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OCA STATEMENT 6

Phila. 10/14, 15/16/97
B. Hollenbeck

**COMMONWEALTH OF PENNSYLVANIA
PUBLIC UTILITY COMMISSION**

Application of:

**PECO ENERGY COMPANY
FOR APPROVAL OF ITS RESTRUCTURING
PLAN UNDER SECTION 2806 OF THE
PUBLIC UTILITY CODE**

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Docket No. R 00973953

DIRECT TESTIMONY AND EXHIBITS OF

NANCY BROCKWAY

CONCERNING UNIVERSAL SERVICE ISSUES

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Prepared for

Pennsylvania Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, PA

June 1997

INTRODUCTION

1 Q. PLEASE STATE YOUR NAME AND ADDRESS.

2 A. My name is Nancy Brockway. My business address is Suite 400, 18 Tremont
3 Street, Boston, MA.

4 Q. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?

5 A. I am testifying on behalf of the Pennsylvania Office of Consumer Advocate.

6 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

7 A. The purpose of my testimony is to recommend a Universal Service program for
8 PECO Energy Company's restructuring plan. The components of my testimony are
9 more specifically described below.

10 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS..

11 A. I am an attorney and utility analyst with over 20 years of experience in the fields of
12 poverty issues, public utility regulation, low-income affordability programs, and low-
13 income conservation. I have been employed by the National Consumer Law Center
14 since 1991. In this capacity, I have testified numerous times on issues related to
15 universal service, including specifically low-income bill affordability programs and
16 usage reduction programs. I am invited frequently to speak to national and regional
17 forums on universal service issues, and have written extensively on electric industry
18 restructuring and low-income electric consumers. I am the primary author of

1 Collegiate Dictionary)(emphasis supplied). Thus, the goal of a universal service
2 program is that service be extended to every household, regardless of income.

3 The word "service" should also be considered in light of its ordinary meaning.
4 The legislature did not qualify the types of services as to which it intended low-
5 income Pennsylvania families to have universal access. Thus, we should
6 understand the concept to refer to the kinds of electricity services the average
7 household receives. Today, PECO Energy offers single phase, 60 mHz, alternating
8 current, delivered to the home on an all-requirements basis, with certain standards
9 for distribution reliability, billing based on energy measured by monthly kWh
10 meters, and associated customer services. This basic energy and delivery service
11 (with its implicit capacity commitment) is the core of the service definition, and
12 should be the basic service to which all Pennsylvania households have affordable
13 access.

14 In Pennsylvania, the General Assembly has specifically defined universal
15 service to include services "that help low-income customers to maintain electric
16 service." 66 Pa.C.S. § 2803, 2804(9). These services may include a Customer
17 Assistance Program (CAP) and Low Income Usage Reduction Program (LIURP).
18 The Electric Generation Customer Choice and Competition Act states as a
19 declaration of policy that:

20 The public purpose is to be promoted by continuing universal service and
21 energy conservation policies, protections and services...
22 66 Pa.C.S. §2802(17).

23
24 To carry out this public purpose, the General Assembly declared that:

1 The Commonwealth must, *at a minimum*, continue the protections, policies,
2 and services that now assist customers who are low-income to afford electric
3 services.

4 66 Pa.C.S. §2802(10)(emphasis supplied).
5
6
7

8 **Q. WHAT ARE THE KEY BARRIERS TO ACHIEVING UNIVERSAL SERVICE?**

9
10 A. As the legislature has indicated, by its choice of universal service program features,
11 the primary barrier to achieving universal service is the inability of households of
12 low income to afford their essential electricity service. As Pennsylvania moves from
13 a monopoly structure for its electricity system to a mixed system, with competitive
14 provision of electric energy and capacity, additional factors will come to the fore as
15 determinants of access to service. Electricity vendors will have greater choice of
16 customers than the monopoly utilities have had up until now. Vendors are likely to
17 be reluctant to supply customers whom they perceive to pose greater risks or
18 present fewer profit opportunities than other customers.

19 Some of this reluctance is rational, as in the case of customers who use little
20 electricity. In that example, the cost of marketing to such a customer and handling
21 the account may be high relative to the profits possible, given the thin margins
22 expected from energy sales in the future. In other cases, the reluctance is
23 irrational, as in the case of racial or ethnic bias. In either case, customers sharing
24 the perceived risk factor will have a more difficult time securing energy supplies on
25 reasonable terms and conditions.

1 Inability to navigate the more complicated waters of electricity choice may
2 be an additional barrier to universal service under competition. Ignorance, fear,
3 confusion, lack of education, lack of simple bases for comparison, high information
4 costs relative to low or unclear benefits, and other factors, can contribute to a
5 failure of many customers to be able to do meaningful comparison shopping. To
6 the extent this results in at-risk customers purchasing energy that is more
7 expensive than need be, the extra cost will put additional pressure on low-income
8 families seeking basic electricity service.

9 **Q. WHAT ARE THE MAJOR TOOLS FOR ACHIEVING UNIVERSAL SERVICE?**

10 B. The major tools for achieving universal service include the following:

- 11 1. Low-Income bill assistance.
- 12 2. Low Income Usage Reduction
- 13 3. Strong customer service (credit, billing and termination) protections.
- 14 4. Effective, low-cost suppliers of last resort, or default, service.
- 15 5. Effective competition for supply sales, particularly in the residential
16 class.
- 17 6. Consumer education.
- 18 7. Low residential rates, including "standard offer" and default service.

19 In addition, utilities have traditionally offered voluntary services, such as LIHEAP
20 outreach, stockholder contributions to fuel funds, and CARES (counseling and referral
21 services). These programs and services help at-risk customers secure resources to pay

1 their bills, and identify options to prevent termination. They will continue to be useful in
2 these ways under a competitive system.

3 **Q. DO THESE TOOLS ALL ADDRESS THE SAME BARRIERS TO UNIVERSAL**
4 **SERVICE?**

5 No. For example, enforcement of anti-discrimination laws and of the credit and
6 termination provisions of Chapter 56, together with the provision of reasonably priced
7 default service, are tools for overcoming the "perceived-risk" barriers to universal service
8 under a competitive regime. Reasonable residential rates, together with low-income
9 targeted CAP and LIURP are the major tools for addressing the unaffordability barrier to
10 universal service. My testimony will focus on the issue of unaffordability. It is my
11 understanding that other OCA witnesses will address some of the other more generic
12 universal service concerns.

13 **Q. PLEASE COMPARE THE GOALS OF A UNIVERSAL SERVICE PROGRAM AND**
14 **THE GOALS OF THE CAP AND LIURP PROGRAMS RUN BY UTILITIES UNDER**
15 **COMMISSION GUIDANCE IN THE PAST**

16 A. CAP and LIURP are each programs that have developed historically to serve a
17 specific set of purposes under traditional regulation. In large part, CAP grew out
18 of the concerns of the Commission and some utilities about the growing level of
19 uncollectible accounts, and the need to determine if there were a more cost-
20 effective way to manage credit and collection activities, especially in relation to low-
21 income payment-troubled households. LIURP has shared this emphasis on credit
22 and collection cost reduction, but has had the added objective of managing energy

1 use wisely. The Commission has also recently noted the broader societal benefits
2 of LIURP, including improved community relations for utilities, economic
3 development, improving the condition of Pennsylvania's housing stock, and several
4 worthwhile benefits from the perspective of low-income customers.

5 These purposes are consistent with the objective of universal service.
6 Indeed, the reduced threats of disconnection and greater sense of mastery over
7 high utility bills are benefits from a CAP program whether its purpose is to achieve
8 universal service or to lower uncollectible costs. Similarly, LIURP expenditures
9 produce improved comfort levels, safer living conditions, more moderate and
10 manageable utility bills, and increased availability of affordable housing, whether
11 they are made to reduce uncollectible costs or to achieve universal service.

12 **Q. PLEASE EXPLAIN THE RELATIONSHIP BETWEEN THE TOOLS USED IN A**
13 **UNIVERSAL SERVICE PROGRAM, AND THE HISTORIC COMPONENTS OF CAP**
14 **AND LIURP PROGRAMS.**

15 A. A universal service program will likely use the same tools as CAP and LIURP,
16 because in each case one objective is to lower the bill of the customer to an
17 affordable level. CAP and LIURP promote this goal to achieve more cost-effective
18 credit and collections activities, and to ensure wise energy use. The broader
19 universal service goal will also concentrate on affordability, and as a tool to
20 enabling all residential households to afford access to essential electric service.
21 In the process, payment patterns are improved, energy is used wisely, and

1 resources of different kinds are more efficiently used, and these are welcome
2 benefits.

3 **Q. HOW SHOULD SUCCESS BE DETERMINED IN A UNIVERSAL SERVICE**
4 **PROGRAM?**

5 A. The measure of success of a universal service program is the extent to which low-
6 income households are not denied service, offered service only on unreasonable
7 terms or conditions, threatened with loss of service, or disconnected from service,
8 on account of lack of income. These results should be achieved in the most cost-
9 effective way possible, achieving the maximum savings in credit and collection
10 costs, as well as resource costs.

11
12 **PART II - CUSTOMER ASSISTANCE PROGRAM ISSUES**

13 **Q. PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.**

14 A. This section of my testimony covers the following topics:

- 15 1. The purpose of the Customer Assistance Program component of a
16 universal service program.
- 17 2. The associated design parameters of a successful CAP.
- 18 3. The budget requirements of a successful CAP in the PECO Energy
19 service area.
- 20 4. The extent to which PECO Energy's proposed CAP meets the design
21 requirements and budget requirements of a successful CAP.

1 5. Recommendations for improvements in PECO Energy's CAP
2 program.

3 **Q. WHAT IS THE PURPOSE OF THE CUSTOMER ASSISTANCE PROGRAM**
4 **COMPONENT OF A UNIVERSAL SERVICE PROGRAM?**

5 A. The primary purpose of the CAP component of a universal service program is to
6 lower the bills of income-limited residential households to the point where the
7 burden the bill places on the household budget is affordable. An important related
8 purpose of CAP is to enable credit and collection costs to be reduced or
9 reprogrammed into more productive uses.

10 **Q. WHAT KIND OF CUSTOMER ASSISTANCE PROGRAM WILL BEST ACHIEVE**
11 **THE AFFORDABLE BURDEN OBJECTIVE OF UNIVERSAL SERVICE?**

12 A. In my opinion, some form of percentage of income payment program (PIPP) will
13 best achieve the universal service objective of reducing the burden of electricity
14 bills for low-income customers to an affordable level. PIPPs by definition seek to
15 reduce energy burdens to a target percentage of the customer's income. To the
16 extent the program is designed to reduce the burden to an affordable percentage
17 of income, the customer should, under ordinary circumstances, be able to afford to
18 make current, timely and complete payments of their copayment responsibilities.

19 **Q. IS THERE ONLY ONE FORM OF PIPP THAT CAN ACHIEVE UNIVERSAL**
20 **SERVICE GOALS?**

21 A. No. There are a number of forms of Percentage of Income Payment Plan, and all
22 can be effective in achieving universal service goals. In fact, PIPPs per se are not

1 the only forms of bill assistance that can be useful in pursuing universal service
2 goals. Low-income rates, such as National Fuel Gas' Low Income Rate (marginal-
3 cost based rate) can be effective in bringing low-income customers' bills closer to
4 affordable levels. However, the less a CAP builds a percentage of income focus
5 into its design, the less effective, and cost-effective, it is likely to be. Also, there are
6 some program design elements that will likely work against the overall goal of
7 universal service.

8 **Q. PLEASE LIST THE NECESSARY ELEMENTS OF A SUCCESSFUL UNIVERSAL**
9 **SERVICE CAP COMPONENT.**

10 A. A CAP program that effectively promotes the goal of universal service should
11 contain the following elements:

- 12 1. A copayment calculated to require only what is affordable, e.g. 5%
13 of income from general use customers, and 8% of income from
14 primary electric heating customers.
- 15 2. Optimal use of low-income community-based organizations for
16 outreach, intake, and service delivery.
- 17 3. Responsiveness to, and interaction with, participants in the CAP,
18 particularly during the first year of any given program.
- 19 4. Reasonable efforts to achieve a 50% participation rate of the eligible
20 low-income households.
- 21 5. Overall CAP billing deficiency budget sufficient to meet the need.

- 1 6. Eligibility generally limited to customers with incomes at or below
- 2 150% of the Federal Poverty Guidelines.
- 3 7. Targeted program offering and program to payment-troubled
- 4 households among the eligible population.
- 5 8. Coordination with effective LIURP services to achieve potential usage
- 6 (and related bill) reduction via persistent savings measures.
- 7 9. Benefits available regardless of the supplier of generation to the
- 8 customer.
- 9 10. Incentives for customers to maintain on-time, full payments of their
- 10 copayment obligations.
- 11 11. Advisory input from key stakeholders on an ongoing and effective
- 12 basis.
- 13 12. Coordination and cooperation with stakeholders in other service
- 14 areas, to achieve cross-fertilization of design concepts and evaluation
- 15 material, and efficiencies in service delivery.
- 16 13. Periodic evaluation against the goals of universal service
- 17

18 **Q. DOES PECO'S CUSTOMER ASSISTANCE PROGRAM MEET THESE CRITERIA?**

19 **A.** Only in part. PECO's CAP and CAP-Rate programs meet some of these criteria,
20 but not all. PECO's CAP program certainly is the most substantially developed of
21 any Pennsylvania electric utility. But there is room for improvement.

1 Q. **GENERALLY, WHAT IMPROVEMENTS DO YOU RECOMMEND TO PECO'S CAP**
2 **PROGRAM?**

3 A. PECO's CAP component needs to be improved by (a) bringing the copayment into
4 line with a more affordable upper limit, (b) improving the level of interaction with
5 individual CAP applicants and enrollees, and (c) expanding the enrollment to
6 include a larger percentage of at-risk, eligible customers. In addition, PECO must
7 complete its evaluation of the current CAP Rate Program (sometimes referred to as
8 "CAP II") as expeditiously as possible, to help determine the appropriate direction
9 and scope of CAP efforts in the future. Finally, once PECO has made the changes
10 I recommend in the way the program interacts with participants and the community,
11 PECO should commission an independent impact evaluation of the CAP I design,
12 using the "top down" method of determining program avoided costs. This
13 evaluation would then be used to help the Company and the Commission determine
14 the appropriate rate of expansion of the program.

15 Q. **PLEASE DISCUSS THE IMPORTANCE OF THE AFFORDABLE BURDEN**
16 **ASPECT OF A RECOMMENDED UNIVERSAL SERVICE CAP PROGRAM.**

17 A. The essential concept of the percentage of income approach to bill affordability is
18 the reduction of a customer's actual bill to an amount that represents an affordable
19 percentage of the household income. Regardless of the rate design or CAP
20 program design, translating the impact of the effective bill into the burden that bill
21 presents as a percentage of the household income permits a fair scaling of the

1 relative difficulty of making timely and complete payments, depending on the
2 income (and household size) of a family.

3 Today, the median income household in the PECO service area spends
4 about 2.4% of its income on electricity in the case of a general use customer, and
5 4.6% in the case of a customer who heats with electricity. By contrast, very low-
6 income families without electric space heat spend as much as 30% of their income
7 on electricity, and those with space heat can spend over 50% of their income for
8 electricity alone. These extremely high burdens are a function of the level of
9 income and the typical bills of such customers.

10 Even for the upper levels of the low-income range (100% to 150% of the
11 Federal Poverty Guidelines), the percentages spent on general use and electric
12 space heat respectively are 6% and just under 12%. Thus, even the least at-risk
13 of the low-income households in PECO's service area carry over twice the burden
14 of electricity costs as their median income neighbors on average. If a median
15 income household in the PECO service area (earning \$37,826 per year), using the
16 average amount of service for general use (563 kWh/month), and without electric
17 space heat, had to bear the burden of the customer at the high end of the poverty
18 range spends, that median income household would spend an average of \$189 *per*
19 *month* for electricity. That same household using the average 1,577 kWh for
20 service including space heat would have to spend an average of \$4388 per year
21 (the equivalent of a payment of \$366 each month, summer and winter) for
22 electricity.

1 These examples show that, from the perspective of the low-income
2 household, the average residential bill places an enormous burden on the
3 household, and places affordable service in jeopardy. A universal service program
4 that seeks to achieve bills for low-income participants pegged to an affordable
5 percent of income is the best way to address this problem directly.

6 **Q. PLEASE DISCUSS THE ROLE OF PAYMENT DIFFICULTIES IN DEFINING**
7 **ELIGIBILITY FOR CAP.**

8 A. Customers should not be denied affordability assistance solely because they have
9 not been delinquent in their bills. Such a limitation on program eligibility ignores the
10 burden of high energy bills on customers who go without food, clothing, medical
11 care or other necessities to pay for essential electricity. It also creates the potential
12 for an incentive on the part of a customer to fall into delinquency in order to qualify
13 for the CAP component of a universal service program. RPM Systems, Inc., the firm
14 that conducted the 1994 impact evaluation of PECO's CAP, argued this position in
15 its report, but this recommendation has not been followed by PECO.

16 While payment delinquency should not be an absolute requirement of
17 participation, it makes sense to include payment delinquency as a factor in outreach
18 and enrollment. The goal of maximizing cost efficiency in the implementation of
19 CAP, is served by targeting payment-troubled households for participation.

20
21 **Q. PLEASE DISCUSS PECO'S PROPOSED DEFINITION OF "PAYMENT-**
22 **TROUBLED" FOR PURPOSES OF LIMITING CAP ELIGIBILITY.**

1 A. PECO now considers a customer "payment troubled" for the purposes of qualifying
2 for its pre-restructuring CAP programs if the customer (a) is already enrolled, (b)
3 has a payment agreement that extends beyond 4 years, or (c) has been past due
4 on paying five out of the last six bills (Kray testimony, p. 11). Using these criteria,
5 the Company estimated that about 150,000 households in its service area have
6 payment difficulties. In practice however, it appears that the Company has limited
7 its intake such that customers who have extended payment agreements or who
8 have fallen into past due payment frequently in the recent past are not brought on
9 to the CAP or CAP Rate, although they are technically eligible for such service.

10 The Company now indicates that it will open its enrollment in these programs
11 to that subset of payment-troubled families whose payment agreements call for
12 payments over a period longer than 48 months.

13 The Company's definition of payment trouble is too narrow. The Commission
14 has put forth a proposed list of indices of payment trouble, in its April 24 Tentative
15 Order on Universal Service. That list includes the following:

- 16 a. Housing and utility costs exceeding 45% of the household's total
17 income.
- 18 b. Households with \$100 or less in disposable income after subtracting
19 all household expenses from all household income.
- 20 c. Households with an arrearage.
- 21 d. Households who have received a termination notice, or who have
22 failed to maintain one payment arrangement.

1 This list is broader than the Company's three-option definition of payment-
2 troubled. As the OCA stated in its filed comments in response to this rule, even the
3 Commission's proposed definition may be overly restrictive in one respect. The
4 standard rule for housing affordability is a payment of no more than 30% of income
5 for housing *and* utility costs (National Consumer Law Center, Access to Utility
6 Service, 1996 and Supp. to be published 1997). Thus, the Company has
7 unnecessarily restricted the definition of "payment-troubled" in a way that prevents
8 access to the program by customers whose payment patterns could be improved
9 with participation in the program.

10 **Q. PLEASE DISCUSS YOUR RECOMMENDATION THAT A HIGHER**
11 **PARTICIPATION RATE SHOULD BE A GOAL FOR THE PECO CAP PROGRAM.**

12 A. CAP efforts should strive for a reasonable rate of participation among the
13 total group of customers potentially eligible for assistance. It is not necessary that
14 100% of the eligible customers participate. However, a low participation rate is an
15 indication that the program is not reaching its fair potential. Participation rates for
16 low-income rate programs vary, with successful programs running at a rate around
17 50% of the target population. It is not unreasonable to expect that the benefits of
18 the program be extended to half the eligible group.

19 **Q. IF THE PARTICIPATION IN THE PROGRAM IS EXPANDED, AND THE BURDEN**
20 **ON PARTICIPATING CUSTOMERS IS BROUGHT TO AN AFFORDABLE LEVEL,**
21 **WHAT WILL BE THE IMPACT ON THE COSTS OF THE PROGRAM?**

1 A. The costs of the program will increase, but the benefits of the program will increase
2 as well. The main cost to increase is what we can call the "gross billing deficiency."
3 I explain this term below. The main benefits to increase, besides the expansion of
4 affordability to a larger portion of the at-risk low-income population, are the savings
5 in credit and collection costs, and the retargetting of uncollectible dollars from write-
6 offs to affordability subsidies.

7 **Q. PLEASE EXPLAIN THE TERM GROSS BILLING DEFICIENCY.**

8 A. I use the phrase "gross billing deficiency" to refer to the dollars of revenue that
9 would have been billed at the regular residential rate, but are not billed to CAP
10 participants. The term "billing deficiency" highlights the fact that the difference
11 being discussed is a difference in billings, not necessarily in revenues. Further, the
12 qualification of these deficiencies as gross, rather than net, emphasizes the fact
13 that the figure does not take into account the offsetting savings in avoidable credit
14 and collection costs from the program. The 1994 impact evaluation of the PECO
15 CAP program of the time showed that, even on a "bottom-up" basis, without taking
16 into account overhead allocations, the CAP rate came close to producing sufficient
17 savings in credit and collection costs to offset the gross billing deficiency. The
18 more recent Equitable Gas Company EAP pilot evaluation, using a "top down"
19 methodology (which does reflect the overheads and other allocated costs)
20 demonstrated that a properly designed and run CAP program can in fact produce
21 sufficient savings to offset the billing shortfall of the program.

1 Thus, a gross billing deficiency tells you how many dollars in billings will not
2 be billed to CAP customers that would have been billed under ordinary residential
3 rates. It overstates, however, the cost to the utility of that portion of the CAP
4 program.

5 **Q. PLEASE DISCUSS WHAT THE BUDGET FOR GROSS BILLING DEFICIENCIES**
6 **WOULD BE UNDER THE CAP PROGRAM PARAMETERS OF 5% AND 8%**
7 **RESPECTIVELY AS UPPER LIMITS ON ELECTRICITY BURDENS ON LOW-**
8 **INCOME HOUSEHOLD INCOME, AND A 50% PARTICIPATION RATE.**

9 In the case of PECO, there are about 250,000 households whose annual
10 incomes fall below 150% of the Federal Poverty Guidelines. If 50% of these
11 income-eligible households participated in a PECO CAP designed to bring bills to
12 within 5% and 8% respectively for general use and space heating participants, I
13 have calculated that the gross billing deficiency would be about \$63 million.

14 PECO billing deficiencies for CAP and CAP Rate (CAP I and CAP II) totaled
15 \$29 million in 1996 (PECO Statement 16, at 16). Thus, a program with the 5%/8%
16 PIP targets and a 50% participation rate would have a gross billing deficiency twice
17 as large as the current PECO CAP and CAP Rate programs for the PECO service
18 area. For the calculation of this billing deficiency estimate, see Exhibit NB-2.

19 **Q. HOW DOES PECO'S CURRENT CAP PROGRAM GROSS BILLING DEFICIENCY**
20 **COMPARE TO THE 0.5% OF REVENUE TARGET INCLUDED IN THE**

1 **COMMISSION'S APRIL 24, 1997 TENTATIVE ORDER ON UNIVERSAL**
2 **SERVICE?**

3 PECO presently expends a little under 1% of its revenue on CAP I and CAP
4 II billing deficiencies. Total CAP billing deficiencies of \$63 million would represent
5 just under 2% of PECO's gross operating revenues.

6
7 **Q. HOW DO YOU RECOMMEND THAT PECO PROCEED WITH RESPECT TO ITS**
8 **CAP BUDGET AT THIS TIME?**

9 With the largest electric CAP in the state (and second overall only to
10 Philadelphia Gas Works), PECO is currently devoting a much higher level of
11 resources to CAP than other electric companies. The fact that PECO's current level
12 is above the 0.5% target is appropriate in light of the significantly greater number
13 and proportion of low-income households served by PECO as compared to other
14 electric utilities. In light of these circumstances, I agree that PECO's proposed plan
15 to ramp up from 41,000 to 70,000 customers makes sense at this time.

16 In the longer term, I would urge that the Company and the Commission
17 consider the adoption of a target of 50% participation in the program, with bill
18 reductions designed to achieve the target percentage of income burdens for
19 general use and electric space heat participants discussed above. It must be
20 remembered that the increase in gross billing deficiency that this ramp-up would
21 entail should be substantially offset by savings in credit and collection cost, and the
22 dedication of write-off dollars to explicit bill assistance. RPM Systems, Inc., in their

1 1994 evaluation of the PECO CAP program, stated that on a "bottom-up" basis, the
2 benefits of the program nearly paid for the gross billing deficiency at that time. The
3 Company currently has an independent impact evaluation of its CAP programs
4 underway by the same firm that completed the recent Equitable Gas EAP (CAP)
5 impact evaluation. The Company should also commission an impact evaluation of
6 the CAP I program, after making the improvements recommended in this docket.
7 This evaluation should include a "top-down" assessment of the costs avoided by
8 improved payment behavior on the part of program participants. The "top down"
9 method, used by Gil Peach Associates in their evaluation of the Equitable Gas EAP
10 program, accounts for a properly allocated share of overheads and other indirect
11 costs savings. It is possible that the PECO CAP will be shown to have cost savings
12 *in excess of* the gross billing deficiency. In any event, the Company and the
13 Commission will be in a better position to determine the appropriate speed of any
14 further ramp-up to a higher participation level once this evaluation is completed.

15 **Q. PLEASE CONTRAST THE ORIGINAL PECO CAP PROGRAM (CAP I) DESIGN**
16 **AND THE PECO CAP RATE (CAP II) DESIGN, IN TERMS OF THEIR**
17 **SUITABILITY FOR USE AS A UNIVERSAL SERVICE PROGRAM COMPONENT.**

18 A. In my opinion, the original PECO CAP program (CAP I), with its combined
19 Percent of Bill and Percent of Income formula for determining copayments and
20 associated bill credits, comes closer than PECO's pilot CAP Rate (CAP II) to
21 achieving bill reductions to an affordable burden on a low-income household's
22 income. CAP II, with different discounts for only two ranges of income, and a 500

1 kWh cut-off for discount application, is an imprecise tool for achieving affordability.
2 Some CAP Rate customers will have their bills reduced to the affordable target, but
3 the program benefits are targeted so imprecisely that this result is not an achieved
4 objective of the program.

5 The new CAP Rate also lends itself to a rigid and formulaic application,
6 cutting out the relationship-development and educational components of a CAP.
7 Although the maintenance of interpersonal interaction and customer education
8 require additional administrative expenditures, they are important to successful
9 participation in a bill reduction (and usage management) effort, as well as to
10 improving customer payment patterns.

11 The Company has engaged an expert analyst to perform an impact
12 evaluation of its CAP II pilot. The evaluation is not due until early 1998 (although
13 the Company may be able to arrange to accelerate parts of it). It is premature for
14 the Company to make a decision to move customers off the pilot and make CAP II
15 a permanent replacement for CAP I until the results of the independent evaluation
16 of CAP Rate can be examined. I recommend that the Company not be permitted
17 to carry out the plan its witness described to move all CAP I participants to CAP II
18 unless and until an independent evaluation presents information that justifies such
19 a change in light of the objectives of universal service. Also, before making any
20 switch to the CAP II program design, the Company should complete the impact
21 evaluation I have proposed for the CAP I program, using the top-down method used
22 by Gil Peach Associates in the Equitable Gas EAP Impact Evaluation.

1 Q. PLEASE DISCUSS THE PREPAYMENT METER ASPECT OF THE CAP RATE
2 PROGRAM, AND ITS IMPLICATIONS FOR UNIVERSAL SERVICE.

3 A. The CAP Rate pilot permits the Company to offer its CAP Rate customers the
4 option of a prepayment meter installation in lieu of termination when they are being
5 threatened with disconnection of service. This aspect of the CAP Rate program
6 poses particular risks to universal service.

7 The prepayment meter creates a situation in which the customer is at risk of
8 disconnecting his or her own service, without the CAP program being aware of the
9 event. The French electric utility, Electricite de France, stopped using prepayment
10 meters in the homes of low-income customers for this reason. Because the self-
11 disconnections occurred with no advance notice either by or to the utility, EDF was
12 unable to intervene in the cycle of nonpayment to marshal resources that might be
13 available to assist the customer in restoring a healthy pattern of bill payment (and
14 thus prevent disconnection). Prepayment meters are used widely in the homes of
15 non-low-income EDF customers, at the customer's request, but EDF will not install
16 them in the homes of low-income customers.

17 Subjecting low-income customers to an implicit denial of credit and to the
18 risks of self-disconnection via the workings of a prepayment meter denies such
19 customers a level of service equivalent to that enjoyed by the average customer.
20 In this way, it violates the fundamental concept of universal service. And
21 eliminating the opportunity to intervene with a payment-troubled customer to correct
22 the payment difficulties is an unwise practice for a CAP program. Thus, the

1 Commission should require that the independent evaluation of the CAP II pilot
2 demonstrate that these concerns are unfounded, before considering the extension
3 of the pre-payment meter aspect of the CAP II pilot.

4 **Q PLEASE DISCUSS THE OPTIMAL USE OF LOW-INCOME AND COMMUNITY**
5 **BASED ORGANIZATIONS IN DELIVERING CAP SERVICES.**

6 A. Low-income and community based organizations have an intimate knowledge of the
7 target customer base involved in universal service efforts. They typically have
8 relationships of trust with the low-income communities. They should be involved
9 in the design and implementation of universal service programs. They provide
10 particular benefits in the outreach and intake phases of a CAP program, where they
11 can provide customer-appropriate information and counseling.

12 PECO has eliminated the use of CBOs and community action agencies in its
13 outreach and intake for CAP and CAP-rate. It has also eliminated the counseling
14 and education function once performed during intake by such organizations. The
15 special relationship such organizations have with various subsectors of the low-
16 income population is important for the Company's program to be successful in
17 reaching all segments of the eligible population. The elimination of PECO's former
18 collaboration with CBOs and CAAs is a step backward for PECO's CAP and CAP
19 Rate programs.

20 **Q. PLEASE DISCUSS THE ROLE OF RESPONSIVENESS TO, AND INTERACTION**
21 **WITH, PARTICIPANTS IN CAP.**

1 A. PECO has eliminated the intake counseling session that used to accompany the
2 income verification process. In the evaluation of PECO's former CAP program,
3 RPM Systems, Inc. noted that "CAP loses more customers for nonresponse than
4 for nonpayment." Evaluation of PECO's Customer Assistance Program: Final
5 Report, September 1994, at p. 10. The authors go on to observe that this
6 phenomenon "suggests continued customer misunderstanding of CAP and its
7 requirements." Such misunderstandings were evident in the survey of CAP
8 participants and former participants performed by Madeleine Kimmich and David
9 Cross, and provided as an appendix to the RPM Systems report. Kimmich and
10 Cross noted that customers did not know about reevaluation requirements,
11 copayment adjustment opportunities, the relationship between CAP's bill reduction
12 formula and the need to reduce usage, and the need to contact PECO when a
13 missed payment becomes necessary as the result of an emergency situation. The
14 elimination of personal interaction between the program staff and the customer is
15 likely to exacerbate this problem with the program.

16 **Q. PLEASE EXPLAIN HOW CAP BENEFITS CAN BE MADE PORTABLE IN A**
17 **COMPETITIVE MARKET, WITH UNBUNDLED DISTRIBUTION, TRANSMISSION**
18 **AND GENERATION CHARGES.**

19 A. If all customers are to have the benefit of the competitive markets for electricity
20 supply, then they must not be locked into one supply arrangement solely because
21 of their need for CAP assistance to be able to make timely bill payments. If the
22 CAP bill reduction is achieved by reducing the distribution company component of

1 the bill, the customer will be able to shop in the competitive market for electricity on
2 a competitively neutral basis, and the total that the customer can spend for
3 electricity will be increased by the distribution company discount. As has been
4 recommended by the Massachusetts Department of Public Utilities, and
5 incorporated in settlements filed by major Massachusetts utilities with the DPU, the
6 discount applied on the distribution company portion of the bill will be increased
7 under competition so that it provides a level of bill reduction equivalent to that
8 provided when the bundled bill is discounted today under regulation.

9 **Q. WON'T THE CUSTOMER BE DENIED THE CHANCE TO OBTAIN COMPETITIVE**
10 **SUPPLIES IF THE DISCOUNT APPLIES ONLY TO THE DISTRIBUTION**
11 **COMPANY PORTION OF THE BILL?**

12 **A.** It is conceivable that suppliers will be reluctant to serve low-income customers
13 unless they receive a portion of the bill discount benefit. However, that remains to
14 be seen. Even if the benefit is not divided, suppliers will receive benefits from CAP
15 bill reductions. The program will increase the affordability of the *entire* bill, not just
16 the distribution company component, so long as it is designed to produce an
17 affordable burden when the combined distribution company and competitive supply
18 portions of the bill are taken into account. Thus, the supplier will get the benefit of
19 the customer's improved ability to afford electricity, without having to make any
20 direct contributions to that affordability. Further benefits to the suppliers should not
21 be necessary. However, the Commission should watch the development of the
22 market carefully. If access to competitive electric supply among low-income

1 customers is limited and remains so, the desirability of splitting the bill discount to
2 the two separate portions of the bill could be explored, along with other possible
3 remedial actions.
4

5 **PART III - LOW INCOME USAGE REDUCTION PROGRAM ISSUES**

6 **Q. PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.**

7 A. This section of my testimony covers the following topics:

- 8 1. The role of LIURP in achieving universal service.
- 9 2. The PECO LIURP plan and how well it serves the General
10 Assembly's universal service goals.
- 11 3. A recommended overall budget level, and program design change
12 proposals.
- 13 4. A low-income renewables pilot proposal.

14 **Q. WHAT IS THE ROLE OF USAGE REDUCTION IN ACHIEVING UNIVERSAL
15 SERVICE?**

16 A. Usage reduction is an integral component of the efforts of the distribution utility and
17 other market participants to assist low-income customers to achieve the same level
18 of service as non-low-income customers. Usage reduction is particularly valuable
19 because it not only helps lower bills, and thereby improve payment patterns, it also
20 saves electricity resource costs, such as fuel and capacity costs. In addition, it has
21 environmental benefits. Thus, low-income usage reduction is a beneficial
22 proposition to all concerned (affordable bills, lower credit and collection costs to the

1 utility, lower credit and collection costs passed on to other customers, lower
2 electricity resource costs, and lower environmental costs).

3 **Q. IN WHAT WAYS COULD THE PECO LIURP PROGRAM BE IMPROVED?**

4 A. There are seven main ways where the PECO LIURP program criteria could be
5 improved.

6 *First*, the floor of 800 kWh for LIURP services should be removed. Many
7 utilities run successful low-income conservation and load management programs
8 with no minimum usage requirement. There are many areas of residential usage
9 that can cost-effectively be reduced in homes that use less than 800 kWh per
10 month. The average non-space heat, non-off-peak water heater usage in the
11 PECO service area is under 600 kWh per month. Such homes have lights,
12 refrigerators, and other energy-using fixtures and appliances. Some even have
13 electric water heaters. The Company is missing opportunities for valuable energy
14 savings in these households. Extrapolating from CAP Rate data, these households
15 represent over half the households in the low-income population in PECO's service
16 area (Attachment OCA XV-7, CAP Rate Discount for 1996).

17 *Second*, the Company should not perform diagnostics according strictly to
18 rate class. Rather, it should audit for all energy usage in a dwelling that could be
19 reduced cost-effectively. Once in the home, the technician/auditor should not be
20 limited to the prescribed measures for any given rate class

21 *Third*, the Company should expand the list of baseload measures it will install
22 to include all cost-effective measures. This includes such items as full refrigerator

1 replacement, air-conditioner replacement (not only fan substitution), and education.

2 With regard to refrigerator replacement, the Company has begun delivering
3 this measure on a pilot basis. Four other Pennsylvania utilities include this
4 measure (Bureau of Consumer Services, LIURP: Historical Report and Program
5 Analysis, 1994, Appendix D). Utilities in other states also offer this measure.
6 Massachusetts Electric Company has successfully run its so-called "Appliance
7 Maintenance Program" for the last year. The Company tests old refrigerators to
8 confirm that they use high levels of electricity, and when the payback test is met,
9 the technician offers to change out the refrigerator. Used refrigerators are disposed
10 of in an environmentally sound manner. An impact evaluation is underway, and
11 preliminary results show that the program is cost-effective *on an incremental cost*
12 *basis*.

13 *Fourth*, the Company should add a pilot renewables component to its LIURP
14 program. I discuss this proposal below.

15 *Fifth*, the Company should determine the cause of the high customer non-
16 participation levels in the "Could Not Contact Customer" category, and take steps
17 to reduce this loss of participation. Conservation Management Corporation,
18 PECO's contractor for this program, reported that in the three years 1994, 1995,
19 and 1996, for "Could Not Contact Customer" in 666, 663, and 5,589 cases,
20 respectively (Attachment OCA XV-12). In 1996, the contractor was unable to
21 contact fully 30% of the customers who were referred into the program. This level
22 of non-contact drops from the program is excessive. It suggests that the Company

1 should explore the value of enlisting community based organizations in delivering
2 services to these populations.

3 *Sixth*, the Company should convene and adequately fund a representative
4 Advisory Committee, to assist it in identifying ways to improve program design and
5 delivery on an ongoing basis. CBOs and weatherization providers in Pennsylvania
6 are among the groups that have expertise and experience that could help the
7 Company make the best use of its LIURP dollars.

8 *Finally*, the Company should increase its overall LIURP budget toward the
9 0.2% target suggested by the Commission in its April 24, 1997 Tentative Order on
10 Universal Service in electric industry restructuring. Today, PECO spends
11 \$2,772,000 on low-income usage reduction (Exh. MCK-6). This sum represents
12 less than 1 tenth of 1 percent of gross operating revenues. This amount can cost-
13 effectively be increased. Also, rather than spending the additional funds on the
14 same limited menu of options represented in the current program design, the
15 Company should institute a renewables pilot, and add the additional cost-effective
16 measures noted above.

17 **Q. PLEASE DESCRIBE YOUR PROPOSAL FOR A RENEWABLES PILOT.**

18 **A.** The General Assembly in the restructuring bill specifically noted that applications
19 of renewable technology can be included in the universal service programs of
20 electric utilities. 66 Pa.C.S. §2803. I recommend that a pilot renewables program
21 be fielded by PECO along the following lines:

1. Issue an RFP to solicit proposals of contractors to install 50 units of photovoltaic electricity panels at 1 kW in 1999, and 100 units of PV in 2000, on the dwellings of low-income PECO customers.
2. Seek bids in a price range of \$5.00 per Watt (this is an aggressive target, but may well be achievable, especially if the PECO payment is packaged with grant funding to lower unit costs).
3. In the same or a different RFP, seek proposals to install up to \$250,000 worth of passive or active solar hot water heating on low-income PECO customers' dwellings.
4. In each case, require a diversity of building types, locations (including a significant number in densely-settled, older urban neighborhoods, with network distribution systems and plans for distribution upgrades, if possible), land tenancies (e.g. customer as owner vs. renter), sizes, and metering arrangements (including some net metering on larger units relative to the load of the subject dwelling).
5. Conduct a process and impact evaluation of the installations, capturing such features as customer acceptance of the measures, landlord acceptance in the case where the customer is a renter, cost per unit, payback per unit, Total Resource Cost on a present value basis per unit, and the like.
6. Involve the LIURP Advisory Committee (recommended above) at all stages of pilot development and evaluation.

1 7. Submit a report to the Commission in 1999 and 2000 concerning the
2 status of the pilot and the findings of any evaluations, together with
3 recommendations as to whether to renew or extend the pilot.

4 **Q. WHAT IS THE PROPOSED BUDGET FOR THIS RENEWABLES PILOT?**

5 A. I propose that the Company budget \$250,000 over two years for the solar hot water,
6 \$250,000 in 1999 for the 50 PV units, and \$500,000 in 2000 for the 100 PV units.
7 In addition, the Company will require some administrative expense to develop the
8 RFP, conduct the proposal process, select winning proposals, enter into contracts,
9 conduct data tracking, and prepare an evaluation. Assuming a 5% administration
10 factor, the cost for 1999 would be \$500,000 plus \$25,000, and the cost for 2000
11 would be \$750,000 plus \$37,500.

12 These amounts should be part of the overall LIURP budget.

13 **Q. WHAT IS THE BASIS FOR THIS BUDGET PROPOSAL?**

14 A. Today, 1000 Watt PV units can be obtained for \$6.00 per kW, and bulk purchases
15 can push the cost down towards \$5.00 per kW. With DOE grant funding or other
16 contributions to the project, the cost can be expected to remain at \$5.00 per kW.
17 PV has a useful life of 30 years. A simple present value calculation shows that the
18 payback for a unit that costs \$5.00 per kW can be as low as 14 years. This is very
19 close to the 12 year limit in the pre-restructuring LIURP regulations for specified
20 measures.

21 There are a number of reasons why the Commission should allow the pilot
22 to go forward, despite the fact that a projected payback under optimistic price

1 conditions will be slightly longer than the current payback limit for LIURP. First, the
2 project is important. The General Assembly highlighted the importance of testing
3 the viability of renewable generation when it included renewables in its list of
4 possible universal service measures.

5 Second, when PV can reach the necessary critical mass for reducing the
6 cost and thus the payback time, it promises to address not only environmental
7 concerns, nor even only affordability concerns, but concerns about the cost of
8 distribution upgrades as well. This is particularly important in densely packed
9 urban neighborhoods, with underground, network-style, distribution systems.
10 Southern California Edison has already shown the value of PV in heading off
11 expensive buried-cable replacements in Pasadena, California.

12 Third, PV is a low-maintenance installation. It does not require complex
13 interactions between customers and machines to deliver its benefits. It does not
14 readily break down. If these qualities persist in the densely-populated low-income
15 neighborhoods where many low-income PECO customers reside, the ease of
16 maintenance will be a significant value to this resource. There is precedent for
17 such installations, in the Rheinhardt Street Townhouses in South Philadelphia,
18 funded partially by a "PV In Buildings" grant from the Department of Energy.

19 With respect to the solar hot water, these technologies are proven. What is
20 not yet understood as well is the viability of these installations in rental situations,
21 urban neighborhoods, and existing low-income housing of various kinds. As in the
22 case of the PV pilot, the use of an RFP process can permit the Company to obtain

1 the insights of solar experts, while maintaining significant control over the prices it
2 will incur for these installations.

3
4 **PART IV - COST ALLOCATION AND COST RECOVERY**

5 **Q. WHAT ISSUES DO YOU ADDRESS IN THIS SECTION OF YOUR TESTIMONY?**

6 A. In this part of my testimony, I address the proper cost allocation for Universal
7 Service costs, and the proper form of cost recovery for these costs.

8 **Q. PLEASE ADDRESS THE ISSUE OF COST RECOVERY FIRST. HOW DOES THE**
9 **COMPANY PROPOSE TO RECOVER UNIVERSAL SERVICE COSTS?**

10 A. As described in Mr. Xander's testimony, beginning at p. 3, the Company proposes
11 first to divide universal service costs into two groups. The first group would include
12 (a) the uncollectible account expenses for customers in the Customer Assistance
13 Program - what I have called the gross billing deficiency, (b) the CAP Rate shortfall
14 - also a billing deficiency, (c) the costs of special payment arrangements over 48
15 months [although it is not clear if these costs are incurred on behalf of customers
16 who are actually participating in CAP under the Company's proposals], and (d) the
17 LIURP program costs.

18 This first group Mr. Xander proposes to recover in a Universal Service Fund
19 Charge, reconciled annually. Mr. Xander proposes that the reconciliation consist
20 of two parts: a true-up of revenues and costs for the preceding year, and the
21 establishment of a future-looking revenue requirement and associated USFC factor.

1 This charge would be separately tariffed but would not be separately identified on
2 the customers' bills.

3 The second group in Mr. Xander's proposal includes administrative costs
4 associated with energy assistance programs for low-income customers, associated
5 primarily with LIHEAP, bill collection activities, and administering the CAP
6 programs. These costs Mr. Xander proposes to include in distribution revenue
7 requirement, and collect from customers as an embedded part of their distribution
8 rates.

9 **Q. WHAT ARE THE PROBLEMS WITH RECOVERING UNIVERSAL SERVICE**
10 **COSTS ON A RECONCILING BASIS?**

11 A. Reconciling factors in regulation have historically been discouraged. When costs
12 and revenues are reconciled, as the Company proposes here, there is less
13 incentive for the firm to manage the costs wisely, and to maximize the revenues
14 from the activity.

15 **Q. BUT THE COMPANY ARGUES THAT THE STATUTE MANDATES FULL COST**
16 **RECOVERY FOR UNIVERSAL SERVICE PROGRAMS. IS THE COMPANY**
17 **CORRECT?**

18 A. Yes. But there is a difference between full cost recovery and the creation of a
19 reconciliation factor that trues up the billing deficiency and program cost side of the
20 ledger without accounting for the associated credit and collection cost savings.

21 **Q. WHAT IS THE PROBLEM WITH THE RECONCILIATION PROPOSAL HERE?**

1 **A.** The Company's proposal does not account for all the savings associated
2 with making bills affordable through Customer Assistance and Usage Reduction.
3 If these savings were included in the reconciliation calculation, the program benefits
4 would be seen to ramp up as costs ramp up, offsetting much of the adverse effect
5 the Company seeks to avoid through its reconciliation factor. PECO's own earlier
6 impact evaluation, conducted using the more limited "bottom-up" incremental cost
7 method of valuing CAP savings, showed that the program was very nearly a wash
8 when costs are set off against each other. And if the Equitable Gas EAP impact
9 evaluation gives us any foretaste of what my proposed CAP evaluation will show
10 in the PECO case, a top-down evaluation may prove that the CAP costs are entirely
11 offset by savings. Second, a major component of the costs the Company proposes
12 to move into a reconciling clause, the uncollectibles associated with CAP and the
13 costs of the payment agreements beyond 48 months, have always been treated like
14 any other jurisdictional expense, rather than being reconciled.

15 **Q. WHAT DO YOU RECOMMEND?**

16 **A.** I recognize the need for PECO to account for any increased universal service costs,
17 particularly if the Company is going to ramp up the level of these programs in the
18 future. The Commission should only permit a deferral or reconciliation of these
19 costs, however, if the Company is also required to calculate and account for any
20 offsetting savings.

1 Q. TURNING TO THE QUESTION OF COST ALLOCATION, HOW SHOULD THE
2 COSTS OF UNIVERSAL SERVICE PROGRAMS BE SPREAD TO THE
3 CUSTOMERS?

4 A. The General Assembly requires that universal service program costs be recovered
5 via a non-bypassable charge in the distribution utility's rates (§ 2804). The common
6 understanding of the bypass problem is the risk that some customers will leave the
7 distribution utility's facilities entirely, and leave their share of system costs behind.
8 Thus, in choosing the word "non-bypassable," I would contend that the General
9 Assembly was incorporating the concept that all customers should cover the
10 Universal Service costs. Further, to the extent that Universal Service is a public
11 good that benefits all of society, the benefits accrue to all customers and classes.
12 Finally, the costs of Universal Service (even without netting out the offsetting
13 savings) are small in relation to the benefits of the universal availability of essential
14 electricity. Spreading the Company's proposed \$35.7 million program over the
15 entire base of kWh, for example, would result in a unit charge for each kWh of
16 \$0.00105. If the programs are ultimately ramped up to a \$70 million level (\$63
17 million in CAP bill reductions and \$6.5 million in LIURP), this would result in unit
18 rates of \$0.00206 per kWh. Again, this is the gross cost of the programs, before
19 deducting the savings associated with the programs.

20 Q. WHAT DO YOU CONCLUDE ABOUT THE PROPER COST RECOVERY,
21 COST ALLOCATION AND RATE DESIGN OF UNIVERSAL SERVICE COSTS?

1 A. I conclude that costs should be recovered in rates according to traditional principles
2 of ratemaking, and should not be reconciled unless the associated savings are
3 segregated and reconciled as well. I also conclude that costs should be allocated
4 on a competitively neutral, nonbypassable basis at an average unit cost for all kWh.

5 **Q. HOW HAVE OTHER STATES HANDLED THE UNIVERSAL SERVICE ISSUES**
6 **YOU DISCUSS IN YOUR TESTIMONY?**

7 A. States that have passed restructuring legislation or developed final plans for
8 implementation of restructuring in the electric industry have provided for bill
9 reduction assistance and energy management similar to that contemplated by the
10 General Assembly in Pennsylvania.

11 In Massachusetts, the Commission's proposed restructuring regulations, and
12 the settlements with major electric companies on plans for introducing competition,
13 provide for a continuation of the low-income discounts (which range from 20% to
14 35% of base rates) and a ramping up of the low-income energy conservation efforts
15 of electric distribution utilities. In particular, baseload use is targeted in expanded
16 low-income DSM programs, budgets will be increased, and greater use of
17 Community Action Agencies will be made.

18 California, Rhode Island, Maine, and Montana preserve the low-income
19 programs that have historically been provided by electric utilities in those states.
20 The Montana statute specifies that at least 17% of the systems benefits moneys
21 collected be devoted to low-income bill assistance and low-income energy
22 conservation. The Montana systems benefits fund ("Universal Service") will be

1 funded by a charge at 2.4% of retail sales revenues in Montana. In Maine, the
2 legislature has mandated that low-income bill assistance continue at its current
3 level (0.5% of revenues), and that energy efficiency (including low-income usage
4 reduction) continue at 1995 levels.

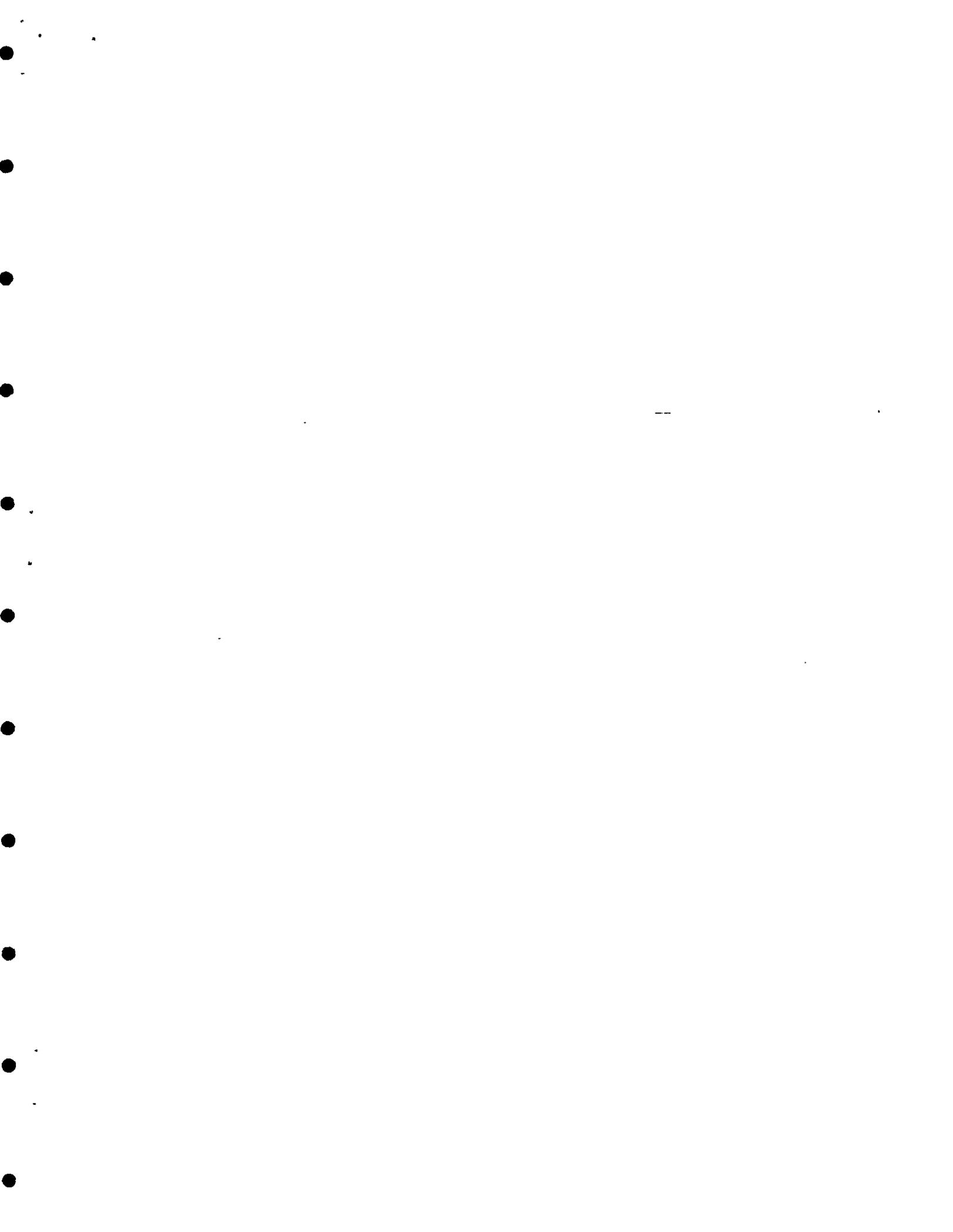
5 California specifies that the budget for such programs must be based on
6 need. Traditionally the low-income rate program in California has provided for a
7 15% discount, and direct assistance to help-low income consumers take advantage
8 of energy efficiency opportunities. The Commission also has set up the California
9 Low Income Governing Board, of which I am a member, to implement the statute's
10 provision for transfer of utility programs to an independent administrator.

11 In New Hampshire, the statute provides that programs to help low-income
12 families "manage and afford" their electric service must be instituted. The
13 Commission was directed to establish a restructuring plan to carry out the overall
14 restructuring statute. On February 28, 1997, the Commission issued its Final Plan,
15 in which it ordered that a new statewide percentage of income payment program be
16 established to carry out the statute's mandate for low-income universal service
17 protection. The Commission accepted the recommendation of a task force of
18 stakeholders that the budget for such assistance would be up to \$13.2 million, for
19 a state with about 500,000 residential electric consumers. New Hampshire had
20 never had low-income rate assistance under regulation, and the Commission's
21 action recognized that the new industry structure posed particular risks for low-
22 income customers.

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY.

2 A. Yes.

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**NANCY BROCKWAY - NCLC
GRANT AND CONTRACT PROJECTS**

June 18, 1997

AGENCY	WORK PRODUCT	TOPIC	DATE
Regulatory Assistance Project	Report	Consumer disclosure in restructuring	Ongoing
Boston Bar Foundation	Training	Massachusetts utility consumer rights	June 1996
Action, Inc (Department of Energy)	Technical assistance	New England restructuring and low-income households	Ongoing
Rhode Island CAP Director's Association	Technical assistance	Universal Service in Rhode Island electric restructuring	Ongoing
Pennsylvania Office of the Consumer Advocate	Testimony and consultation	Universal Service Components of Electric Utility Restructuring Plans	Ongoing
Governor, State of Illinois	Report and consultation	Impact of Restructuring on Residential Consumers	Spring, 1997
Oak Ridge National Laboratories	Report with appendices	DSM Programs for Low-Income Customers in Restructuring	Ongoing
Spratley Associates; Legislative Energy Assistance Project	New England Consumer Advocate regional meeting; summaries of deliberations.	Consumer Issues in Restructuring: Integrating the Green Agenda.	October 28, 1996
Regulatory Assistance Project	Report with appendices	Consumer Issues in Restructuring: Specific Regulatory and Legislative Options to Address Consumer Protection Issues	Ongoing
Spratley Associates; Legislative Energy Assistance Project	Report	Consumer Issues in Restructuring: Scoping the Need for Legislation	August, 1996
U.S. Department of Energy (subcontracted by Action, Inc.)	Letter reports on New England restructuring activities	Utility Restructuring	1996
Urban Consortium, via Cape Cod (MA) County Commissioners	Parts of Report and draft contract, RFP, regulations and statutes	Biddable Franchise as a form of industry restructuring	1996

AGENCY	WORK PRODUCT	TOPIC	DATE
Pennsylvania Office of Consumer Advocate	Testimony	Rate rebalancing and universal service.	1996
National Association of Regulatory Utility Commissioners and National Council of State Legislatures	Report	Strandable Benefits in Utility Restructuring, and Techniques for Preventing Stranding	August, 1996
Massachusetts Executive Office of Communities and Development (now Division of Housing and Community Development) (subcontracted by Action, Inc.)	Represent low-income consumers in regulatory proceedings seeking additional DSM to leverage Weatherization Assistance. Filed comments on behalf of clients in Mass. D.P.U. 95-30, generic electric industry restructuring docket.	Leveraging WAP, electric industry restructuring	Ongoing
The Energy Foundation	Project Director, The National Low-Income DSM Project. Coordinate national efforts to respond to challenge of retail restructuring on low-income customer programs.	Electric industry restructuring and impacts on low-income customers.	Ongoing
Joyce Mertz-Gilmore Foundation	Supports various activities in field of electric industry restructuring and impact on low-income customers' access to affordable, efficient energy.	Electric industry restructuring and impacts on low-income customers.	Ongoing
National Energy Assistance Directors' Association	Report and technical assistance	Utility restructuring and options for low-income participation to protect low-income customers	Reports submitted 10/95, 5/96, 9/96.
American Association of Retired Persons	Comments for filing with Federal Communications Commission	Universal Service rulemaking proposals	Comments filed September 27, 1995

NANCY BROCKWAY
PUBLICATIONS/ARTICLES/REPORTS LIST
NATIONAL CONSUMER LAW CENTER, INC.
June 18, 1997

BOOKS

1. Access to Utility Services (with Margot F. Saunders), National Consumer Law Center, 1996. Comprehensive manual for low-income advocates and others on the legal bases for consumer protections enabling customers to obtain electric, gas, water and telephone service. Includes treatment of regulatory jurisdiction, unregulated deliverable fuels, protections from shut-off, the right to service, payment issues, terminations, third-party liability, tenants' rights, rights of mobile home residents, bankruptcy, master-metering, erroneous billing/unauthorized use, LIHEAP, payment assistance, weatherization, subsidized housing, telecommunications under the 1996 Act, and intervenor funding.
2. Tenants' Rights to Utility Service (with Margot F. Saunders and Roger D. Colton) (1994). A manual for practitioners covering all aspects of a tenant's relationship to providers of utility service, including sources of law, grounds for denial of service or termination, deposits, remedies in the event of landlord default, mastermetering, weatherization, public housing utility allowances, and bankruptcy.

OTHER PUBLICATIONS

1. Regulatory Jurisdiction to Enforce Consumer Protections Against Competitive Electricity Suppliers: The Case of New England, in Barbara R. Alexander and NCLC, "Consumer Protection Proposals for Retail Electric Competition: Model Legislation and Regulations," October 1996, The Regulatory Assistance Project. This report reviews the various factors that have typically been used by legislatures to attach regulatory jurisdiction to public utilities (e.g. ownership or control of certain facilities, performance of certain functions, etc.), and concludes that new legislation, clarifying the role of regulation in controlling abusive practices of competitive electricity suppliers, is necessary to avoid gaps in jurisdiction and litigation over the proper scope of statutes written for a monopoly, vertically-integrated electric industry.
2. Public Goods of the Electric Utility Industry: Will They Be Stranded and How Can We Preserve Them?, with Mike Sherman, October 1996, National Council on Competition in the Electric Industry. Identifies the major benefits of the current vertically integrated monopoly electricity industry at risk of being stranded in the move to retail competition. Public Goods include such benefits of the current system as consumer protections, low-income affordability and energy-efficiency programs, fuel diversity, energy efficiency, renewable energy investments, high-paying jobs, and the like. The report identifies four Types of mitigation strategies: (I) require competition participants to provide these benefits, (II) raise a fund to pay for the above-market costs of such activities, (III) bring customer demand together in a value-

driven aggregator to purchase these goods, and (IV) remove market imperfections that create barriers to customers obtaining these goods.

3. **A Low-Income Advocate's Guide to the Telecommunications Act of 1996**, March 1996, National Consumer Law Center. The Telecommunications Act of 1996 will put in place the most sweeping changes in the telecommunications industry in half a century. This paper analyzes the 100 page Act, explaining the basic changes the Act will make in the industry, and the specific provisions that affect low-income consumers. The report focusses on the Act's provisions: (a) making Universal Service the law of the land, and explicitly including the concept of affordability, (b) requiring comparable rates and services in urban and rural areas, (c) fostering expansion of distance learning and medicine, and (d) tightening up anti-slamming and 900 number protections.
4. **Deregulation of the Electricity Market: Implications for Captive Customers, and Options for Mitigation** (June 1995). Analyzes the degree to which different electric industry restructuring options imply deregulation of the industry, with the associated adverse impacts on captive customers. Lays out the viable options for mitigating these impacts (e.g. obligation to serve, provider access fees to fund discounts and DSM, wires charges for the same purpose, all-provider service obligations (with or without "Net-Trans" accounts to trade obligations among suppliers), energy/utility stamps. Discusses pros and cons of each method for providing maintenance and improvement in ability of low-income customers to get service in deregulated markets.
5. "Intervenor Funding in Public Utility Rate Cases," *Clearinghouse Review*, June 1995, Chicago, Illinois. Catalogues the statutes and rules in effect nationally (e.g. the Public Utility Regulatory Policy Act of 1978) and by state, that provide for reimbursement of the costs of intervening in regulatory proceedings on behalf of consumers. Discusses subject matter of fundable interventions, criteria for reimbursement, barriers to reimbursement, and legal basis for reimbursement in the various states.
6. **Electric Industry "Restructuring": Can the Small Consumer Afford It?** (March 9, 1995)(with Texas R.O.S.E.). Explains the proposals for electric industry restructuring for a lay audience. Discusses impact of restructuring proposals on planning for future energy needs, with particular emphasis on fuel diversity, siting, plant performance, and DSM. Explains concept of stranded assets and stranded benefits. Analyzes 3 restructuring proposals: wholesale competition, retail competition, and transitional or quasi-competitive proposals (e.g. incentive regulation). Identifies winners and losers under competition, and advances 10 elements of a program to protect captive ratepayers. Includes a Consumer Bill of Rights.
7. **The Low-Income Advocate's Introduction to Electric Industry Restructuring and Retail Wheeling** (Rev. January 1995). Analyzes the impact on low-income customers of retail wheeling and electric industry restructuring. The report reviews the history of the issue, describes the adverse impacts of many of the proposals being advanced by proponents of retail competition, and outlines several alternative forms of industry restructuring that would better

serve the needs of low-income customers and ratepayers as a whole. (available in summary version).

8. **Redefining and Safeguarding Universal Telecommunications Service, Part I: What is Universal Telecommunication Service?: Standards for Defining and a Definition for 1994** (January 1994). Reviews the history of American telecommunications and the concept of universal service. Posits that universal service is both a fundamental and an evolving policy objective. Sets out 4 criteria for determining whether a service element should be provided on a ubiquitous basis as an element of universal service. Applies those criteria to a modern state with large cities, major suburbs, and considerable rural population. Goes beyond mere dial tone to incorporate concept of affordability in concept of universality. Posits that unlimited local calling, a basic package of long-distance calling, 911, call-trace, and privacy blocks, are all part of the modern understanding of universal service elements (available, together with Parts II, III and IV, in an updated and summary format, as well).
9. **Redefining and Safeguarding Universal Telecommunications Service, Part II: Do We Have Universal Service in America Today?** (January, 1994). Reviews census and other demographic data to describe a world of information haves and have-nots. Shows that low-income households, Blacks, Hispanics, and other disadvantaged groups lack basic dial tone to a significant degree. Overall average rates of phone penetration, thus, do not reveal true picture. Shows that lack of access to other tools, such as credit cards, will hamper low-income access to benefits of information superhighway (available, together with Parts I, III and IV, in an updated and summary format, as well).
10. **Redefining and Safeguarding Universal Telecommunications Service, Part III: The Impact on the Poor of the Lack of Telephone Service** (January 1994). Examines survey results that demonstrate importance of telephone service in acquiring and keeping jobs, social services, medical care, and contact with friends and family. Discusses failure of payphones to fill the gap for those without in-home phones (available, together with Parts I, II and IV, in an updated and summary format, as well).
11. **Redefining and Safeguarding Universal Telecommunications Service, Part IV: Necessary Steps to the Achievement of Universal Service** (January, 1994). Lays out variety of policy alternatives designed to increase telephone penetration, including enhanced Lifeline, Universal Telephone Access Fund, performance standards for phone companies, and the like (available, together with Parts I, II and III, in an updated and summary format, as well).
12. **The Impact of Rising Water and Sewer Costs on the Poor: The Case of Eastern Massachusetts** (November 1990). Examines the reasons that water and sewer rates are projected to rise to the level of home heating costs by the end of the decade in eastern Massachusetts, where the Boston Harbor clean-up will be paid for 95% by rate increases. Looks at the impact of the federal Clean Water Act and Safe Drinking Water Act on water and sewer rates nationally. Reviews Census and HUD data to develop an estimate of households currently unable to pay for minimum family needs, and projects the impact of additional burdens of water and sewer rates. Reviews possible means of relieving the burden.

13. "Utility Demand-Side Management and Low-Income Customers," *Clearinghouse Review*, Vol. 27, No. 3 (July 1993).
14. COM/Electric C&LM Task Force, *Report of the Independent Conservation and Load Management Expert*, Boston, MA. (Nov. 1992).
15. How Rates are Set for the Regulated Utility: A Quick Overview (1994). A précis of traditional regulatory mechanisms for the beginning student, with reference to new emerging techniques for setting rates.
16. Utility Demand-Side Management Programs for Elders: Changes in the Last Five Years (October 1993). Examines the changes in DSM programs targetted to elders in the five years since the 1988 ORNL study on the same topic. Notes expansion of measures (*e.g.* lighting, appliances) and broadening scope of "special needs" groups by utilities. Finds that utilities do not track demographic data on participation, and concludes that goals for subsector participation should be developed and participation tracked to ensure meeting goals. Also recommends program design features to overcome barriers to elder participation.
17. Model DSM Programs Targetted to Low-Income Households (November 1993). Four programs designed for the residential class that have program features intended to ensure adequate low-income participation. Drawing also on recognized program designs from other experts around the country, these models provide for comprehensive DSM services in a cost-effective manner for electric (and gas) utilities. The programs include Energy Fitness/Gas Piggyback (a neighborhood "blitz" low-use electric general use and hot water program), Residential Electric Space Heat (which can be adapted to gas, and focusses on shell measures), High-Use Pilot (to target those residential customers with persistent and unexplained high use), and Hot Water/General Use (an on-site, low-to-medium-use program that runs in tandem with the Fitness and ESH programs).
18. The Low Income Customer as Non-Participant in DSM: What is to be done? (October 1992). Examines usage data that shows low-income customers tend to use electricity and other energy sources less intensively than other customers, and that with low avoided costs, and high barriers to participation in DSM programs, low-income customers tend not to receive DSM assistance in lowering their energy burden proportionate to their numbers in the customer base. Examines cost allocation of cost of "saved kWh" as technique to overcome cross-subsidy by low-income customers. Discusses program designs and other techniques to overcome barriers to participation.
19. "Bridging the Gap: Addressing the Conservation and Equity Needs of Low-Income People," *PowerLine*, Vol. 18, No. 2 (March/April 1993).

RELATED BRIEFS AND FILINGS

1. In Re: Boston Gas Company Unbundling Proposal and Proposed Increase in Rates, D.P.U. No. 96-50, Initial Brief of Low-Income Intervenors (November 1996).
2. In Re: Massachusetts Electric Company Proposed Increase in Rates and Incentive Ratemaking Plan, D.P.U. No. 95-40, Initial Brief and Reply Brief of Low-Income Intervenors (with Jerrold Oppenheim)(July and August 1995).
3. In Re: Massachusetts Electric Company Proposed Increase in Rates and Incentive Ratemaking Plan, D.P.U. No. 95-40, Direct Testimony and Exhibits of Jerrold Oppenheim (incentive plan, rates and fees), and Elliott Jacobson (low income DSM) (co-author with witnesses), June 9, 1995.
4. In Re: Electric Industry Restructuring, Comments of the Low-Income Intervenors, Mass. D.P.U. 95-30, filed March 31, 1995. Reply comments May 25, 1995.
5. In Re: Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Comments of Direct Action for Rates and Equality, Docket No. RM94-7-004, Federal Energy Regulatory Commission, December 8, 1994.
6. In Re: Texas Utilities Electric Company, Initial Brief (DSM) (with Deidre Smith, Esq.), Docket No. 11735, Texas Public Utilities Commission, July 26, 1993.

NANCY BROCKWAY TESTIMONY:

1. Comments: The Low-Income Affordability Mandate: Setting Rates to an Affordable Percentage of Income, and Energy Efficiency Investments Targetted to Low-Income Households (December 6, 1996), Before the New Hampshire Public Utilities Commission, In the Matter of the Electric Industry Restructuring Plan. Argues that a Percentage of Income approach is the logical way to determine an affordable bill for low-income households, and that accordingly it is the best way to meet the legislative mandate in the restructuring act to extend universal service to all households in New Hampshire. Describes a proposed Percentage of Income/Fixed Credit plan sponsored by low-income advocates, that would bring bills for low-income consumers down so that such customers pay no greater portion of their income towards electric service than the median New Hampshire customer, and shows that the impact of such a program on other ratepayers is modest. Also describes the value of energy efficiency investments in achieving universal service and resource savings, and explains the best way to administer such a program.
2. Direct, Rebuttal and Surrebuttal Testimonies of Nancy Brockway (Rate rebalancing and Universal Service) (January and February, 1996), In Re: Formal Investigation to Examine and Establish Updated Universal Service Principles and Policies for Telecommunications Services In the Commonwealth, Docket No. I-00940035 (Pennsylvania Public Utilities Commission). Testimony on behalf of Office of Consumer Advocate. Shows importance of telecommunications to low-income consumers, data showing that universal service has not yet been achieved in Pennsylvania, elasticity of demand for local telephone service, and potential loss of subscribership from increases in local exchange service rates contemplated under rate rebalancing proposed by major local exchange companies. Includes color maps of telephone penetration, low-income
3. Direct Testimony and Exhibits of Nancy Brockway (Customer Service and Rate Design (January 1995), and Direct Testimony and Exhibits of Nancy Brockway (Demand Side Management and Revenue Requirements)(November 1994), Complaint of Kenneth Williams, et al., v. Houston Lighting and Power Co., Docket No. 12065 (Texas Public Utilities Commission). Proposal for elimination of various customer charges, and for institution of low-income DSM program, on behalf of low-income intervenors.
4. Direct Testimony and Exhibits and Surrebuttal Testimony of Nancy Brockway (December 1994, March 1995), Bath Water District, Proposed Increase in Rates, Docket No. 94-034 (Maine P.U.C.). Critique of District's cost of service study and cost of service study presented by Staff witness, analysis of proposed rate designs, proposal for low-income affordability program consisting of waiver of customer and other fixed charges for very low-income customers.
5. Direct Testimony and Exhibits of Nancy Brockway (May 1994), Application of Ohio Bell Telephone Company for Approval of An Alternative Form of Regulation (Ohio PUC). Prepared on behalf of the Legal Aid Societies of Dayton and Cleveland. Discusses the

evolving definition of universal service, in the context of a price cap proceeding. Demonstrates that Bell has not yet achieved universal service, particularly among low-income and minority Ohioans. Proposes Universal Service Access (USA) program, to go beyond Lifeline to a set of affordable rates for low-income customers. Also proposes Universal Telephone Access Fund, like a fuel fund, to raise contributions from ratepayers through a voluntary check-off. Proposes performance-based adjustments to price cap growth factor if Bell fails to make satisfactory progress towards achieving universal service. Proposes neighborhood telecomputing centers to assist inner-city youth acquire "driving skills on the information superhighway." Proposes greater public input in modernization decisions.

6. Direct Testimony and Exhibits/Surrebuttal of Nancy Brockway (December 1993/January 1994), Pennsylvania Public Utilities Commission v. The Bell Telephone Company of Pennsylvania (Penna. PUC). Prepared on behalf of Pennsylvania Public Utilities Law Project. Discusses the evolving definition of universal service, in the context of a state pursuing modern telecommunications investments.
7. Direct Testimony and Exhibits of Nancy Brockway, Revenue Requirements (April 1993). Re: Application of Texas Utilities Electric Company for Authority to Change Rates (Texas PUC). Prepared on behalf of Texas Legal Services Center. Discusses barriers to low income customers' participation in energy efficiency (DSM) programs, the value of reducing the bills of low-income customers (avoided credit and collection costs, and avoided societal externalities), cost-effectiveness of low-income DSM.
8. Direct Testimony and Exhibits of Nancy Brockway, Rate Design (April 1993). Re: Application of Texas Utilities Electric Company for Authority to Change Rates. Prepared on behalf of Texas Legal Services Center. Proposes pilot Maintenance of Effort rate to test whether lowering energy burden of poor enables them to make more consistent payments of electric bills, thus reducing utility credit and collection costs.
9. Direct Testimony and Exhibits of Nancy Brockway. (1992) Philadelphia Water Department rate case. Prepared on behalf of Philadelphia Public Advocate. Discusses costs of unrepaired system leaks.
10. Direct Testimony and Exhibits of Nancy Brockway (1991). New England Telephone Company Rate Case. Prepared on behalf of Rhode Island Legal Services. Discusses DNP for non-basic service, and procedures to make voluntary tollblocking more secure from toll use by non-customer residents.
11. Direct Testimony and Exhibits of Nancy Brockway. (July 1991). In Re: Kentucky Power Company Request for Increased Rates. Prepared on behalf of Low Income Residential Customers, Lexington Kentucky. Proposes pilot Low Income Rate based on short run marginal cost.

NANCY BROCKWAY: TESTIMONY AND REPRESENTATION

Case name	Client Name	Topic	Juris. & Docket No.	Date
Boston Edison Company	Mass. Senior Action, others	Electric industry restructuring	Massachusetts Department of Public Utilities	Ongoing
Eastern Edison Company	Mass. Senior Action, others	Electric industry restructuring	Massachusetts Department of Public Utilities, D.P.U. 96-24	Ongoing
Massachusetts Electric Company Restructuring Company Settlement	Individual low-income customers	Electric industry restructuring	Massachusetts Department of Public Utilities, D.P.U. 96-25	Ongoing
In the Matter of the Electric Industry Restructuring Plan	New Hampshire Legal Services	Low-income rates and DSM, impacts of restructuring on low-income consumers	New Hampshire Public Utilities Commission, D.R. 96-150	Nov., Dec. 1996
Boston Gas Company Unbundling and Rate Case	named Low-Income Intervenors	Gas industry unbundling, gas DSM for low-income customers, low-income rates	Massachusetts Department of Public Utilities, D.P.U. 96-50	Order 12/96
Notice of Inquiry/ Rulemaking...establishing the procedures to be followed in electric industry restructuring...	Mass. CAP Directors Association, Mass. Energy Directors Association, named Low-Income Intervenors	Electric industry restructuring	Massachusetts Department of Public Utilities, D.P.U. 96-100.	ongoing
Universal Service Docket	Pennsylvania Office of Consumer Advocate	Rate rebalancing, universal service, telephone penetration.	Pennsylvania Public Utilities Commission Docket No. I-00940035	1996
Massachusetts Electric Company Proposed Increase in Rates and Incentive Ratemaking Plan	Named Low-Income Intervenors	Incentive ratemaking plan, low-income discount rates and fees, low income DSM.	Massachusetts Department of Public Utilities, No. 95-40	1995

NANCY BROCKWAY: TESTIMONY AND REPRESENTATION

Case name	Client Name	Topic	Juris. & Docket No.	Date
In Re: Electric Industry Restructuring	Named Low-Income Consumers	Electric industry restructuring	Massachusetts D.P.U. Docket No. 95-30	ongoing
In Re: Complaint of Kenneth D. Williams v. Houston Lighting and Power Co.	Named Low-Income Consumers	Customer service, rate design, demand-side management, revenue requirements	Texas Public Utilities Docket No. 12065	1994-5
Open Access Non-Discriminatory Transmission Services ... and Recovery of Stranded Costs	Direct Action for Rates and Equality, Providence, Rhode Island	Open transmission access in interstate commerce, and stranded costs recovery.	FERC, Nos. RM95-8-000, RM94-7-000.	1994-5
Bath Water District, Proposed Increase in Rates	Maine Office of Public Advocate	Water district rate design, low-income water affordability	Maine Public Utilities Commission, Docket. No. 94-034	12/94, 3/95
Application of Ohio Bell Telephone Co. for Approval of Alternative Form of Regulation	Legal Aid Society of Cleveland and Dayton	Definition of universal telecommunications service, proposal for Universal Service Access program (USA).	Public Utilities Commission of Ohio, Case No. 93-487-TP-ALT	5/4/94
Pennsylvania PUC vs. Bell Telephone of Pennsylvania	Pennsylvania Public Utility Law Project	Definition of "universal telecommunications service"	Pennsylvania PUC No. P-930715	filed 12/93
Joint Application for Approval of Demand-Side Management Programs, etc.	LG&E; Legal Aid Society of Louisville, other Joint Applicants	Cost-effective DSM programs for low-income customers; collaborative process to design DSM programs; cost allocation and cost recovery.	Kentucky PSC No. 93-150	11/8/93
Texas Utilities Electric Company	Texas Legal Services Center	Costs and benefits of DSM targeted to low-income customers	Texas PUC No. 11735	1993
Texas Utilities Electric Company	Texas Legal Services Center	Proposed Maintenance of Effort Rate for low-income customers	Texas PUC No. 11735	1993
Philadelphia Water Department	Philadelphia Public Advocate	Costs of Unrepaired System Leaks	Philadelphia Water Comm'r.	1992

NANCY BROCKWAY: TESTIMONY AND REPRESENTATION

Case name	Client Name	Topic	Juris. & Docket No.	Date
New England Telephone	Rhode Island Legal Services	DNP for non-basic service	Rhode Island PUC, No. 1997	1991
Kentucky Power Co.	Kentucky Legal Services	Low Income Rate	Kentucky PSC No. 91-066	1991
Investigation into Modernization	Invited by Commission	Impact of modernization costs on low income telephone users	New York PSC	1991

NANCY BROCKWAY: RECENT PRESENTATIONS

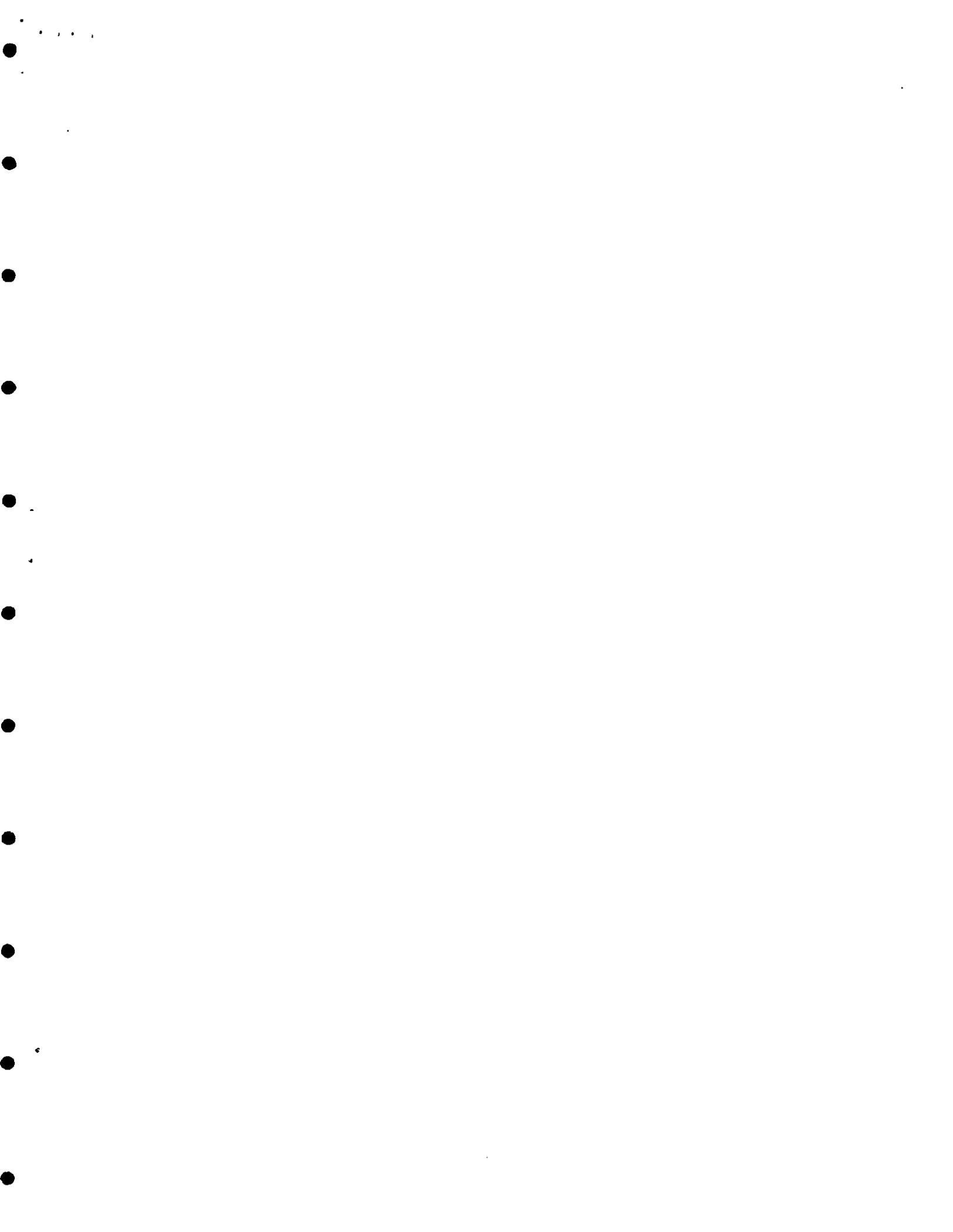
Forum	Topic	Date
NARUC and NCCEI Regional Disclosure Workshops	Consumer Disclosures in Restructuring	June 6, 1997
DOE Regional Restructuring Conference, Portland, ME.	Low-income restructuring issues in New England	May 23, 1997
Prairie States Legal Services	Utility Law: Customer Service Rules	May 19, 1997
Vermont State House of Representatives	History and Purpose of Public Utility Regulation	April 18, 1997
NASUCA Electric Restructuring Conference, Washington, D.C.	Consumer Issues in Restructuring	March, 1997
National Rural Electric Cooperative Assn Annual Meeting	Low-Income Issues and Cooperatives in Electric Industry Restructuring	March, 1997
National Consumer Law Center Annual Energy Affordability Conference	Restructuring the Electric and Gas Industries: Issues for Low-Income Consumers	February 26, 1997
Pennsylvania Public Utilities Commission - RAP Workshops on Electricity Restructuring	Universal Service, Default Suppliers, Metering and Reliability Issues in Restructuring	March 4, 1997
Oak Ridge National Laboratories Advanced Training	State Legislative Treatment of Low-Income Issues in Utility Restructuring	December 9, 1996
Electricité de France: Les Engagements Solidarité 1996-1997	Panorama des Utilities des USA vis-a-vis les Démunis (Overview of USA Utility Practice vis-a-vis Disadvantaged Customers)	November 25, 1996

NANCY BROCKWAY: RECENT PRESENTATIONS

Forum	Topic	Date
Indiana PSC Restructuring Roundtable	Impact on Low-Income Consumers of Electric Industry Restructuring	November 1, 1996
Indiana CAP Directors Association Training	Potential Avenues for Protecting Low-Income Customers in Electric and Gas Restructuring	October 31, 1996
NARUC/DOE Fourth National Electricity Forum: Toward a New Market Structure	Stranded Benefits: Support for Universal Service	October 21, 1996
United States Department of Energy, Regional Hearings on Electric Industry Restructuring	Impact of Restructuring on Low-Income Customers, and Options for Achieving Universal Service	October 10, 1996
Indiana Electric Association	Impact of Restructuring on Low-Income Customers, and Options for Achieving Universal Service	October 4, 1996
New Hampshire Restructuring Roundtable	Impact of Restructuring on Low-Income Customers, and Options for Achieving Universal Service	October 3, 1996
Massachusetts CAP Directors Association	The Massachusetts Electric Company Restructuring Settlement - Treatment of Low-Income Issues	October 1, 1996
New England CAP Directors Association	The Treatment of Low-Income Issues in the Legislation Passed in 1996 By Rhode Island, New Hampshire, and California	September 29, 1996
New England Public Power Association	The Role of Public Power in Achieving Universal Service in a Restructured Electric Industry	August 19, 1996
NARUC Annual Regulatory Training Institute	Consumer Protection Issues Arising Under Utility Deregulation	August 5, 1996
National Council on Competition in the Electric Industry	Public Benefits at Risk in the Move to Competition and Four Strategies to Preserve Them	July 25, 1996
Wisconsin Energy Policy Center	Impact of Restructuring on Low-Income Customers, and Options for Achieving Universal Service	July 18, 1996

NANCY BROCKWAY: RECENT PRESENTATIONS

Forum	Topic	Date
National Low Income Energy Coalition	Impact of Restructuring on Low-Income Customers, and Options for Achieving Universal Service	June 4, 1996
National Fuel Funds Network	The Cost of Achieving Affordable Electric and Gas Bills for All Americans	June 3, 1996
Consumer Federation of America	Achieving Universal Service in a Competitive Local Telephone Market	May 31, 1996
Minneapolis Department of Economic Services	The Role of Low-Income Energy Advocates in Achieving Universal Service	May 22, 1996
National Peoples Alliance	Impact of Restructuring on Low-Income Customers, and Options for Achieving Universal Service	April 25, 1996
Federal Communications Commission Joint Board on Universal Service	The Telecommunications Act of 1996: Universal Service Provisions and How to Implement Them	April 12, 1996
Executive Enterprises	Gas Unbundling: Implications for Captive Customers and Options for Mitigation	April 1, 1996
U.S. House of Representatives, Committee on Commerce, Subcommittee on Energy and Power	Protecting Low-Income Consumers in Electric Industry Restructuring: The Roles of Congress and the States	March 28, 1996
National Association of State Utility Consumer Advocates	Protecting Low-Income Consumers in Electric Industry Restructuring	March 1, 1996
National Association of Regulatory Utility Commissioners	Low-Income Protections in the Telecommunications Act of 1996	February 26, 1996
Maine Public Utilities Commission	Protecting Low-Income Consumers in Electric Industry Restructuring	February 2, 1996
Energy Coordination Association	Protecting Low-Income Consumers in Electric Industry Restructuring	January 23, 1996



PECO ENERGY COMPANY

I: Gross Revenue Loss of CAP

EXH. NB-2, p. 1 of 2

A. Eligible Non-Space Heat Customers

CAP Program Type:	Percentage of Income Payment Program
Customer Group:	General use
Income Eligibility:	150% FPL
Participation Rate:	50%
% of Income Copayment:	5%

	1	2	3	4	5	6	7	8	9
Poverty Level	Av. Gen. Use Res. Total Annual Bill	Ratio of LI Expenditure to Avg Exp.	Av. LI Gen. Use Cust. Annual Bill	overty Level for Area Avg. HHD Size	Tot. Company # Gen. Use Customers	Area Number Residents	Area Persons by Poverty	Area Distribution By Poverty	Number of Co. Gen. Use Cust. By Poverty
0-49%	\$912	100%	\$912	\$12,142	1142504	3187735	202368	6.35%	72,530
50-100	\$912	100%	\$912	\$12,142	1142504	3187735	189116	5.93%	67,780
100-150	\$912	100%	\$912	\$12,142	1142504	3187735	206961	6.49%	74,176
									214,486

	10	11	12	13	14	15	16	17
Poverty Level	Area Median Income	Midpoint of Poverty Range	Median LI Annual Income	Residential customer Bil erc. of Incom	LI Customer Bill Percent of Income	Affordable Low-Income Bill	Per LI HHD Ave. CAP Annual Cost	Aggregate Ave. CAP Cost
0-49%	\$37,826	0.25	\$3,035	2.4%	30.0%	\$152	\$760	\$27,569,721
50-100	\$37,826	0.75	\$9,106	2.4%	10.0%	\$455	\$457	\$15,477,303
100-150	\$37,826	1.25	\$15,177	2.4%	6.0%	\$759	\$153	\$5,680,035

Estimated Gross Revenue Cost, Gen'l Use: \$48,727,059

B. Eligible Space Heat Customers

Exh. NB-2, p. 2 of 2

Customer Group: Eligible space heat customers
 Income Eligibility: 150% FPL
 Participation Rate: 50%
 % of Income Copayment: 8%

Poverty Level	1 Av. SP HT Res. Total Annual Bill	2 Ratio of LI Expenditure to Avg Exp.	3 Av. LI SP HT Cust. Annual Bill	4 Poverty Level for Area Avg. HHD Size	5 Tot. Company Space Heat Customers	6 Area Number Residents	7 Area Persons by Poverty	8 Area Distribution By Poverty	9 Number of Co. Sp Ht Cust. By Poverty
0-49%	\$1,755	100%	\$1,755	\$12,142	152003	3187735	202368	6.35%	9,650
50-100	\$1,755	100%	\$1,755	\$12,142	152003	3187735	189116	5.93%	9,018
100-149	\$1,755	100%	\$1,755	\$12,142	152003	3187735	206961	6.49%	9,869
								28,536	28536

Poverty Level	10 Area Median Income	11 Midpoint of Poverty Range	12 Median LI Annual Income	13 Residential Customer Billerc. of Incom	14 LI Customer Bill Percent of Income	15 Affordable Low-Income Bill	16 Per LI HHD Ave. CAP Annual Cost	17 Aggregate Ave. CAP Cost
0-49%	\$37,826	0.25	\$3,035	4.6%	57.8%	\$243	\$1,512	\$7,295,970
50-100	\$37,826	0.75	\$9,106	4.6%	19.3%	\$728	\$1,027	\$4,628,391
100-149	\$37,826	1.25	\$15,177	4.6%	11.6%	\$1,214	\$541	\$2,668,692

Est'd Gross Revenue Cost - Sp. Heat: \$14,593,053

C. CAP Total Gross Revenue Cost

Exh. NB-2, p. 3 of 3

Estimated Gross Revenue Cost -GU **\$48,727,059**
 Est'd Gross Revenue Cost - Sp. Heat: **\$14,593,053**

TOTAL \$63,320,113