *Determining Household Energy Consumption in Washington State in the Absence of 12 Months of Usage Data*.

Colton (1996). *Allocating Undesignated Utility Allowances to Heat in Washington State Subsidized Housing Units*.

Colton (1996). *The Implications of Minimum and Maximum Benefits in Washington State's LIHEAP Program*.

Colton (1996). *Targeting Impacts of Proposed Washington State LIHEAP Distribution Formula*.

Colton and Sheehan (1996). *Fair Housing Analysis of Impediments Study for Washington County (Oregon)*..

Colton (1996). *Structuring a Low-Income "Wires Charge" for New Jersey*, prepared for Citizens Against Rate Escalation (CARE).

Colton (1996). *Structuring a Low-Income "Wires Charge" for Kentucky*, prepared for Louisville Legal Aide Association.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Iowa*, prepared for Iowa Bureau of Human Resources, Office of Weatherization.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Montana*, prepared for Energy Share of Montana.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Oklahoma*, prepared for Oklahoma State Association of Community Action Agencies.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Ohio*, prepared for Ohio Legal Services Corporation.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Indiana*, prepared for Indiana Citizen Action Campaign.

Colton (1996). *Changing Paradigms for Delivering Energy Efficiency to the Low-Income Consumer by Competitive Utilities: The Need for a Shelter-Based Approach*.

Colton (1996). *Shawmut Bank and Community Reinvestment in Boston: Community Credit Needs and Affordable Housing*.

Colton (1995). *Addressing Residential Collections Problems through the Offer of New Services in a Competitive Electric Industry*.

Colton and Elwood (1995). *Affordable Payment Plans: Can they be Justified?*, prepared for 1995 Affordable Comfort Tutorial.

Colton (1995). *Understanding "Redlining" in a Competitive Electric Utility Industry*.

Colton (1995). *Energy Efficiency as a Credit Enhancement: Public Utilities and the Affordability of First-Time Homeownership*.

Colton (1995). *Competition in the Electric Industry: Assessing the Impacts on Residential, Commercial and Low-Income Customers*, prepared under contract to the National Association of Regulatory Utility Commissioners.

Colton (1995). *Performance-Based Evaluation of Customer Collections in a Competitive Electric Utility Industry*.

Colton (1995). *Poverty Law and Economics: Calculating the Household Budget*, prepared for presentation to National Legal Aid and Defender Association, Substantive Law Training.

Colton (1995). *The Need for Regulation in a Competitive Electric Utility Industry*.

Colton (1995). *Rewriting the Social Compact: A Competitive Electric Industry and its Core Customer*.

Colton (1995). *The Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility, and Childhood Education in Missouri*, prepared for the Missouri Association of Head Start Directors.

Colton (revised 1995). *Models of Low-Income Utility Rates*, prepared under contract to Washington Gas Company.

Colton (1995). *Beyond Social Welfare: Promoting the Earned Income Tax Credit (EITC) as an Economic Development Strategy by Public Utilities*.

Colton (1995). *Should Regulation of Electricity Depend on the Absence of Competition?*

Colton (1995). *Comprehensive Credit and Collection Strategies in a Competitive Electric Utility Industry*, prepared under contract to Hydro-Quebec.

Colton (1995). *Economically Stranded Investment in a Competitive Electric Industry: A Primer for Cities, Consumers and Small Business Advocates*.

Colton (1995). *Funding Minority and Low-Income Energy Efficiency in a Competitive Electric Industry*.

Colton (1995). *Competitive Solicitation as an Integrated Resource Planning Model: Its Competitive Impacts on Small Businesses Serving Low-Income Households*, prepared under contract to the Arkansas State Weatherization

- Colton (1995). *Reviewing Utility Low-Income DSM Programs: A Suggested Framework for Analysis*.
- Colton (1995). *Least-Cost Integrated Resource Planning in Arkansas: The Role of Low-Income Energy Efficiency* prepared under contract to the Arkansas State Weatherization Assistance Program.
- Colton (1995). *Home Energy Assistance Review and Reform in Colorado*, prepared for Colorado Energy Assistance Foundation (CEAF).
- Colton, et al. (1995). *An Assessment of Low-Income Energy Needs in Washington State*. Prepared under contract to the Washington state Department of Community Development.
- Colton (1994). *Addressing Low-Income Inability-to-Pay Utility Bills During the Winter Months On Tribal Lands Served By Electric Co-ops: A Model Tribal Winter Utility Shutoff Regulation* .
- Colton (1994). *An Earned Income Tax Credit Utility Intervention Kit* .
- Colton (1994). *Telecommunications Credit and Collections and Controlling SNET Uncollectibles*, prepared under contract to the Connecticut Office of Consumer Counsel.
- Colton (1994). *Customer Deposit Demands by U.S. West: Reasonable Rationales and the Proper Assessment of Risk*, prepared on behalf of the Staff of the Washington Utilities and Transportation Commission.
- Colton (1994). *Credit and Collection Fees and Low-Income Households: Ensuring Effectiveness and Cost-Effectiveness*, prepared on behalf of the Missouri Office of Public Counsel.
- Colton (1994). *Determining the Cost-Effectiveness of Utility Late Payment Charges*.
- Colton (1994). *Determining the Cost-Effectiveness of Imposing Customer Deposits for Utility Service*.
- Colton (1994). *Weatherization Assistance Program Evaluations: Assessing the Impact on Low-Income Ability-to-Pay*.
- Colton (1994). *DSM Planning in a Restrictive Environment*.
 Part 1: *Why Ramping Down DSM Expenditures Can Be "Pro" DSM*
 Part 2: *Low-Income Opposition to DSM: Ill-Defined and Misguided*
 Part 3: *Low-Income DSM Expenditures as a Non-Resource Acquisition Strategy: The Potential for Niche Marketing*
- Colton (1994). *Loan Guarantees as a Utility Investment in Energy Efficiency for Low-Income Housing*.
- Colton and Sheehan.(1994). *"Linked Deposits" as a Utility Investment in Energy Efficiency for Low-Income Housing*.
- Colton (1994). *Securitizing Utility Avoided Costs: Creating an Energy Efficiency "Product" for Private Investment in WAP*.
- Colton and Sheehan (1994). *Economic Development Utility Rates: Targeting, Justifying, Enforcing*, prepared under contract to Texas ROSE.
- Colton and Sheehan (1993). *Affordable Housing and Section 8 Utility Allowances: An Evaluation and a Proposal for Action*:
 Part I: *Adequacy of Annual Allowances*.
 Part II: *Adequacy of Monthly Allowances*.

Colton (1993). *Methods of Measuring Energy Needs of the Poor: An Introduction*.

Colton and Sheehan (1993). *Identifying Savings Arising From Low-Income Programs*.

Colton (1993). *Low-Income Programs And Their Impact on Reducing Utility Working Capital Allowances*.

Colton, et al. (1993). *Funding Social Services Through Voluntary Contribution Programs: A Proposal for SNET Participation in Funding INFOLINE's Information and Referral Services in Connecticut*. Prepared under contract with United Way of Connecticut.

Colton (1993). *Universal Residential Telephone Service: Needs and Strategies*. Prepared for National Association of State Regulatory Utility Commissioners (NARUC).

Colton et al. (1992). *The Impact of Rising Water and Sewer Rates on the Poor: The Case of Eastern Massachusetts*, prepared for National Consumer Law Center.

Colton. (1994). *Public Utility Credit and Collection Activities: Establishing Standards and Applying them to Low-Income Utility Programs*. Prepared under contract to the national office of the American Association of Retired Persons.

Colton (1992). *Filling the Gaps: Financing Low-Income Energy Assistance in Connecticut*. Prepared under contract to the Connecticut State Department of Human Resources.

Colton and Quinn. (1992). *The Impact on Low-Income People of the Increased Cost for Basic Telephone Service: A Study of Low-income Massachusetts Resident's Telephone Usage Patterns and Their Perceptions of Telephone Service Quality*. Prepared under contract to the Massachusetts Office of the Attorney General.

Colton and Quinn. (1991). *The ABC's of Arrearage Forgiveness*. Prepared with a grant from the Mary Reynolds Babcock Foundation.

Colton and Sable (1991). *A California Advocate's Guide to Telephone Customer Service Issues*. Prepared with funding from the California Telecommunications Education Trust Fund.

Colton and Levinson. (1991). *Poverty and Energy in North Carolina: Combining Public and Private Resources to Solve a Public and Private Problem*. Prepared under contract to the North Carolina General Assembly.

Colton. (1991). *The Percentage of Income Payment Plan in Jefferson County, Kentucky: One Alternative to Distributing LIHEAP Benefits*. Prepared with funds provided by the City of Louisville, Kentucky and the Louisville Community Foundation.

Colton. (1991). *The Energy Assurance Program for Ohio: A Cost-Based Response to Low-Income Energy Problems*. Prepared for Cincinnati Legal Aid Society, Dayton Legal Society, and Cleveland Legal Aid Society.

Colton. (1991). *Utility-Financed Low-Income DSM: Winning for Everybody*. Prepared with funds provided by the Public Welfare Foundation and the Mary Reynolds Babcock Foundation.

Colton (1991). *Percentage of Income Payment Plans as an Alternative Distribution of LIHEAP Benefits: Good Business, Good Government, Good Social Policy*. Prepared under contract to the New England Electric System (NEES).

Colton (1991). *The Forced Mobility of Low-Income Customers: The Indirect Impacts of Shutoffs on Utilities and their Customers*.

Colton (1990). *Controlling Uncollectible Accounts in Pennsylvania: A Blueprint for Action*. Prepared under contract to the Pennsylvania Office of Consumer Advocate.

Colton (1990). *Nonparticipation in Public Benefit Programs: Lessons for Fuel Assistance*.

Colton (1990). *Understanding Why Customers Don't Pay: The Need for Flexible Collection Techniques*. Prepared under contract to the Philadelphia Public Advocate.

Colton (1990). *A Regulatory Response to Low-income Energy Needs in Colorado: A Proposal*. Prepared for the Legal Aid Society of Metro Denver.

Colton (1990). *Determining the Cost-Effectiveness of Utility Credit and Collection Techniques*. Prepared with funds provided by the Mary Reynolds Babcock Foundation.

Colton (1990). *Energy Use and the Poor: The Association of Consumption with Income*.

Colton (1989). *Identifying Consumer Characteristics Which are Important to Determining the Existence of Workable Competition in the Interexchange Telecommunications Industry*. Prepared under contract to the Office of Public Counsel of the Florida Legislature.

Colton (1989). *The Interexchange Telecommunications Industry: Should Regulation Depend on the Absence of Competition*. Prepared under contract to the Office of Public Counsel of the Florida Legislature.

Colton (1989). *Fuel Assistance Alternatives for Utah*. Prepared under contract to the Utah State Energy Office.

Colton (1989). *Losing the Fight in Utah: High Energy Bills and Low-Income Consumers*. Prepared under contract with the Utah State Energy Office.

Colton (1989). *The Denial of Local Telephone Service for Nonpayment of Toll Bills: A Review and Assessment of Regulatory Litigation* (2d ed.).

Colton (1988). *Customer Service Regulations for Residential Telephone Customers in the Post-Divestiture Era: A Study of Michigan Bell Telephone Company*. Prepared under contract to the Michigan Divestiture Research Fund.

Colton (1988). *Low-Income Utility Protections in Maine*. (3 volumes). Prepared under contract to the Maine Public Utilities Commission.

- a. Volume 1: *An Evaluation of Low-Income Utility Protections in Maine: Winter Requests for Disconnect Permission*.
- b. Volume 2: *An Evaluation of Low-Income Utility Protections in Maine: Payment Arrangements for Maine's Electric Utilities*.
- c. Volume 3: *An Evaluation of Low-Income Utility Protections in Maine: Fuel Assistance and Family Crisis Benefits*.

Colton (1988). *The Recapture of Interest on LIHEAP Payments to Unregulated Fuel Vendors: An Evaluation of the 1987 Maine Program*. Prepared with a grant from the Jessie B. Cox Charitable Trust.

Colton (1988). *An Evaluation of the Warwick (Rhode Island) Percentage of Income Payment Plan*. Prepared under contract to the Rhode Island Governor's Office of Energy Assistance.

Colton, Hill & Fox (1986). *The Crisis Continues: Addressing the Energy Plight of Low-Income Pennsylvanians Through Percentage of Income Plans*. Prepared under contract to the Pennsylvania Utility Law Project.

Fisher, Sheehan and Colton (1986). ***Public/Private Enterprise as an Economic Development Strategy for States and Cities***. Prepared under contract to the United States Department of Commerce, Economic Development Administration.

Colton (1985). ***Creative Financing for Local Energy Projects: A Manual for City and County Government in Iowa***. Prepared under contract to the Iowa Energy Policy Council.

Colton (1985). ***The Great Rate Debate: Rate Design for the Omaha Public Power District***. Prepared under contract to the Omaha Public Power District.

Grenier and Colton (1984). ***Utility Conservation Financing Programs for Nebraska's Publicly Owned Utilities: Legal Issues and Considerations***. Prepared under contract to the Nebraska Energy Office.

Colton (1984). ***The Financial Implications to the Utility Industry of Pursuing Energy Management Strategies***. Prepared under contract to the Nebraska Energy Office.

COLTON EXPERIENCE AS EXPERT WITNESS

1988 – PRESENT

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O FirstEnergy Companies (Met Ed, WPP, Penelec, Penn Power)	Office of Consumer Advocate	Not yet assigned	Rate design / customer service / storm communications	Pennsylvania	14
I/M/O Xcel Energy Company	Energy CENTS Coalition	E002/GR-13-868	Rate design / energy conservation	Minnesota	14
I/M/O Peoples Gas Light and Coke Company / North Shore Gas	Office of Attorney General	14-0224 / 14--0225	Rate design / customer service	Illinois	14
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2014-2406274	Rate design / customer service	Pennsylvania	14
I/M/O Duquesne Light Company Rates	Office of Consumer Advocate	R-2013-2372129	Rate design / customer service / storm communications	Pennsylvania	13
I/M/O Duquesne Light Company Universal Service	Office of Consumer Advocate	M-2013-2350946	Low-income program design	Pennsylvania	13
I/M/O Peoples-TWP	Office of Consumer Advocate	P-2013-2355886	Low-income program design / rate design	Pennsylvania	13
I/M/O PECO CAP Shopping Plan	Office of Consumer Advocate	P-2013-2283641	Retail shopping	Pennsylvania	13
I/M/O PECO Universal Service Programs	Office of Consumer Advocate	M-201202290911	Low-income program design	Pennsylvania	13
I/M/O Privacy of Consumer Information	Legal Services Advocacy Project	CI-12-1344	Privacy of SSNs & consumer information	Minnesota	13
I/M/O Atlantic City Electric Company	Division of Rate Counsel	BPU-12121071	Customer service / Storm communications	New Jersey	13
I/M/O Jersey Central Power and Light Company	Division of Rate counsel	BPU-12111052	Customer service / Storm communications	New Jersey	13
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2012-2321748	Universal service	Pennsylvania	13
I/M/O Public Service Company of Colorado Low-income Program Design	Xcel Energy d/b/a PSCO	12A-EG	Low-income program design / cost recovery	Colorado	12

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Philadelphia Water Department.	Philadelphia Public Advocate	No. Docket No.	Customer service	Philadelphia	12
I/M/O PPL Electric Power Corporation	Office of Consumer Advocate	R-2012-2290597	Rate design / low-income programs	Pennsylvania	12
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-2012-2285985	Rate design / low-income programs	Pennsylvania	12
I/M/O Merger of Constellation/Exelon	Office of Peoples Counsel	CASE 9271	Customer Service	Maryland	11
I/M/O Duke Energy Carolinas	North Carolina Justice Center	E-7, SUB-989	Customer service/low-income rates	North Carolina	11
Re. Duke Energy/Progress Energy merger	NC Equal Justice foundation	E-2, SUB 998	Low-income merger impacts	North Carolina	11
Re. Atlantic City Electric Company	Division of Rate Counsel	ER1186469	Customer Service	New Jersey	11
Re. Carmelot Utilities	Office of Attorney General	11-0549	Rate shock	Illinois	11
Re. UGI—Central Penn Gas	Office of Consumer Advocate	R-2010-2214415	Low-income program design/cost recovery	Pennsylvania	11
Re. National Fuel Gas	Office of Consumer Advocate	M-2010-2192210	Low-income program cost recovery	Pennsylvania	11
Re. Philadelphia Gas Works	Office of Consumer Advocate	P-2010-2178610	Program design	Pennsylvania	11
Re. PPL	Office of Consumer Advocate	M-2010-2179796	Low-income program cost recovery	Pennsylvania	11
Re. Columbia Gas Company	Office of Consumer Advocate	R-2010-2215623	Rate design/low-income program cost recovery	Pennsylvania	11
Crowder et al. v. Village of Kauffman	Crowder (plaintiffs)	3:09-CV-02181-M	Section 8 utility allowances	Texas Fed Court	11
I/M/O Peoples Natural Gas Company.	Office of Consumer Advocate	T-2010-220172	Low-income program design/cost recovery	Pennsylvania	11
I/M/O Commonwealth Edison	Office of Attorney General	10-0467	Rate design/revenue requirement	Illinois	10
I/M/O National Grid d/b/a Energy North	NH Legal Assistance	DG-10-017	Rate design/revenue requirement	New Hampshire	10
I/M/O Duquesne Light Company	Office of Consumer Advocate	R-2010-2179522	Low-income program cost recovery	Pennsylvania	10
I/M/O Avista Natural Gas Corporation	The Opportunity Council	UE-100467	Low-income assistance/rate design	Washington	10
I/M/O Manitoba Hydro	Resource Conservation Manitoba (RCM)	CASE NO. 17/10	Low-income program design	Manitoba	10

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O TW Phillips	Office of Consumer Advocate	R-2010-2167797	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Gas Division	Office of Consumer Advocate	R-2010-2161592	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Electric Division	Office of Consumer Advocate	R-2010-2161575	Low-income program cost recovery	Pennsylvania	10
I/M/O PPL Energy	Office of Consumer Advocate	R-2010-2161694	Low-income program cost recovery	Pennsylvania	10
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2009-2149262	Low-income program design/cost recovery	Pennsylvania	10
I/M/O Atlantic City Electric Company	Office of Rate Council	R09080664	Customer service	New Jersey	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2009-2139884	Low-income program cost recovery	Pennsylvania	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocates	R-2009-2097639	Low-income program design	Pennsylvania	10
I/M/O Xcel Energy Company	Xcel Energy Company (PSCo)	085-146G	Low-income program design	Colorado	09
I/M/O Atmos Energy Company	Atmos Energy Company	09AL-507G	Low-income program funding	Colorado	09
I/M/O New Hampshire CORE Energy Efficiency Programs	New Hampshire Legal Assistance	D-09-170	Low-income efficiency funding	New Hampshire	09
I/M/O Public Service Company of New Mexico (electric)	Community Action of New Mexico	08-00273-UT	Rate Design	New Mexico	09
I/M/O UGI Pennsylvania Natural Gas Company (PNG)	Office of Consumer Advocate	R-2008-2079675	Low-income program	Pennsylvania	09
I/M/O UGI Central Penn Gas Company (CPG)	Office of Consumer Advocate	R-2008-2079660	Low-income program	Pennsylvania	09
I/M/O PECO Electric (provider of last resort)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-2008-2029325	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Ohio Consumers' Counsel	08-072-GA-AIR	Rate design	Ohio	08
I/M/O Dominion East Ohio Gas Company	Office of Ohio Consumers' Counsel	07-829-GA-AIR	Rate design	Ohio	08
I/M/O Vectren Energy Delivery Company	Office of Ohio Consumers' Counsel	07-1080-GA-AIR	Rate design	Ohio	08
I/M/O Public Service Company of North Carolina	NC Department of Justice	G-5, SUB 495	Rate design	North Carolina	08
I/M/O Piedmont Natural Gas Company	NC Department of Justice	G-9, SUB 550	Rate design	North Carolina	08

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O National Grid	New Hampshire Legal Assistance	DG-08-009	Low-income rate assistance	New Hampshire	08
I/M/O Empower Maryland	Office of Peoples Counsel	PC-12	Low-income energy efficiency	Maryland	08
I/M/O Duke Energy Carolinas Save-a-Watt Program	NC Equal Justice Foundation	E-7, SUB 831	Low-income energy efficiency	North Carolina	08
I/M/O Zia Natural Gas Company	Community Action New Mexico	08-00036-UT	Low-income/low-use rate design	New Mexico	08
I/M/O Universal Service Fund Support for the Affordability of Local Rural Telecomm Service	Office of Consumer Advocate	I-0004010	Telecomm service affordability	Pennsylvania	08
I/M/O Philadelphia Water Department	Public Advocate	No Docket No.	Credit and Collections	Philadelphia	08
I/M/O Portland General Electric Company	Community Action--Oregon	UE-197	General rate case	Oregon	08
I/M/O Philadelphia Electric Company (electric)	Office of Consumer Advocate	M-00061945	Low-income program	Pennsylvania	08
I/M/O Philadelphia Electric Company (gas)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2008-2011621	Low-income program	Pennsylvania	08
I/M/O Public Service Company of New Mexico	Community Action New Mexico	08-00092-UT	Fuel adjustment clause	New Mexico	08
I/M/O Petition of Direct Energy for Low-Income Aggregation	Office of Peoples Counsel	CASE 9117	Low-income electricity aggregation	Maryland	07
I/M/O Office of Consumer Advocate et al. v. Verizon and Verizon North	Office of Consumer Advocate	C-20077197	Lifeline telecommunications rates	Pennsylvania	07
I/M/O Pennsylvania Power Company	Office of Consumer Advocate	P-00072437	Low-income program	Pennsylvania	07
I/M/O National Fuel Gas Distribution Corporation	Office of Consumer Advocate	M-00072019	Low-income program	Pennsylvania	07
I/M/O Public Service of New Mexico--Electric	Community Action New Mexico	07-00077-UT	Low-income programs	New Mexico	07
I/M/O Citizens Gas/NIPSCO/Vectren for Universal Service Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	CASE 43077	Low-income program design	Indiana	07
I/M/O PPL Electric	Office of Consumer Advocate	R-00072155	Low-income program	Pennsylvania	07
I/M/O Section 15 Challenge to NSPI Rates	Energy Affordability Coalition	P-886	Discrimination in utility regulation	Nova Scotia	07

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-00049157	Low-income and residential collections	Pennsylvania	07
I/M/O Equitable Gas Company	Office of Consumer Advocate	M-00061959	Low-income program	Pennsylvania	07
I/M/O Public Service Company of New Mexico	Community Action of New Mexico	Case No. 06-000210-UT	Late charges / winter moratorium / decoupling	New Mexico	06
I/M/O Verizon Massachusetts	ABCD	Case NO. DTE 06-26	Late charges	Massachusetts	06
I/M/O Section 11 Proceeding, Energy Restructuring	Office of Peoples Counsel	PC9074	Low-income needs and responses	Maryland	06
I/M/O Citizens Gas/NIPSCO/Vectren for Univ. Svc. Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	Case No. 43077	Low-income program design	Indiana	06
I/M/O Public Service Co. of North Carolina	North Carolina Attorney General/Dept. of Justice	G-5, Sub 481	Low-income energy usage	North Carolina	06
I/M/O Electric Assistance Program	New Hampshire Legal Assistance	DE 06-079	Electric low-income program design	New Hampshire	06
I/M/O Verizon Petition for Alternative Regulation	New Hampshire Legal Assistance	DM-06-072	Basic local telephone service	New Hampshire	06
I/M/O Pennsylvania Electric Co./Metropolitan Edison Co.	Office of Consumer Advocate	N/A	Universal service cost recovery	Pennsylvania	06
I/M/O Duquesne Light Company	Office of Consumer Advocates	R-00061346	Universal service cost recovery	Pennsylvania	06
I/M/O Natural Gas DSM Planning	Low-Income Energy Network	EB-2006-0021	Low-income gas DSM program.	Ontario	06
I/M/O Union Gas Co.	Action Centre for Tenants Ontario (ACTO)	EB-2005-0520	Low-income program design	Ontario	06
I/M/O Public Service of New Mexico merchant plant	Community Action New Mexico	05-00275-UT	Low-income energy usage	New Mexico	06
I/M/O Customer Assistance Program design and cost recovery	Office of Consumer Advocate	M-00051923	Low-income program design	Pennsylvania	06
I/M/O NIPSCO Proposal to Extend Winter Warmth Program	Northern Indiana Public Service Company	Case 42927	Low-income energy program evaluation	Indiana	05
I/M/O Piedmont Natural Gas	North Carolina Attorney General/Dept. of Justice	G-9, Sub 499	Low-income energy usage	North Carolina	05
I/M/O PSEG merger with Exelon Corp.	Division of Ratepayer Advocate	EM05020106	Low-income issues	New Jersey	05

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Re. Philadelphia Water Department	Public Advocate	No docket number	Water collection factors	Philadelphia	05
I/M/O statewide natural gas universal service program	New Hampshire Legal Assistance	N/A	Universal service	New Hampshire	05
I/M/O Sub-metering requirements for residential rental properties	Tenants Advocacy Centre of Ontario	EB-2005-0252	Sub-metering consumer protections	Ontario	05
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00049656	Universal service	Pennsylvania	05
I/M/O Nova Scotia Power, Inc.	Dalhousie Legal Aid Service	NSUAR-P-881	Universal service	Nova Scotia	04
I/M/O Lifeline Telephone Service	National Ass'n State Consumer Advocates (NASUCA)	W/C 03-109	Lifeline rate eligibility	FCC	04
Mackay v. Verizon North	Office of Consumer Advocate	C20042544	Lifeline rates—vertical services	Pennsylvania	04
I/M/O PECO Energy	Office of Consumer Advocate	N/A	Low-income rates	Pennsylvania	04
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P00042090	Credit and collections	Pennsylvania	04
I/M/O Citizens Gas & Coke/Vectren	Citizens Action Coalition of Indiana	Case 42590	Universal service	Indiana	04
I/M/O PPL Electric Corporation	Office of Consumer Advocate	R00049255	Universal service	Pennsylvania	04
I/M/O Consumers New Jersey Water Company	Division of Ratepayer Advocate	N/A	Low-income water rate	New Jersey	04
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8982	Low-income gas rate	Maryland	04
I/M/O National Fuel Gas	Office of Consumer Advocate	R-00038168	Low-income program design	Pennsylvania	03
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8959	Low-income gas rate	Maryland	03
Golden v. City of Columbus	Helen Golden	C2-01-710	ECOAs disparate impacts	Ohio	02
Huegel v. City of Easton	Phyllis Huegel	00-CV-5077	Credit and collection	Pennsylvania	02
I/M/O Universal Service Fund	Public Utility Commission staff	N/A	Universal service funding	New Hampshire	02
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	M-00021612	Universal service	Pennsylvania	02
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8920	Rate design	Maryland	02

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Consumers Illinois Water Company	Illinois Citizens Utility Board	02-155	Credit and collection	Illinois	02
I/M/O Public Service Electric & Gas Rates	Division of Ratepayer Advocate	GR01050328	Universal service	New Jersey	01
I/M/O Pennsylvania-American Water Company	Office of Consumer Advocate	R-00016339	Low-income rates and water conservation	Pennsylvania	01
I/M/O Louisville Gas & Electric Prepayment Meters	Kentucky Community Action Association	200-548	Low-income energy	Kentucky	01
I/M/O NICOR Budget Billing Plan Interest Charge	Cook County State's Attorney	01-0175	Rate Design	Illinois	01
I/M/O Rules Re. Payment Plans for High Natural Gas Prices	Cook County State's Attorney	01-0789	Budget Billing Plans	Illinois	01
I/M/O Philadelphia Water Department	Office of Public Advocate	No docket number	Credit and collections	Philadelphia	01
I/M/O Missouri Gas Energy	Office of Peoples Counsel	GR-2001-292	Low-income rate relief	Missouri	01
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Division of Ratepayer Advocate	T001020095	Telecommunications universal service	New Jersey	01
I/M/O Energy Merger	Low-income Intervenor	2000-UA925	Consumer protections	Mississippi	01
I/M/O T.W. Phillips Gas and Oil Co.	Office of Consumer Advocate	R00994790	Rate-making of universal service costs.	Pennsylvania	00
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-00994782	Rate-making of universal service costs.	Pennsylvania	00
I/M/O UGI Gas Company	Office of Consumer Advocate	R-00994786	Rate-making of universal service costs.	Pennsylvania	00
I/M/O PFG Gas Company	Office of Consumer Advocate	R00994788	Rate-making of universal service costs.	Pennsylvania	00
Armstrong v. Gallia Metropolitan Housing Authority	Equal Justice Foundation	2:98-CV-373	Public housing utility allowances	Ohio	00
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Division of Ratepayer Advocate	T099120934	Telecommunications universal service	New Jersey	00
I/M/O Universal Service Fund for Gas and Electric Utilities	Division of Ratepayer Advocate	EX00200091	Design and funding of low-income programs	New Jersey	00
I/M/O Consolidated Edison Merger with Northeast Utilities	Save Our Homes Organization	DE 00-009	Merger impacts on low-income	New Hampshire	00
I/M/O UtilCorp Merger with St. Joseph Light & Power	Missouri Dept. of Natural Resources	EM2000-292	Merger impacts on low-income	Missouri	00
I/M/O UtilCorp Merger with Empire District Electric	Missouri Dept. of Natural Resources	EM2000-369	Merger impacts on low-income	Missouri	00

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
	Resources				
I/M/O PacifiCorp	The Opportunity Council	UE-991832	Low-income energy affordability	Washington	00
I/M/O Public Service Co. of Colorado	Colorado Energy Assistance Foundation	99S-609G	Natural gas rate design	Colorado	00
I/M/O Avista Energy Corp.	Spokane Neighborhood Action Program	UE9911606	Low-income energy affordability	Washington	00
I/M/O TW Phillips Energy Co.	Office of Consumer Advocate	R-00994790	Universal service	Pennsylvania	00
I/M/O PECO Energy Company	Office of Consumer Advocate	R-00994787	Universal service	Pennsylvania	00
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00994785	Universal service	Pennsylvania	00
I/M/O PFG Gas Company/Northern Penn Gas	Office of Consumer Advocate	R-00005277	Universal service	Pennsylvania	00
I/M/O UGI Energy Company	Office of Consumer Advocate	R-00994786	Universal service	Pennsylvania	00
Re. PSCO/NSP Merger	Colorado Energy Assistance Foundation	99A-377EG	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Office of Consumer Advocate	R-00994782	Universal service	Pennsylvania	99
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-00994781	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Office of Consumer Advocate	R-00994783	Universal service	Pennsylvania	99
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-00994784	Universal service	Pennsylvania	99
Alleruzzo v. Klarckek	Barlow Alleruzzo	N/A	Mobile home fees and sales	Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Division of Ratepayer Advocate	GO99030123	Universal service	New Jersey	99
I/M/O Bell Atlantic Local Competition	Public Utility Law Project	P-00991648	Lifeline telecommunications rates	Pennsylvania	99
I/M/O Merger Application for SBC and Ameritech Ohio	Edgemont Neighborhood Association	N/A	Merger impacts on low-income consumers	Ohio	98 - 99
Davis v. American General Finance	Thomas Davis	N/A	Damages in "loan flipping" case	Ohio	98 - 99

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Griffin v. Associates Financial Service Corp.	Earlie Griffin	N/A	Damages in "loan flipping" case	Ohio	98 - 99
I/M/O Baltimore Gas and Electric Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8794	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Delmarva Power and Light Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8795	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Electric Power Co. Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8796	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Edison Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8797	Consumer protection/basic generation service	Maryland	98 - 99
VMHOA v. LaPierre	Vermont Mobile Home Owners Association	N/A	Mobile home tying	Vermont	98
Re. Restructuring Plan of Virginia Electric Power	VMH Energy Services, Inc.	PUE960296	Consumer protection/basic generation service	Virginia	98
Mackey v. Spring Lake Mobile Home Estates	Timothy Mackey	N/A	Mobile home fees	State ct: Illinois	98
Re. Restructuring Plan of Atlantic City Electric	New Jersey Division of Ratepayer Advocate	E097070457	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Jersey Central Power & Light	New Jersey Division of Ratepayer Advocate	E097070466	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Public Service Electric & Gas	New Jersey Division of Ratepayer Advocate	E097070463	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Rockland Electric	New Jersey Division of Ratepayer Advocate	E09707466	Low-income issues	New Jersey	97-98
Appleby v. Metropolitan Dade County Housing Agency	Legal Services of Greater Miami	N/A	HUD utility allowances	Fed. court: So. Florida	97 - 98
Re. Restructuring Plan of PECO Energy Company	Energy Coordinating Agency of Philadelphia	R-00973953	Universal service	Pennsylvania	97
Re. IES Industries Merger	Iowa Community Action	SPU-96-6	Low-income issues	Iowa	97

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
	Association				
Re. New Hampshire Electric Restructuring	NH Comm. Action Ass'n	N/A	Wires charge	New Hampshire	97
Re. Merger of Atlantic City Electric and Connecticut	Division of Ratepayer Advocate	EM97020103	Low-income	New Jersey	97
Re. Connecticut Power and Light	City of Hartford	92-11-11	Low-income	Connecticut	97
Re. Comprehensive Review of RI Telecomm Industry	Consumer Intervenor	1997	Consumer protections	Rhode Island	97
Re. Natural Gas Competition in Wisconsin	Wisconsin Community Action Association	N/A	Universal service	Wisconsin	96
Re. Baltimore Gas and Electric Merger	Maryland Office of Peoples Counsel	CASE NO. 8725	Low-income issues	Maryland	96
Re. Northern States Power Merger	Energy Cents Coalition	E-002/PA-95-500	Low-income issues	Minnesota	96
Re. Public Service Co. of Colorado Merger	Colorado Energy Assistance Foundation	N/A	Low-income issues	Colorado	96
Re. Massachusetts Restructuring Regulations	Fisher, Sheehan & Colton	DPU-96-100	Low-income issues/energy efficiency	Massachusetts	96
I/M/O PGW FY1996 Tariff Revisions	Philadelphia Public Advocate	No Docket No.	Credit and collection / customer service	Philadelphia	96
Re. FERC Merger Guidelines	National Coalition of Low-Income Groups	RM-96-6-000	Low-income interests in mergers	Washington D.C.	96
Re. Joseph Keilikuli III	Joseph Keilikuli III	N/A	Damages from lack of homestead	Honolulu	96
Re. Theresa Mahaulu	Theresa Mahaulu	N/A	Damages from lack of homestead	Honolulu	95
Re. Joseph Ching, Sr.	Re. Joseph Ching, Sr.	N/A	Damages from lack of homestead	Honolulu	95
Joseph Keaulana, Jr.	Joseph Keaulana, Jr.	N/A	Damages from lack of homestead	Honolulu	95
Re. Utility Allowances for Section 8 Housing	National Coalition of Low-Income Groups	N/A	Fair Market Rent Setting	Washington D.C.	95

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Re. PGW Customer Service Tariff Revisions	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Customer Responsibility Program	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	95
Re. Houston Lighting and Power Co.	Gulf Coast Legal Services	12065	Low-income Rates	Texas	95
I/M/O Petition to Stay PGW's Suspension of CRP customers who did Not Assign LIHEAP Grant to PGW	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	95
Re. PGW Tariff Changes, Programs and Information Systems	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Request for Modification of Winter Moratorium	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Dept of Hawaii Homelands Trust Homestead Production	Native Hawaiian Legal Corporation	N/A	Prudence of trust management	Honolulu	94
Re. SNET Request for Modified Shutoff Procedures	Office of Consumer Counsel	94-06-73	Credit and collection	Connecticut	94
Re. Central Light and Power Co.	United Farm Workers	128280	Low-income rates/DSM	Texas	94
Blackwell v. Philadelphia Electric Co.	Gloria Blackwell	N/A	Role of shutoff regulations	Penn. courts	94
U.S. West Request for Waiver of Rules	Wash. Util. & Transp. Comm'n Staff	UT-930482	Telecommunications regulation	Washington	94
Re. U.S. West Request for Full Toll Denial	Colorado Office of Consumer Counsel	93A-6113	Telecommunications regulation	Colorado	94
Washington Gas Light Company	Community Family Life Services	Case 934	Low-income rates & energy efficiency	Washington D.C.	94
Clark v. Peterborough Electric Utility	Peterborough Community Legal Centre	6900/91	Discrimination of tenant deposits	Ontario, Canada	94
Dorsey v. Housing Auth. of Baltimore	Baltimore Legal Aide	N/A	Public housing utility allowances	Federal district court	93
Penn Bell Telephone Co.	Penn. Utility Law Project	P00930715	Low-income phone rates	Pennsylvania	93
Philadelphia Gas Works	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	93
Central Maine Power Co.	Maine Assn Ind. Neighborhoods	Docket No. 91-151-C	Low-income rates	Maine	92

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
New England Telephone Company	Mass Attorney General	92-100	Low-income phone rates	Massachusetts	92
Philadelphia Gas Works	Philadelphia Public Advocate	No Docket No.	Low-income DSM	Philadelphia	92
Philadelphia Water Dept.	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	92
Public Service Co. of Colorado	Land and Water Fund	91A-783EG	Low-income DSM	Colorado	92
Sierra Pacific Power Co.	Washoe Legal Services	N/A	Low-income DSM	Nevada	92
Consumers Power Co.	Michigan Legal Services	No Docket No.	Low-income rates	Michigan	92
Columbia Gas	Office of Consumer Advocate (OCA)	R9013873	Energy Assurance Program	Pennsylvania	91
Mass. Elec. Co.	Mass Elec Co.	N/A	Percentage of Income Plan	Massachusetts	91
AT&T	TURN	90-07-5015	Inter-LATA competition	California	91
Generic Investigation into Uncollectibles	Office of Consumer Advocate	I-900002	Controlling uncollectibles	Pennsylvania	91
Union Heat Light & Power	Kentucky Legal Services (KLS)	90-041	Energy Assurance Program	Kentucky	90
Philadelphia Water	Philadelphia Public Advocate (PPA)	No Docket No.	Controlling accounts receivable	Philadelphia	90
Philadelphia Gas Works	PPA	No Docket No.	Controlling accounts receivable	Philadelphia	90
Mississippi Power Co.	Southeast Mississippi Legal Services Corp.	90-UN-0287	Formula ratemaking	Mississippi	90
West Kentucky Gas	KLS	90-013	Energy Assurance Program	Kentucky	90
Philadelphia Electric Co.	PPA	N/A	Low-income rate program	Philadelphia	90
Montana Power Co.	Montana Ass'n of Human Res. Council Directors	N/A	Low-income rate proposals	Montana	90
Columbia Gas Co.	Office of Consumer Advocate	R-891468	Energy Assurance Program	Pennsylvania	90
Philadelphia Gas Works	PPA	No Docket No.	Energy Assurance Program	Philadelphia	89

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Southwestern Bell Telephone Co.	SEMLSC	NF-89749	Formula ratemaking	Mississippi	90
Generic Investigation into Low-income Programs	Vermont State Department of Public Service	Case No. 5308	Low-income rate proposals	Vermont	89
Generic Investigation into Demand Side Management Measures	Vermont DPS	N/A	Low-income conservation programs	Vermont	89
National Fuel Gas	Office of Consumer Advocate	N/A	Low-income fuel funds	Pennsylvania	89
Montana Power Co.	Human Resource Develop. Council District XI	N/A	Low-income conservation	Montana	88
Washington Water Power Co.	Idaho Legal Service Corp.	N/A	Rate base, rate design, cost-allocations	Idaho	88

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission : Docket No. R-2014-2428743
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Pennsylvania Electric Company :

VERIFICATION

I, Roger D. Colton, hereby state that the facts above set forth in my Direct Testimony (OCA Statement No. 4), are true and correct and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Signature: 

 Roger D. Colton

Consultant Address: 34 Warwick Road, Belmont, MA 02478

DATED: 11/24/14
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