

CITY OF PITTSBURGH ET AL. STATEMENT NO. 2

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF DUQUESNE LIGHT COMPANY FOR
APPROVAL OF ITS RESTRUCTURING PLAN
UNDER SECTION 2806 OF THE PUBLIC UTILITY CODE

DOCKET NO. R-00974104

PREPARED DIRECT TESTIMONY AND
EXHIBITS OF

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SUBMITTED ON BEHALF OF:
THE CITY OF PITTSBURGH
PITTSBURGH BRANCH, N.A.A.C.P.
LOW-INCOME ADVOCATE PARTIES
CITIZEN POWER, INC.

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1 Q. PLEASE STATE YOUR NAME AND ADDRESS.

2 A. My name is Roger Colton. My address is 34 Warwick Road, Belmont, MA
3 02178.

4 Q. FOR WHOM DO YOU WORK AND IN WHAT CAPACITY?

5 A. I am a principal in the firm of Fisher, Sheehan & Colton, Public Finance and
6 General Economics (FSC). I provide technical assistance to a variety of public
7 utilities, state agencies and consumer organizations on rate and customer
8 service issues involving telephone, water/sewer, natural gas and electric utilities.
9 My resume is attached as Exhibit RDC-1.

10 Q. FOR WHOM ARE YOU PROVIDING THIS TESTIMONY?

11 A. I am appearing today to provide this testimony on behalf of four parties, the City
12 of Pittsburgh, the NAACP's Pittsburgh Branch, the LIAP low income group of
13 intervenors, and Citizen Power, Inc.

14 Q. PLEASE DESCRIBE YOUR INVOLVEMENT WITH THE DEBATES
15 CONCERNING RESTRUCTURING THE ELECTRIC INDUSTRY.

16 A. I have been involved with electric restructuring throughout the nation. My work
17 has been with state and local governments, with the federal government, and
18 with a variety of community-based organizations. A description of my
19 involvement with electric restructuring issues is attached as Exhibit RDC-2. I
20 also testified earlier this year before this Commission in the PECO Energy
21 restructuring case, R-00973953.

1 Q. PLEASE DESCRIBE YOUR EXPERIENCE WITH THE DESIGN OF LOW-
2 INCOME UTILITY AFFORDABILITY PROGRAMS.

3 A. I have been involved with designing low-income affordability programs for nearly
4 15 years. I have worked with electric and natural gas utilities, with state utility
5 commission staff, with community-based organizations, and with state
6 weatherization and fuel assistance offices to develop and implement affordable
7 rate programs, fuel assistance programs, and low-income energy efficiency
8 programs in nearly 25 states. A description of my involvement with the design of
9 low-income affordability programs is attached as Exhibit RDC-3.

10 Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY TODAY.

11 A. The purpose of my testimony is to review Duquesne Light Company's universal
12 service proposal as well as those aspects of its consumer education proposal
13 relating to low-income consumers. After an introduction, my testimony is divided
14 into three parts:

15 Part I: assesses the Duquesne Light universal service program and
16 makes recommendations;

17 Part II: assesses the Duquesne Light consumer education program and
18 makes recommendations; and

19 Part III: summarizes the recommendations I make.

20 In brief, my testimony concludes that the Commission should direct Duquesne
21 Light to do the following with its universal service program: to adopt a rate

1 affordability program funded at \$14.750 million; to adopt an expansion of its
2 LIURP efforts to be funded at 0.20% of total gross revenues; to tie LIURP and
3 the rate affordability program more closely together; to incorporate a renewable
4 pilot project as part of its LIURP efforts; and to adopt the 11-part consumer
5 education program contained in my exhibits. In making these recommendations,
6 I emphasize the fact that Duquesne Light just filed its universal service program
7 on or about November 1, 1997. That late filing provided an inadequate
8 opportunity to review and provide a thorough review of the filing. My review of
9 the universal service program filing will come at a subsequent date.

10 INTRODUCTION

11 **Q. PLEASE EXPLAIN THE OVERALL CONTEXT OF YOUR TESTIMONY TODAY.**

12 A. Moving to a competitive marketplace in the electric industry will likely have
13 significant adverse impacts on low-income consumers. A review of competitive,
14 non-electric industries (such as health care, personal lines of insurance,
15 telecommunications) reveals that, even if regulated, these industries have not
16 achieved and maintained universal service. Universal service is *not* the norm in
17 these industries and the competitive market has operated to impede rather than
18 to promote universal service. In each instance, it tends to be the poor and
19 minority consumers who are charged higher rates, provided lesser service or
20 excluded from the market altogether.

1 The failure to achieve universal service for home energy generally, and electricity
2 in particular, is substantively different from failing to achieve universal service for
3 telephone service, personal lines of insurance and even health care. Allowing a
4 competitive electric industry to yield penetration levels, service levels, and rate
5 levels that mirror these other competitive industries for low-income consumers
6 would be an unacceptable result.

7 **Q. WHAT CRITERIA SHOULD THE PUC APPLY IN DECIDING WHETHER TO**
8 **APPROVE, DISAPPROVE OR MODIFY DUQUESNE LIGHT'S PROPOSED**
9 **UNIVERSAL SERVICE PLAN?**

10 A. In light of the recognition that competitive markets impede rather than promote
11 universal service, the Pennsylvania PUC should assess the Duquesne Light
12 programs to determine whether Duquesne programs serve to attain and maintain
13 affordable service within the electric industry. In applying this criterion,
14 affordable service cannot be measured by reference to customers as a whole.
15 Instead, for there to be affordable service, there must be affordable service in
16 each sub-market as well as for consumers as a whole.

17 **PART I: UNIVERSAL SERVICE FOR LOW-INCOME CONSUMERS ..**

18 **A. Overview**

19 **Q. PLEASE EXPLAIN WHY LOW-INCOME CONSUMERS GENERATE**
20 **UNIVERSAL SERVICE CONCERNS.**

1 A. Low-income consumers tend to bear non-sustainable energy burdens (bills as a
2 percentage of income). Because of these non-sustainable burdens -- by "non-
3 sustainable," I mean burdens which cannot be paid in a consistently full and
4 timely fashion -- low-income consumers can be expected to experience arrears,
5 be subject to credit and collection efforts, have their service disconnected, and
6 be forced to make budget decisions between competing household necessities
7 (e.g., heat or eat).

8 **Q. WHAT ELECTRIC BURDENS DO LOW-INCOME CONSUMERS OF**
9 **DUQUESNE LIGHT FACE?**

10 A. According to the Duquesne Light FERC Form 1, the average residential bill for its
11 electric heating tariff was \$1,132. The average residential bill for the Company's
12 non-heating tariff was \$780. Adjusting those bills to take into account the
13 reduced consumption associated with poverty results in heating and non-heating
14 bills of \$1,080 and \$720 respectively. Given an average income for households
15 at or below 150 percent of the Poverty Level in Pittsburgh of roughly \$7,000, the
16 low-income heating customer experiences an energy burden of 14%, while the
17 non-heating customer experiences a burden of 9%.¹

18 Use of an average burden in this analysis, however, masks the problems which
19 the lowest income households experience. The energy burdens experienced by

¹Electric space heating is less than 10% of the low income customers of this company.
My exhibit RDC-6 reflects the low saturation.

1 households at various income ranges are set forth in Exhibit RDC-4. As this
2 exhibit shows, substantial numbers of consumers live in these lower income
3 brackets.

4 **Q. PLEASE EXPLAIN WHY THESE ENERGY BURDENS ARE NON-**
5 **SUSTAINABLE.**

6 A. According to the U.S. Department of Housing and Urban Development (HUD), a
7 household experiencing total shelter costs in excess of 30 percent of income is
8 likely to be over-extended. Total shelter costs include housing (rent or mortgage)
9 plus the cost of all utilities except telephones. A consumer who pays nine or 10
10 percent or more for his or her electric costs is not going to experience total
11 shelter costs of 30 percent or less. Likewise, a consumer who pays 14 or 15
12 percent for heating bills will not be able to limit total shelter costs to 30 percent of
13 income.

14 **Q. WHAT IS THE UNIVERSAL SERVICE RESPONSE TO THESE NON-**
15 **SUSTAINABLE ENERGY BURDENS?**

16 A. The appropriate universal service response is to increase the affordability of the
17 electric bill. In this context, I define "affordable" in the same way the Federal
18 Communications Commission (FCC) did in its May 1997 "universal service" order
19 to implement the Telecommunications Act of 1996. The FCC decided that the
20 concept of "affordability" includes both an "absolute" ("to have enough or the

1 means for") and a "relative" ("to bear the cost of without serious detriment")
2 component. According to the FCC, "both the absolute and relative components
3 must be considered in making the affordability determination required under the
4 statute." In implementing these policy decisions, the "affordability" of Duquesne
5 Light's universal service program should be judged by whether service under the
6 program offers a level of affordability consistent with the PUC's percentage of
7 income payment plan matrix in the CAP regulations within the consumption
8 constraint set out immediately below.

9 **Q. WHAT CONSUMPTION CONSTRAINT WOULD YOU ESTABLISH?**

10 A. A Universal Service Program should not be exclusively focused on consumption.
11 It is reasonable, assuming that a consumer has received all available energy
12 efficiency treatment, to limit the actual consumption that is eligible for support.
13 Because of the natural variability of consumption amongst households around a
14 mean, such a limit should not be placed at or below average usage. A
15 reasonable rule is that universal service should not completely underwrite the
16 cost of electric consumption greater than 120% of the average median
17 residential consumption for the rate class, size and type of dwelling in which the
18 service is provided for households who have received (or been offered) energy
19 efficiency treatment.

20 **Q. HOW DO YOU INCREASE THE AFFORDABILITY OF LOW-INCOME**

1 **ELECTRIC BILLS?**

2 A. There are only two basic ways for Duquesne Light to increase the affordability of
3 low-income electric bills. It can either increase the income of such customers or
4 it can decrease their bills.

5 **Q. HOW MIGHT DUQUESNE LIGHT INCREASE THE INCOME OF LOW-INCOME**
6 **CUSTOMERS?**

7 A. The Duquesne Light universal service program should emulate the utility
8 programs such as those I have briefly described in Exhibit RDC-5 to help
9 increase the incomes of low-income consumers.

10 **B. Rate Affordability Program (CAP)**

11 **Q. HOW MIGHT DUQUESNE LIGHT LOWER THE UTILITY BILLS OF A LOW-**
12 **INCOME CUSTOMER TO INCREASE AFFORDABILITY?**

13 A. Only two ways exist to lower a utility bill. You can either (1) decrease the price,
14 or (2) decrease the consumption. Efforts to increase affordability in these two
15 ways are what lie at the heart of the Pennsylvania CAP and LIURP programs
16 respectively. They should be the basis for the Duquesne Light universal service
17 program.

18 **Q. WHAT WOULD IT COST FOR DUQUESNE LIGHT TO LOWER THE PRICE OF**
19 **ELECTRIC BILLS TO THE BURDEN PREVIOUSLY RECOMMENDED BY THE**

1 **PENNSYLVANIA PUC?**

2 A. I estimate the cost of such an affordable rate program to be \$14.750 million.
3 The derivation of that estimate is set forth in Exhibit RDC-6. The net costs of this
4 program will need to be determined after a review of the Duquesne Light
5 universal service program which the Company was to have been filed on or
6 about November 1, 1997.²

7 **Q. WHY DO YOU RECOMMEND THIS LEVEL OF FUNDING FOR THE**
8 **DUQUESNE LIGHT RATE AFFORDABILITY PROGRAM?**

9 A. According to the most recent American Housing Survey, **the Pittsburgh**
10 **metropolitan area has nearly 100,000 housing units occupied by**
11 **households with incomes of less than 150 percent of the federal Poverty**
12 **Level. In contrast, the existing Duquesne Light rate affordability *pilot***
13 **program reaches only 1,200 low-income consumers.** That level of effort
14 makes no meaningful contribution to universal service, or affordable service, for
15 low-income consumers in Pittsburgh. I do not believe that the General
16 Assembly's directive that existing levels of effort form the minimum level of
17 universal service effort in a utility's restructuring plan was meant to freeze
18 universal service efforts at this pilot level, particularly given its clear inadequacy.

²The computer spreadsheet model which I used to calculate RDC-6 in this case is available in electronic form to any rate case party by emailing me at the address on the front of the testimony, and indicating the docket number. Counsel has instructed me to make the model available immediately, without the necessity of written discovery.

1 Q. WHAT RATE IMPACT WOULD FUNDING SUCH A PROGRAM HAVE ON
2 DUQUESNE LIGHT CUSTOMERS?

3 A. The rate impact on consumers depends on the consumption base over which the
4 costs of the rate affordability program is spread. For all of the reasons I outline
5 below, limiting rate recovery strictly to residential customers is inappropriate.

6 Q. SHOULD THE RATE AFFORDABILITY BENEFITS BE LIMITED TO THE
7 DISTRIBUTION COMPANY, IN THIS CASE DUQUESNE?

8 A. No. Giving energy suppliers access to those benefits will promote competition
9 for low income consumers. Some call this "portability". This is a concept I urge
10 the Commission to embrace.

11 Q. WHY SHOULD ALL CUSTOMERS CONTRIBUTE TO THE RATE
12 AFFORDABILITY PROGRAM YOU PROPOSE?

13 A. From the perspective of local government, the obligation to support universal
14 service is not an obligation that has been imposed upon a utility by the
15 government. Instead, it is an obligation to which utilities have submitted
16 themselves, one they have voluntarily taken on. The obligation is an explicit *quid*
17 *pro quo* that was exacted in exchange for substantial -- and continuing -- public
18 benefits. So long as the utility enjoys the fruits of that exchange, it should abide
19 by the obligations that were bargained for as part of the exchange. .

20 In particular, electric utilities have been granted two sets of public perquisites: (1)
21 the right to exercise eminent domain; and (2) the right to use the public's streets,

1 alleys and public ways as transportation corridors. In accepting these public
2 perquisites, electric utilities have dedicated their property so supported to a
3 public use, including the support of universal service.

4 **Q. WHY DOES THIS DISCUSSION SUPPORT HAVING ALL CLASSES HELP**
5 **PAY FOR UNIVERSAL SERVICE SUPPORT?**

6 A. Four reasons support this conclusion. First, utilities are unique in that they are
7 granted the right to use city streets as well as the right to exercise the power of
8 eminent domain. Second, those public benefits have a distinct value, which is
9 positive; indeed, the right to eminent domain is not only *valuable*, but is essential
10 to public utilities. This value inures to the benefit of all ratepayers. If a utility
11 could not use eminent domain, in other words, the increased costs that would
12 arise as a result would be borne by all ratepayers. All end users gain the benefit.
13 Third, a commitment to universal service is simply the compensation to the
14 public for having provided these public benefits. There has been an exchange of
15 consideration. On the one hand, electric utilities are provided the right to use
16 public streets and to exercise eminent domain. On the other hand, the utilities
17 "pay" for these grants through a commitment to universal service. Finally,
18 offering unaffordable service is the functional equivalent of denying service
19 altogether. Accordingly, a commitment to universal service implies a
20 commitment to affordable service. In sum, having obtained the benefits of the
21 bargain, all end users should be required to help fulfill the responsibility part of

1 the bargain. To allow otherwise would be to grant the benefit while forgiving the
2 costs.

3 **Q. HAS ANYONE ELSE REACHED THIS SAME CONCLUSION?**

4 A. Yes. According to the Practicing Law Institute:

5 Local governments are realizing the unique value of public rights-
6 of-way for which they act as trustee. Public rights-of-way are
7 acquired and paid for through government action, usually the
8 exercise of a jurisdiction's eminent domain powers. Thus, the
9 public rights of way are the most valuable property rights in the
10 hands of government. . . Local governments must receive fair
11 compensation for granting use of the rights-of-way. Otherwise,
12 government is merely subsidizing the businesses of private rights-
13 of-way users. . . Traditional users of the public rights-of-way were
14 deemed to provide public compensation in the form of universal
15 service and regulated rates. . . With traditional users of public rights-
16 of-way, compensation for use of the public rights-of-way was
17 passed onto the end consumer through rate regulation and other
18 public benefits like universal service, rather than being paid directly
19 by the governments, the actual owner of the public rights-of-way.³

20 **Q. ARE YOU SUGGESTING THAT THE COMMISSION CONTRADICT THE**
21 **UNIVERSAL SERVICE ALLOCATIONS PROVIDED BY THE COMPETITION**

³ Nicholas Miller and Kristen Niven, "What is the Emerging Role of Local Governments in This New World of Telecommunications," in *Cable Television Law 1996: Competition in Video and Telephony*, at 12 - 13 (1996: Practicing Law Institute). See also, Peter Fox-Penner (1997). *Electric Utility Restructuring: A Guide for the Competitive Era*, 329, Public Utility Reports: Arlington, VA ("Others argue that the obligation to provide for universal service is not one imposed upon the industry, but rather an obligation that the utility industry has voluntarily accepted as part of its franchise agreement. This obligation is one that serves as the industry's "payment" for the grant of substantial public benefits provided to it. So long as the utilities enjoy the fruits of that exchange, they must abide by the obligations that were bargained for as part of that exchange.").

1 **ACT?**

2 A. I am not suggesting that the Commission violate the law. To the extent,
3 however, that the statute provides the Commission with the discretion to
4 increase its universal service support in furtherance of the public interests I have
5 discussed, I urge it to so exercise its discretion. I do note that the Act's definition
6 of public utility makes it clear that merely providing energy, as an alternative
7 supplier, does not entitle an energy company to Pennsylvania's eminent domain
8 powers.⁴ Only the wires company, in this case Duquesne, has that power.⁵ This
9 underscores the importance of insuring a fair exchange — universal service for
10 the eminent domain power.

11 **Q. HOW DO YOU PROPOSE THE UNIVERSAL SERVICE FUNDING BE**
12 **RECOVERED?**

13 A. The Company should recover its universal service costs through distribution
14 charges. The universal service costs currently reflected in customer rates, as

⁴The Act amended the definition of "public utility" in 66 Pa. C.S. §102 to exclude the **non**-local distributor energy suppliers: "The term. . . 'public utility'. . . does not include: . . . (vi) electric generation supplier companies except for the limited purposes as described in sections 2809 (relating to requirements for electric generation suppliers) and 2810 (relating to revenue neutral reconciliation). "Public utilities" ordinarily have eminent domain powers.

⁵Pennsylvania law restricts the power of eminent domain to public purposes. Pa. Const. art 1 § 10. A public utility which has received a certificate of public convenience, 66 Pa.C.S. § 1104, can use the alternate "quick take" provisions of the Business Corporation Law to condemn property, 15 Pa.C.S. § 1511. For example, transmission-related condemnation can proceed through a PUC proceeding. 52 PA. CODE §§ 57.71-.77, rather than an ordinarily longer civil trial.

1 well as any future universal service charges, shall remain bundled and shall not
2 separately appear as line items on customer bills.

3 **Q. PLEASE EXPLAIN THE MANNER IN WHICH YOU PROPOSE TO**
4 **ADMINISTER THE UNIVERSAL SERVICE FUNDS.**

5 A. Duquesne Light should contract out the administration and delivery of universal
6 service programs to an experienced non-profit, community-based organization
7 with both a strong track record in the provision of energy assistance,
8 conservation and education programs, and the ability to leverage significant
9 amounts of additional public and private resources to help resolve the energy
10 problems of Duquesne's low income customers. These programs should
11 include: budget counseling, home repair, heating system repair, job development
12 and placement, and related services.

13 **C. Low-Income Energy Efficiency (LIURP).**

14 **Q. WHAT DO YOU RECOMMEND WITH RESPECT TO LOW-INCOME ENERGY**
15 **EFFICIENCY SPENDING?**

16 A. I recommend that Duquesne Light devote 0.20 percent of its annual gross
17 revenues to spending on low-income energy efficiency programs through LIURP.
18 Given Duquesne Light's gross revenues of \$1.1 billion in 1996, I recommend a
19 total LIURP expenditure of \$2.214 million.

1 Q. **WHY DO YOU RECOMMEND THIS LEVEL OF FUNDING?**

2 A. Energy efficiency can be an effective tool to use in reducing low-income energy
3 needs for many households. In fact, the plight of many of the households most
4 significantly in need can be addressed through increased efficiency in usage. It
5 is generally recognized that energy efficiency is a more efficient means of
6 addressing low-income energy needs over the long term than providing fuel
7 assistance or rate relief. Energy efficiency provides continuing benefits year-in
8 and year-out. Fuel assistance and rate relief, on the other hand, provides
9 assistance to help pay current utility bills (including arrears in some cases); each
10 year, a new round of assistance must be provided.

11 Energy efficiency is an important supplement to a rate affordability program even
12 in a non-electric heat situation. Even when electricity is not used for space
13 heating, electric bills can represent 60 percent or more of a low-income
14 household's total energy bill. As a result, the LIURP program is a particularly
15 important element to universal service for Duquesne Light.

16 In contrast to this demonstrated need, while the Duquesne Light LIURP effort is
17 nationally recognized as being state-of-the-art in saving energy (achieving
18 energy savings of 30 and 40%), it nonetheless reaches only a small fraction of
19 low-income homes per year (reported to be 600 - 650 homes per year). That
20 level of effort is an inadequate response to the clearly effective efforts by
21 Duquesne Light to help address affordability, and inability-to-pay problems,

1 through energy efficiency investments.

2 **Q. SO YOU ARE NOT CRITICIZING THE STRUCTURE OR OPERATION OF THE**
3 **DUQUESNE LIGHT SMART COMFORT PROGRAM?**

4 A. No. I am suggesting that it be expanded to reach additional customers. An
5 independent evaluation of the Duquesne Light program concluded that: "Through
6 [its] new approach to low-income energy use, Duquesne converted its
7 weatherization program into a groundbreaking customized program that has
8 since set the standard for low-income energy usage reduction in Pennsylvania."⁶
9 According to this evaluation, Smart Comfort is expected to achieve an annual
10 usage reduction of 40% or better. The evaluation concluded, to the Company's
11 credit:

12 Implementing low-income programs. . . may well not be the first choice of
13 utilities in this age of increasing competition. Yet Duquesne has shown
14 that through creative program design, these programs can be delivered in
15 a cost-effective manner. . . To its credit, Smart Comfort has clearly
16 demonstrated impressive energy savings with equally impressive cost
17 effectiveness.

18 **Q. WHAT IS THE SECOND CHANGE YOU PROPOSE FOR THE DUQUESNE**
19 **LIGHT SMART COMFORT PROGRAM?**

20 A. Targeting utility-financed energy efficiency improvements to high use participants
21 in the rate affordability program will improve both the effectiveness and the cost-
22 effectiveness of that program. There is a clear overlap between the interests of

⁶ The Results Center (1996). *Duquesne Light Company: Smart Comfort Program*, at 6, IRT Environment: Boulder, CO.

1 the affordable energy programs and those of the energy efficiency programs.
2 Accordingly, I recommend that Duquesne Light's rate affordability program
3 include an automatic referral to LIURP for all high users (those whose
4 consumption exceeds the average for their rate class). In addition, I recommend
5 that the rate affordability program include personal follow-up, particularly to
6 ensure that those de facto electric heating or water heating cases are receiving
7 the services they need in order to get their central heating or water heating
8 restored.

9 In addition, the Company should provide in-person interviews to all successful
10 CAP Rate applicants whose annualized average monthly electrical consumption
11 is in excess of 110% of subsidized levels to (1) educate them on energy
12 conservation and (2) furnish them with referrals to organizations which might
13 assist them to reduce their energy consumption. These educational interviews
14 should be provided by an independent contractor employing for the purpose
15 PACE-certified energy educators. Such interviews shall be a LIURP measure
16 and, as with other LIURP measures, will be subject to independent evaluation to
17 determine their cost-effectiveness under the Commission's existing standard of a
18 simple payback of seven years or less. The cost of conducting such interviews
19 should be deemed part of the LIURP funding levels.

20 **Q. DO YOU PROPOSE ANY ADDITIONAL CHANGE TO THE DUQUESNE LIGHT**
21 **LIURP EFFORT?**

1 A. Yes. Duquesne Light should implement a pilot program in renewable energy
2 applications -- like wind or solar power -- in retrofits or new construction or both,
3 which is designed to cost effectively apply existing, proven renewable
4 technologies in homes that may be already energy efficient. This pilot should be
5 designed to help close the affordability gap for low income customers.

6 **Q. WHY SHOULD DUQUESNE LIGHT PURSUE SUCH A PROGRAM?**

7 A. The rationale for such a program is much the same as the rationale for delivering
8 energy efficiency in the first place. As I wrote more than 15 years ago:

9 The conceptual basis for providing full energy services is quite easy to
10 grasp. The concept is simply that providing electricity and natural gas is
11 not an end in itself. Supplying energy is rather a means to provide results
12 such as heat, light and motion. What a utility company does for its
13 customers is to wash the dishes and heat the house. Thus, providing hot
14 water through a solar collector or providing a warm house through
15 insulation constitutes the same utility service as providing the natural gas
16 or electricity necessary to accomplish the same end results ... As an
17 energy service, financing a solar water heater is no different from
18 increasing the supply of natural gas or electricity to accomplish the same
19 result ... In this framework, utility companies would evaluate the various
20 alternative services and provide whichever one was the least costly.⁷

21 This statement is as true today as it was in 1982. The goal of LIURP should be
22 to cost-effectively reduce low-income energy consumption. That goal might be
23 accomplished through the offer of energy efficiency or energy conservation
24 measures. Alternatively, that goal might be accomplished through the
25 installation of renewable technologies. The goal remains the same, and whether

⁷ Roger Colton, "Mandatory Utility Financing of Conservation and Solar Measures," 3 *Solar Law Reporter* 767 (1982).

1 it is accomplished through conservation measures or renewables should be
2 irrelevant to the purposes of the program.

3 **Q. DO YOU RECOMMEND A SPECIFIC ADMINISTRATIVE STRUCTURE FOR**
4 **THE COMPANY'S LIURP EFFORT?**

5 A. Yes. I recommend the establishment of a LIURP Oversight Committee. The
6 make-up of the LIURP Oversight Committee should include interested consumer
7 and public representatives with experience in energy conservation. While the
8 Company would be represented on the Committee the non-Company members
9 should retain a majority vote. The LIURP Oversight Committee should meet as
10 needed, but not less than four times per year. The Company should provide
11 Committee members, in advance of each meeting date, the following current
12 information and documents regarding the LIURP program: financial reports;
13 evaluation reports; a narrative of program successes and challenges, as
14 measured against the stated objectives. The duties of the LIURP Oversight
15 Committee should include the development of a program performance standard
16 and the review and approval of: the RFP for the LIURP contractors, the selection
17 of the LIURP contractors, the LIURP evaluation plan, the RFP for the
18 independent evaluator(s), the evaluator selection, all draft and final evaluation
19 reports, and other program design and implementation matters.

20 **D. Summary.**

1 Q. CAN YOU SUMMARIZE YOUR RECOMMENDATIONS AS TO THE CHANGES
2 WHICH SHOULD BE MADE TO DUQUESNE LIGHT'S UNIVERSAL SERVICE
3 PROGRAM?

4 A. Yes. A summary of my recommendations for Duquesne Light's universal service
5 program is set forth as Exhibit RDC-7.

6 Q. HOW, IF AT ALL, SHOULD A POSSIBLE MERGER BETWEEN WEST PENN
7 POWER AND DUQUESNE LIGHT AFFECT THE UNIVERSAL SERVICE
8 PROGRAMS OF THE TWO UTILITIES?

9 A. Basic merger law requires that a merger, at the least, result in no adverse
10 impacts on consumers. In addition, merger approval should only be granted if a
11 merger, in fact, generates net positive benefits to ratepayers. Based on this law,
12 and as a matter of good policy, the merger of these two companies should only
13 be approved if, at the least, the universal service program of the least favorable
14 company be raised to the same level as the universal service program of the
15 more favorable company. In this instance, I mean that West Penn's LIURP
16 program should be brought up to the standards and performance levels of the
17 Duquesne program, and both enhanced to the levels I have suggested. The
18 Commission should in no way countenance changes in the Duquesne program
19 that might diminish its effectiveness.

20 In addition, as discussed in detail above, Duquesne Light's LIURP program

1 delivery mechanism, in particular, has proven to be highly effective and cost-
2 effective. It should be maintained and expanded should the merger be
3 approved.

4 While I don't mean to turn my testimony to the issues to be addressed in the
5 Commission's merger docket, I address the matter here because, in my view, the
6 Commission's decisions aiding Duquesne's low income customers could be
7 reversed through post-merger activities of a new, and remotely-located owner
8 with a poor track record in LIURP delivery. Without the measures I propose, low-
9 income customers will see their universal service benefits diluted and will,
10 therefore, experience an adverse, and unlawful, impact as a result of the merger.

11 **II. Consumer Education.**

12 **Q. ARE THERE ANY GENERAL PRINCIPLES THAT GUIDE YOUR APPROACH**
13 **TO CONSUMER EDUCATION IN A RESTRUCTURED ELECTRIC INDUSTRY?**

14 **A.** Yes. First, there is a significant difference between three types of activity: (1)
15 engaging in marketing; (2) providing information; and (3) providing education.
16 What is needed from Duquesne Light at this point is consumer education, *not*
17 merely information provision, and not merely marketing. Second, the actual
18 delivery of education is but one part of a consumer education program. An
19 effective education program must incorporate a significant planning component,
20 a significant evaluation component, and a significant component where

1 Duquesne Light adjusts its education efforts based on the feedback it develops
2 as to program effectiveness.

3 **A. Marketing, Information and Education.**

4 **Q. PLEASE EXPLAIN THE DISTINCTION YOU DRAW BETWEEN PROVIDING**
5 **INFORMATION, PROVIDING EDUCATION, AND ENGAGING IN MARKETING.**

6 A. The May 8, 1997 statement of Commissioner Brownell makes the distinction
7 quite well. Therein, she states that "education can be distinguished from
8 information when a customer is able to take the information and use it to make
9 better decisions ... information does not qualify as education... [C]onsumer
10 education involves efforts to provide consumers with skills and knowledge to
11 allocate their resources wisely in the marketplace." In contrast, as
12 Commissioner Brownell stated, "the ultimate goal of marketing clearly is to
13 promote the sales of goods and services. . . .Marketing can be described as the
14 process of planning and executing the conception, pricing, promotion and
15 distribution of ideas, goods and services to create exchanges that satisfy
16 individual and organizational goals."

17 **Q. HAS THERE BEEN ANY CONSIDERATION OF THE DIFFERENCE BETWEEN**
18 **CONSUMER INFORMATION AND CONSUMER EDUCATION IN**
19 **PENNSYLVANIA IN PARTICULAR?**

20 A. Yes. In 1988, Drew Hyman, from Penn State University, considered this issue

1 within the context of low-income fuel assistance. The Penn State report found
2 that "most consumers do not have *effective knowledge* about those [energy
3 assistance] programs which exist." (emphasis added). Moreover, Penn State
4 concluded that consumer education can fill in the missing gaps in consumer
5 knowledge and teach consumers to use the information available to them in an
6 effective manner. This concept of "effective knowledge" is one contribution the
7 Penn State research has made. "Effective knowledge" involves not only
8 conveying information, but teaching consumers how to use that information as
9 well. According to the Penn State work, consumers must know how to act upon
10 the information they are given.

11 The Duquesne Light consumer education program should be overseen as
12 described in the consumer education proposal below to ensure that the program
13 truly concentrates on education, not on mere marketing or information
14 distribution.

15 **Q. DO YOU HAVE ANY OTHER SUGGESTION ON HOW TO INCREASE THE**
16 **EFFECTIVENESS OF CONSUMER EDUCATION?**

17 **A.** Yes. Excessive reliance upon a media campaign as a mechanism for consumer
18 education is not likely to be successful. Professor Brenda Dervin⁸ states that
19 one "well-established premise of public communication/education campaign

⁸Communications Department, Ohio State University, Columbus, OH.

1 design [is] that mass mediated messages are rarely effective." According to
2 Professor Dervin, media-based campaigns tend to have low penetration levels,
3 with a typical public service announcement campaign producing awareness rates
4 as low as 5 - 10%. What is needed is an added focus on community-based
5 education as well. The community education proposal I outline below includes a
6 substantial emphasis on community-based education.

7 **B. Planning the Consumer Education Program.**

8 **Q. PLEASE EXPLAIN THE PLANNING THAT YOU RECOMMEND BE MADE A**
9 **PART OF THE DUQUESNE LIGHT CONSUMER EDUCATION PROGRAM.**

10 **A.** A consumer education program begins many steps before the actual provision of
11 education. In order to determine what type of program should be adopted,
12 substantial planning must occur before the design and development of the
13 program ever begins. The first step in the Duquesne Light education program
14 should be a consumer research step. A consumer research section of the
15 education plan should involve the four inquiries set forth in Exhibit RDC-8.
16 Moreover, in engaging in each of these steps, there is a need for Duquesne Light
17 to segment its research and analysis by relevant consumer groups. Such groups
18 may be demarcated by age, race/ethnicity, socio-economic status, or some other
19 factor.

20 The second step should involve setting goals, objectives, strategies and tactics.

1 Basic planning calls for broad policy goals to next be translated into objectives.
2 Objectives are then matched with specific strategic approaches which are then
3 implemented through specific tactics. Objectives are to be: (a) attainable; and
4 (b) measurable. Without these attributes, it is impossible to know to what extent,
5 if at all, your strategies and tactics are working. An adequate planning process
6 finally would allow a measurement of whether the objective has been
7 accomplished and, if not, enable the planner to trace that failure to a specific
8 strategy or tactic that did not do what it was intended to do.

9 The third step in planning a consumer education program is to decide, based on
10 all of the above, what needs to be said. A four phase consumer education
11 program, modeled after the program proposed in Vermont, would include those
12 elements set forth in Exhibit RDC-9.

13 Finally, the Duquesne Light education program planning process should decide,
14 again based on everything that's been said above, on the *mechanisms* for
15 *delivering its education*. Delivery includes a determination, for example, of
16 whether to use the mass media or to use community-based outreach; whether to
17 use direct mailings; and the like.

1 **C. The Role of Evaluation and Adjustment.**

2 **Q. PLEASE EXPLAIN THE APPROPRIATE EVALUATION COMPONENT OF A**
3 **CONSUMER EDUCATION PROGRAM FOR DUQUESNE LIGHT.**

4 A. Duquesne Light provides no mechanism to evaluate and adjust its consumer
5 education program as it is implemented. Given the inadequacies of the
6 Company's process of setting goals, objectives, strategies and tactics, I
7 recognize that it is impossible for it now to set forth an appropriate monitoring,
8 feedback and adjustment process. Without measurable objectives, for example,
9 it is not possible to determine whether the education program is accomplishing
10 what it was intended to accomplish, let alone decide whether any failure that
11 might exist flows from a strategic miscalculation or an error in tactics. Moreover,
12 without being able to trace a tactic back through a strategy to a measurable
13 objective, it is impossible to determine whether a failed tactic flows from a design
14 failure or an implementation failure.

15 What the Duquesne Light consumer education program should thus have is a
16 monitoring effort designed to determine:

- 17
- 18 1. Whether the objectives are being met, and to what extent;
 - 19 2. If not, where the consumer education process is breaking down; and
 - 20 3. What should be changed in the education process to respond to the
 - 21 findings in 1 and 2 immediately above.

22 A procedure for evaluation and adjustment within a planning process is set forth
23 in Exhibit RDC-10. Only after Duquesne Light completes each of the steps

1 outlined in Exhibit RDC-10 is it ready to sit down and develop its consumer
2 education program. Only after each step is completed does West Penn Power
3 (1) know what education needs to occur; (2) know what needs to be done in
4 order to educate rather than simply to provide information; (3) know how to reach
5 different consumers with different messages; and (4) know how to evaluate and
6 modify its program if the program falls short of expected or desired outcomes.

7 In sum, Duquesne Light must determine specifically what it is trying to
8 accomplish and specifically how it intends to accomplish it. It can only at that
9 point develop its consumer education program. Its program would include tasks,
10 timelines, dates for deliverables, and resource commitments in furtherance of its
11 planning and evaluation efforts.

12 **D. Proposal for Duquesne Light Consumer Education Program.**

13 **Q. GIVEN YOUR DISCUSSION ABOVE, WHAT DO YOU RECOMMEND THE**
14 **COMMISSION DO RELATIVE TO DUQUESNE LIGHT'S CONSUMER**
15 **EDUCATION PROGRAM?**

16 **A.** The Pennsylvania PUC should adopt the 11-step plan set forth in Exhibit RDC-
17 11.

18 **III. Summary of Recommendations.**

19 **Q. PLEASE SUMMARIZE THE CHANGES TO THE DUQUESNE LIGHT**

1 **UNIVERSAL SERVICE PROGRAM THAT YOU RECOMMEND BE MADE.**

2 A. I recommend the following for Duquesne Light's universal service program: (1)
3 an expansion of the rate affordability program to at least 50 percent of the
4 eligible population; (2) a engagement in outreach efforts to promote income-
5 enhancing activities such as implementation of a BOSS system and promotion of
6 the EITC; (3) recovery of the costs of the rate affordability program from all
7 customer classes; and (4) administration of the rate affordability program through
8 a private non-profit third party entity. In addition, I recommend the following for
9 the Duquesne Light LIURP efforts: (1) an expansion of program funding to
10 0.20% of total gross revenues; (2) the creation of an explicit tie between the rate
11 affordability program and LIURP, including the referral to LIURP of any "high
12 use" rate affordability participant; (3) assurance of personal follow-up with high
13 use rate affordability participants to ensure that those de facto electric heating or
14 water heating cases are receiving the services they need in order to get their
15 central heating or water heating restored; and (4) the initiation of a renewable
16 resource pilot program component to LIURP. I also urge special attention to
17 survival of the present high-performing program in the event of a merger.

18 **Q. CAN YOU SUMMARIZE THE UNIVERSAL SERVICE BUDGET THAT YOU**
19 **PROPOSE FOR DUQUESNE LIGHT?**

20 A. Yes. A summary of the budget is included as Exhibit RDC-12.

1 Q. PLEASE SUMMARIZE THE CHANGES TO THE DUQUESNE LIGHT
2 CONSUMER EDUCATION PROGRAM THAT YOU RECOMMEND BE MADE.

3 A. An 11-part consumer education proposal was set forth in Exhibit RDC-11.

4 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

5 A. Yes it does.

6 C:\PENNRGL\LITIGIOTODAY\SDUQTE-1.WPD

City of Pittsburgh, *et al.* Statement No. 2
EXHIBIT RDC-1

Before the
Pennsylvania Public Utility Commission

Duquesne Light Company
Restructuring Plan

Docket R-00974104

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Resume of Roger D. Colton

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EDUCATION:

- J.D. (Order of the Coif), University of Florida, 1981
- M.A. (Economics), McGregor School, Antioch University (1993)
- B.A., Iowa State University (1975)

PROFESSIONAL EXPERIENCE:

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

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

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory bodies in more than two dozen states. He is particularly noted for creative program design and implementation within tight budget constraints. Colton has published seven books and more than 50 journal articles on a wide range of legal and economic subjects.

National Consumer Law Center (NCLC): 1986 - 1994

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

Community Action Research Group (CARG): 1981 - 1985

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

PROFESSIONAL AFFILIATIONS:

- Member: Board of Directors, Vermont Energy Investment Corporation.
- Member: Board of Directors, Affordable Comfort, Inc.
- Member: Editorial Advisory Board, International Library, *Public Utility Law Anthology*.
- Member: Fair Housing Commission (Belmont, MA).
- Member: ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort HVAC Systems for Multiple Occupancy Buildings*
- Member: National Advisory Committee, U.S. Department of Housing and Urban Development, Calculation of Utility Allowances for Public Housing.

PROFESSIONAL ASSOCIATIONS:

- National Association of Housing and Redevelopment Officials (NAHRO).
- Association for Enterprise Opportunity.
- Association of Energy Engineers, Energy Marketing Section.
- Iowa State Bar Association.
- Association for Institutional Thought.
- National Community Reinvestment Coalition.
- National Association of Human Rights Workers.

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- c. Volume 3: *An Evaluation of Low-Income Utility Protections in Maine: Fuel Assistance and Family Crisis Benefits.*

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

Roger Colton is an attorney and an economist who has done substantial work both in the area of electric industry restructuring and in the area of consumer protection. Colton was hired by the National Council on Competition in the Electric Industry, a joint project of the National Association of Regulatory Utility Commissioners and the National Conference of State Legislatures, to prepare that organization's evaluation of the impact of restructuring on "small users," including residential and small business customers. He has completed a report for Oak Ridge National Laboratory on the obligation to serve in a restructured electric industry. He has been hired by Oak Ridge to consider federal regulation of non-energy industries to assess the lessons that might be learned for the electric industry. He is also currently working with the University of St. Thomas (St. Paul) to assess the impacts of restructuring on particular neighborhoods in Minneapolis/St. Paul.

Roger routinely provides assistance to public officials regarding restructuring issues. He was hired by the Vermont legislature as well as the Maryland Office of Peoples Counsel to provide restructuring consulting. He was hired by the New Hampshire state association of community action agencies to help develop a funding mechanism for low-income programs in the New Hampshire PUC's consideration of electric restructuring. Colton has testified in the Philadelphia Electric restructuring proceeding on behalf of a statewide coalition of environmental groups and has been hired by the New Jersey Division of Ratepayer Advocate to testify in that state's restructuring dockets regarding universal service issues. He has provided briefings on restructuring to legislators and regulators in Ohio, Wisconsin, Maryland, Georgia, Indiana, Vermont, Massachusetts and New Hampshire.

Roger writes widely on restructuring issues. In addition to his work for Oak Ridge and the National Council, Roger has prepared a 28-part set of "occasional papers" in FSC's *Electric Competition and the Small User: A Guide for Cities, Consumers & Low-Income Advocates*. His book *Funding Stranded Benefits: A State Data Book* sets forth 12 funding scenarios for recovering low-income program costs for every state in the country (plus D.C.). His 15-part series *Electric Restructuring and the Low-Income Consumer*, prepared for the Iowa Community Action Association, was just distributed to over 300 media outlets nationwide.

Roger is also active in developing funding for low-income energy assistance. He has authored reports on how to structure a "wires charge" in ten states for a variety of clients, including the Missouri Department of Natural Resources, Iowa Department of Human Resources (Weatherization Division), Colorado Energy Assistance Foundation, Ohio Legal Services, Louisville Legal Aide, Oklahoma Community Action Association, Indiana Citizen Action Campaign, and others.

Finally, Roger is active in experimentation with residential and low-income aggregation methodologies. He has been retained as a consultant to help low-income advocates organize an aggregation initiative in Philadelphia. He is part of the technical development team helping to design state and regional full energy service co-operatives in New England. He has been hired to develop a model aggregation proposal in Minnesota for local community action agencies, and to provide advice on developing an aggregation proposal in Colorado.

Finally, Roger has been active in working with and for low-income advocates in electric merger proceedings. He represented a national coalition of ten low-income advocacy groups before FERC in that federal proceeding to establish new federal electric merger guidelines. He has testified as an expert witness on low-income issues in merger proceedings regarding Public Service Company of Colorado, Baltimore Gas and Electric Company, Northern States Power Company, Atlantic City Electric and IES Industries.

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Roger Colton an attorney and an economist who has done substantial work in the area of low-income energy efficiency and affordable rates.

Energy efficiency: At present, Roger is working with the Iowa Bureau of Weatherization to develop a utility-based "linked deposit" program in that state. He is working with a variety of community action agencies to delivery Home Energy Rating System (HERS) audits to First Time Home Buyer programs in Indiana, New Hampshire, Maine, Iowa and Pennsylvania. Colton is also presently working as a sub-contractor to help design a low-income energy efficiency programs for Public Service Electric and Gas (PSE&G).

Colton is noted for his innovative work in the area of low-income energy efficiency. His publications include the book *Energy Efficiency and the Low-Income Consumer: Planning, Designing and Financing* (Flying Pencil Publications: 1995); *Financing Energy Efficiency in Affordable Housing Programs*, presented at the 1996 annual meeting of the National Association of Housing and Redevelopment Officials; *Changing Paradigms for Delivering Energy Efficiency to the Low-Income Consumer by Competitive Utilities: The Need for a Shelter-Based Approach*, presented at the May 1996 meeting of the National Association of State Energy Officials; *Securing Private Investment in Low-Income Energy Efficiency: Breaking the Reliance on Government and Utility Programs*, presented to the 16th World Energy Engineering Conference (1993); *The Economics of Pursuing Energy Efficiency in Affordable Housing*, presented to the 14th International Making Cities Livable Conference (1993); *Linked Deposits as a Utility Investment in Energy Efficiency for Low-Income Housing*, prepared for the 1994 National Regulatory Information Conference; and *Models of Public and Private Investment in Energy Efficiency for Low-Income Housing*, presented at the American Council for an Energy Efficient Economy 1994 Summer Study on Energy Efficiency in Buildings.

In 1996, Roger completed under contract to the Vermont Department of Public Service a proposed structure for the Residential Energy Efficiency Investment Partnership (REEIP), an institution that would combine the resources of the state's utilities, the state Weatherization Assistance Program (WAP), the state Housing Finance Agency (VHFA), and others into a single program to address the energy efficiency needs of low-income multi-family units. Roger worked under contract with the Florida Housing Coalition to help develop leveraged resources for low-income energy efficiency. His proposal for the Land and Water Conservation Fund (LAWCON) was adopted by the Colorado PUC as the Public Service Company of Colorado Power Partners program.

Roger is a member of the Board of Directors of the Vermont Energy Investment Corporation (VEIC) as well as the Board of Directors of Affordable Comfort, Inc. (ACI).

Affordable rates: Colton is the national expert in low-income rate programs. He designed the original Rhode Island Percentage of Income Payment Plan (PIPP) for Providence Gas Company and Narragansett Electric. He designed the pilot PIPP precursor to the Montana Power Company low-income rate discount; the Philadelphia Gas Works pilot precursor to the PGW Customer Responsibility Program (CRP); and the Massachusetts Electric Company percentage of income plan. Colton served as the consultant to Houston Lighting and Power Company and Gulf Coast Legal Foundation in the design of a "shadow billing" pilot program for direct vendor section 8 payments and has served as the consultant to Entergy's development of a low-income rate in Texas. Colton was the witness for the Maine PUC's Customer Assistance Division in the establishment of the Maine Electric Lifeline Program and worked under contract with the Washington Gas Light Company (D.C.) to serve as the consultant to a collaborative expansion and revision to that company's Residential Essential Service (RES) rate. Colton is now under contract to help design the low-income affordable rate pilot projects for Public Service Company of Colorado.

Public assistance: Colton serves as a consultant on energy assistance programs. He provided consultation to the U.S. Department of Housing and Urban Development in its development of a handbook for local housing authorities on how to set utility allowances for public and assisted housing. He currently is serving as part of the advisory committee for the U.S. Department of Health and Human Services (HHS) to establish

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performance measurements for the federal LIHEAP program.

Number and Percent of LIHEAP Recipients by Income Range and Annual Electric Burdens									
	All Households	Under \$2000	\$2000 - \$3999	\$4000 - \$5999	\$6000 - \$7999	\$8000 - \$9999	\$10,000 - \$11,999	\$12,000 - \$14,999	\$15,000+
Percent	100%	1.6%	13.0%	27.7%	20.9%	16.4%	8.4%	6.8%	5.2%
Number	313,830	5,021	40,798	86,931	65,590	51,468	26,362	21,340	16,319
Burden	xxx	73%	24%	15%	10%	8%	7%	5%	5%

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Programs serving to increase incomes that should be emulated by the company include:

BOSS:

The company should implement a Benefits Outreach and Screening Software (BOSS) initiative through its customer service centers and telephone service centers. Through BOSS, company customer service personnel can help payment-troubled customers identify those public benefit programs for which they are eligible. Having a utility provide assistance through BOSS is merited because it makes no sense for a customer who is having problems paying their utility bill to *not* be getting the benefits for which they are eligible. While some people quite rightfully question what a utility can offer that the entire range of social service agencies can not, there are several answers to that. First, unlike social service agencies, the company has a continuing contact with these households. Every month, at a minimum, the company sends these households a bill. This constant contact does not occur with social services agencies. Second, the company has a way to target its outreach. Rather than doing comprehensive mailings to *all* low-income consumers, or buying blanket radio and television ads, the company can say to customers in payment-trouble and/or facing service disconnections: "You owe us money. Rather than having your service disconnected in the near future, please contact us and let us help find you assistance to keep your service on."

Despite the existence of dozens of federal, state and local public and private assistance programs, low-income households face many obstacles and barriers as they search for independence and self-sufficiency. Information about assistance programs is inconsistently distributed. The application process is often an intimidating mass of program rules and regulations that are barriers to program participation. Some of the barriers that exist to program participation include:

- o A lack of a centralized location at which to apply for public assistance, whether such assistance is cash, volunteer services, or employment and job training opportunities;
- o Different eligibility criteria, such as income and asset criteria, amongst the various programs;
- o Different methods for determining income and assets for household and family units;
- o Lengthy, repetitive and complex application forms.

Many agencies have an in-depth knowledge of a few resources, but it is virtually impossible for any single agency to be proficient in the complexities and current changes in the rules and regulations of all programs.

BOSS is a computer software screening tool that allows a utility to help its low-income consumers navigate this process. BOSS not only reduces the complexity and time required to identify assistance programs for which utility customers may be eligible, but also greatly increases the ability of customer assistance representatives to ensure that eligible low-income utility customers (or those with special needs) obtain all the services to which they are entitled. BOSS has the capability of screening an array of health and human services programs, community resources, volunteer services, employment and job training opportunities, and utility assistance programs. Nationwide, BOSS has the following capabilities:

- o To screen low-income households for potential eligibility for a wide array of community resources, volunteer services, and employment and job training opportunities;
- o Print a resource eligibility report for each person that lists the programs for which that person is eligible, telephone numbers of the contact person, addresses, times to apply, and required documentation; and
- o Use scanning technology to store brochures and other agency forms so that information about any agency is available at any site.

In October 1996, Public Service Electric and Gas (New Jersey) agreed to implement the BOSS system for its service territory. Companies such as Baltimore Gas and Electric and Northern States Power Company (Wisconsin) have also found the BOSS system to be extremely effective in directing new assistance dollars to low-income payment-troubled customers. Overall, BOSS is currently in place at over 400 sites in 23 states.

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EARNED INCOME TAX CREDIT:

One program that is not explicitly an "energy assistance" program, but which delivers extensive benefits to low-income households to use for paying home energy bills, involves the efforts of many utilities to promote participation in the federal Earned Income Tax Credit (EITC). Some utilities have become extremely aggressive in promoting the enrollment by low-income households in the EITC. One utility, Public Service Electric and Gas Company (PSE&G), in New Jersey, found that the additional resources represented by the EITC would help alleviate many bill payment (and inability-to-pay) problems by low-income customers. According to PSE&G research, more than nine of ten (9 of 10) households receiving EITC refunds use those refunds to pay household bills. PSEG, in conjunction with a variety of public and private agencies, undertook an extensive promotion to enroll eligible households in the federal Earned Income Tax Credit (EITC). The goal of the promotion was to increase enrollment by at least five percent. Given PSE&G's promotion of the EITC in New Jersey, New Jersey's number of EITC recipients increased by 4.9 percent. According to PSE&G, as of July 31, 1994, in 1994 alone, New Jersey low-income residents had received \$60,000,000 more in EITC benefits than they had received by August 29 of 1993. This is 35 percent higher than the national average for the same period.

PSE&G spearheaded the efforts in that state to encourage income-eligible households to apply for the EITC. PSE&G created and funded a "1-800" hotline to promote the EITC. Outreach activities used to publicize New Jersey's hotline were both creative and effective. Some of that utility's activities included:

- o Over 100,000 flyers were produced by PSE&G and distributed by community volunteers.
- o 750 municipal buses carried posters "advertising" the PSE&G EITC number.
- o An EITC commercial sponsored by PSE&G was played just before New Jersey lottery drawings. It started with: "If you found a lottery ticket worth \$2,000, would you throw it away?"
- o PSE&G helped sponsor public service announcements by Governor Christie Whitman and Senator Bill Bradley to spread the message.
- o Collaborating with the New Jersey Division of Motor Vehicles, PSE&G produced inserts advertising the EITC through 350,000 vehicle registration renewal form mailings. It was headlined "Drive Yourself to a Treasure."

In addition, PSE&G reported that with the company's assistance:

- o Over 3.5 million envelope stuffers, flyers, and posters were distributed to reach potential EITC recipients.
- o An additional 1.1 million flyers describing EITC were delivered to parents of the state's public school children.

This effort is an indirect, but substantial, source of "fuel assistance" for low-income households. According to one article published by an Edison Electric Institute (EEI) staffperson, 25 percent of the low-income households receiving EITC credits used their credits to pay current utility bills while an additional 30 percent used their credits to pay past-due utility bills.

**Estimate of Universal Service Program Costs
at 50 Percent CAP Participation**

Cost of General Use Customers							
Income Range	Low-Income Bill	CAP Percent	Affordable Bill	Difference	Number of Gen. Use HHs		Cumulative Shortfall
					Total	Income Range	
Under \$2000	\$736	5%	\$50	\$686	90,000	5,940	\$4,075,410
\$2-3999	\$736	5%	\$150	\$586	90,000	6,570	\$3,850,651
\$4-5999	\$736	5%	\$250	\$486	90,000	14,400	\$6,999,783
\$6-7999	\$736	5%	\$350	\$386	90,000	14,670	\$5,664,029
\$8-9999	\$736	5%	\$450	\$286	90,000	15,390	\$4,403,018
\$10-11,999	\$736	5%	\$550	\$186	90,000	9,450	\$1,758,608
\$12-14,999	\$736	5%	\$675	\$61	90,000	10,260	\$626,845
\$15,000+	\$736	5%	\$750	\$0	90,000	13,410	\$0
Sub-Total General Use							\$27,378,344

Cost of Electric Space Heating Customers							
Income Range	Space Htg Bill	CAP Percent	Affordable Bill	Difference	No. of Space Heating HHs		Cumulative Shortfall
					Total	Income Range	
Under \$2000	\$1,086	13%	\$130	\$956	10,000	660	\$630,884
\$2-3999	\$1,086	13%	\$390	\$696	10,000	730	\$507,996
\$4-5999	\$1,086	13%	\$650	\$436	10,000	1,600	\$697,416
\$6-7999	\$1,086	13%	\$910	\$176	10,000	1,630	\$286,692
\$8-9999	\$1,086	13%	\$1,170	\$0	10,000	1,710	\$0
\$10-11,999	\$1,086	13%	\$1,430	\$0	10,000	1,050	\$0
\$12-14,999	\$1,086	13%	\$1,755	\$0	10,000	1,140	\$0
\$15,000+	\$1,086	13%	\$1,950	\$0	10,000	1,490	\$0
Sub-Total Space Heating							\$2,122,988

Sub-Total General Use	\$27,378,344
Sub-Total Space Heating	\$2,122,988
Total General Use and Space Heating	\$29,501,332
50 Percent Participation	\$14,750,666

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Summary of Universal Service Recommendations

1. Define universal service as affordable service for all customers, including low-income customers.
2. Define "affordable" service as having two components, including an "absolute" component and a "relative" component.
3. Adopt an "income supplement" component to the rate affordability program, including implementation of a BOSS system and implementation of an EITC promotion.
4. Adopt an expansion of the company's rate affordability program, to be funded at \$14.750 million.
5. Contract administration of the universal service program to a non-profit community-based organization.
6. Maintain CARES and Hardship Fund efforts at existing funding levels, provided that Duquesne shareholders continue their existing level of matching funds for the Hardship Fund.
7. Adopt an expansion of the company's LIURP efforts, to be funded at 0.20% of total gross revenues (\$2.214 million).
8. Make an explicit tie between LIURP and the rate affordability program, by automatically referring all high use participants in the rate affordability program for LIURP treatments.
9. Assure personal follow-up with high use rate affordability participants to ensure that those de facto electric heating or water heating cases are receiving the services they need in order to get their central heating or water heating restored.
10. Incorporate a renewable pilot project as part of the company's LIURP efforts.
11. Adopt the recommended 11-part consumer education program.

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A consumer research section of the education plan should involve four primary inquiries, including:

1. What do people know about restructuring (thus informing decisions about what people need to learn). Basic adult education concepts counsel that education most readily occurs when it is *learner* and *learning* focused rather than *teaching* and *teacher* focused.
2. Who do people turn to for information and how do they get their information? Do they read it, or watch it, or listen to it? Do they get it from the media, through the mail, or from their neighbors and friends?
3. Who are major influencers of behavior and opinion? From whom do people take their "cues," neighbors, fellow workers, city/government officials, social organizations? This inquiry differs in that it looks at behavior rather than at information sources.
4. Who do different information sources reach? Do particular radio stations reach particular audiences? Conversely, does the local newspaper systematically "miss" some definable or discrete population? Do discrete populations rely more on one source than any other?

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A four phase consumer education program, modeled after the program proposed in Vermont, would include:

- Phase 1: Understanding Restructuring -- Phase 1 would be designed to explain to customers the expected changes in the electric industry resulting from restructuring. Its objective would be to raise the aided and unaided awareness of restructuring to predetermined levels by a date certain.
- Phase 2: Getting Ready for Choice -- Phase 2 would be designed to explain to customers the need to make a choice and to educate consumers both about their household energy consumption and about their options in energy sources (including energy efficiency). Messages would include, for example, how to evaluate the total bills (rather than looking simply for the least expensive rates); how to evaluate green power claims; what types of consumer protections might exist; and how to consider the environment impacts of power choices.
- Phase 3: Making a Good Choice -- Phase 3 would be designed to educate consumers to help them through the choice-making process. It would educate consumers on what types of offers they might expect to see, what consumers should do in response to various offers, what information to look for in particular, and who to call with questions.
- Phase 4: Continuing to Make Good Choices -- Phase 4 would educate consumers on how to evaluate their home energy bill on a continuing basis. This phase would allow consumers to use their bills as a feedback on what they are doing with their own household energy consumption. It would educate consumers about how to understand their consumption patterns.

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EVALUATION PROCESS

There are eleven steps that Duquesne Power should consciously follow in an evaluation process:

1. **Articulate expected/desired performance:** Within the context of consumer education, the desired performance is established by the program objectives. Objectives should be attainable and measurable.
2. **Measure actual performance:** Actual performance is an empirically demonstrable fact. Obtaining this measurement is key to establishing the baseline of information upon which to make decisions as to future program operation.
3. **Review expected performance in light of actual performance:** Rather than simply saying: "our performance goal was not met," it seems reasonable to interject a point where the company asks: given what we know now, was our expectation reasonable in the first place? It is possible that the appropriate response to a shortfall between actual performance and desired performance is to modify the expectation rather than seeking to improve the performance.
4. **Determine the extent to which actual performance falls short of expected/desired performance:** This involves the development of information. If the company does not know how "what is" differs from "what ought to be," it will be difficult, if not impossible, to make appropriate decisions as to policy.
5. **Determine the cause(s) of the shortfall between what "is" and what "ought to be":** Identifying what *causes* the shortfall between what "is" and what "ought to be" is important to the implementation of appropriate remedies.
6. **Develop remedies:** For each cause identified in Step 5 above, the company should develop an appropriate remedy. A remedy removes or modifies the cause, thus eliminating or minimizing the shortfall in performance.
7. **Identify needed changes:** For each remedy proposed in Step 6, the company needs to know what changes should be made to bring that remedy about. This step requires information. It would be difficult, if not impossible, to develop a remedy if the company does not know what changes need to be made to implement that remedy.
8. **Determine the resources needed to make the change:** As a subset, determine whether those resources are both available and appropriate.

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9. **Review expected performance in light of changes that have been proposed:** This step closes the loop. If the changes do not result in improved performance, they should not be made. This step differs from measuring the actual performance given the implementation of changes. This is not an implementation or evaluation step. It is a planning step. The company should be able to say: "if this particular change, *then* this particular result." The result should be an improvement in performance.
10. **Adopt the appropriate changes:** One important aspect here is to retain the option of "make no changes."
11. **Begin the evaluation process anew:** Finally, the process should start over again by articulating the expected or desired performance given the changes that have been adopted. That takes the company back to the top of the chart. The review should be an ongoing dynamic process.

SUMMARY OF CONSUMER EDUCATION RECOMMENDATIONS

- Step 1:** Commit \$50,000 to hire a consultant to do a market segmentation analysis.
- Step 2:** Commit \$50,000 to engage a consultant to develop a complete, adequate and appropriate set of consumer education goals, objectives, strategies and tactics.
- Step 3:** Commit \$25,000 to retain a consultant to develop a Community-Based Participation Plan consistent with the goals, objectives, strategies and tactics, and market research information. The use of community-based organizations has been explicitly endorsed by the PUC.
- Step 4:** To agree to a four phase substantive consumer education message consisting of the four phases described in the testimony.
- Step 5:** To develop a consumer education program specifically directed at educating consumers about how energy efficiency and consumer choice operate together.
- Step 6:** To allocate its budget of \$24.161 million to the tactical programs identified by the consultants in Steps 2 through 5, consistent with the market research information. This should involve: (a) a proactive plan of outreach; (b) a dedicated consumer education staff; (c) an outreach plan that is culturally appropriate.
- Step 7:** To commit \$1 million a year for 1998 through 2000 to capitalize a Consumer Education Trust Fund structured broadly as follows:
- a. An independent board of trustees, consisting of persons skilled in consumer education, community outreach, and community involvement, including at least two members from or representing the low-income community;
 - b. To provide funding on an application basis for specific projects that:
 - i. Demonstrably serve an identifiable population at risk of being underserved by the consumer education program;
 - ii. Present a unique approach to consumer education offering special benefits; or
 - iii. Propose a new and/or innovative approach to consumer education that requires and merits testing on a pilot basis.

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- Step 8:** To create a dedicated consumer education staff of not fewer than two professionals (along with necessary support staff) to provide community outreach, education and training.
- Step 9:** To commit \$50,000 a year for the years 1997 through 2000 to retain a consultant to develop and implement a monitoring, feedback and adjustment process for the Consumer Education Program.
- Step 10:** To create an independent Consumer Education Advisory Panel to advise the company as to its ongoing Consumer Education Program and to provide advice and consent on the selection of the recommended consultants.
- Step 11:** To re-submit the final consumer education program to the PUC for review and approval.

Proposed Budget	
Program	Budget
CARES	\$60,000
Hardship Fund	\$65,000 /a/
Income-Enhancement Programs	\$400,000
Affordability Rate	\$14,750,000
LIURP	\$2,214,000
NOTES:	
Assumes existing shareholder match continues.	

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BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF DUQUESNE LIGHT COMPANY FOR
APPROVAL OF ITS RESTRUCTURING PLAN
UNDER SECTION 2806 OF THE PUBLIC UTILITY CODE

DOCKET NO. R-00974104

PREPARED SURREBUTTAL TESTIMONY AND
EXHIBITS OF

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SUBMITTED ON BEHALF OF:
THE CITY OF PITTSBURGH
PITTSBURGH BRANCH, N.A.A.C.P.
LOW-INCOME ADVOCATE PARTIES
CITIZEN POWER, INC.

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1 Q. PLEASE STATE YOUR NAME AND ADDRESS.

2 A. My name is Roger Colton. My address is 34 Warwick Road, Belmont, MA 02178.

3 Q. ARE YOU THE SAME ROGER COLTON WHO PREVIOUSLY SUBMITTED
4 TESTIMONY IN THIS PROCEEDING?

5 A. Yes.

6 Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY TODAY.

7 A. My testimony today responds to the rebuttal testimony provided by Mr. Joe Flynn on
8 behalf of Duquesne Light Company.

9 Q. WHY MUST THE PUC DEFINE WHAT CONSTITUTES "AFFORDABLE"
10 SERVICE AS PART OF DECIDING ON THE APPROPRIATENESS OF THE
11 PROPOSED DUQUESNE LIGHT UNIVERSAL SERVICE PROGRAM?

12 A. The Company states the goal of its universal service program to be "to cost-effectively
13 ensure that low-income, payment-troubled customers have access to affordable energy."
14 (Statement 14-R, at 12). It is, of course, impossible to know whether the Company is
15 reaching that goal without defining what is meant by "affordable energy." It is for that
16 reason that I recommend the same definition adopted by the FCC for "affordability" (*i.e.*,
17 "affordability" is to include both an "absolute" ("to have enough or the means for") and a
18 "relative" ("to bear the cost of without serious detriment") component.)

1 **Q. HAS THE PENNSYLVANIA PUC ADOPTED THIS SAME TWO PRONGED**
2 **APPROACH TO "AFFORDABILITY"?**

3 A. Yes, at least implicitly. The PUC's definition of "payment-troubled" which includes the
4 disposable income test as well as the total shelter burden test recognize that energy can be
5 *unaffordable* even if bills are paid on a full and timely basis.

6 **Q. HOW DOES SUCH A DEFINITION MANIFEST ITSELF IN PRACTICAL TERMS**
7 **FOR THE DUQUESNE LIGHT UNIVERSAL SERVICE PROGRAM?**

8 A. Several components of the Duquesne Light program do not recognize both aspects of
9 "affordability." For example, the Company's statement that "CAP participants should not
10 necessarily be able to pay less in CAP than they paid in the year prior to enrollment"
11 (Statement 14-R, at 14) fails to recognize the second aspect of "affordability." Indeed,
12 even if a customer makes full and timely payments, as the FCC and Pennsylvania PUC
13 have both recognized, that customer may be "payment-troubled" if the customer could not
14 make such payments "without serious detriment." In addition, the Company's limitation
15 of CAP to customers with \$500 in arrears fails to take into account that customers may
16 have made payments, but still be "payment-troubled" under the PUC's definitions and may
17 still face "affordability" problems under my definition of "affordability" (based on the
18 FCC's definition).

1 Q. WHAT DO YOU RECOMMEND?

2 A. I recommend that my proffered definition of "affordability" be adopted and utilized in
3 evaluating the Company's universal service program.

4 Q. DO YOU HAVE OTHER OBJECTIONS TO THE DUQUESNE LIGHT CAP
5 ELIGIBILITY CRITERIA?

6 A. Yes. Mr. Flynn misstates and misrepresents the PUC's *Final Order* respecting universal
7 service. Mr. Flynn is correct in that eligible customers for CAP are those whose
8 household income is at or below 150% of federal poverty guidelines and who meet other
9 non-income criteria. The eligibility criteria, however, were limited to only three. The
10 PUC stated:

11 A CAP applicant must meet the following eligibility criteria: (1) status as a
12 ratepayer or new applicant is verified; (2) household income is verified at or below
13 150% of the Federal poverty guidelines; and (3) the CAP applicant is payment
14 troubled.

15 The PUC continued on to state: "Payment troubled is defined as a household who has
16 failed to maintain one or more payment arrangements."

17 Mr. Flynn's statement that "the Commission's Guidelines specifically include other non-
18 income criteria in the definition of eligibility" (Statement 14R, at 9) is simply wrong in the
19 way in which it is used. What Mr. Flynn has done is to take suggested "targeting"
20 mechanisms for prioritizing enrollment and inappropriately convert them into eligibility
21 guidelines. The PUC said quite clearly:

1 An EDC may choose one of the following four options to *prioritize the enrollment*
2 *of eligible customers*. When determining if a CAP applicant is payment troubled,
3 an EDC should select one of the following priorities for payment troubled. . .

4 (emphasis added).

5 *Prioritizing* the enrollment based on one of the four articulated factors is completely
6 different from restricting enrollment to those customers who meet only one of the four
7 factors. To deny enrollment to someone who meets the three "eligibility" criteria
8 articulated by the PUC but who does not meet the "prioritization" for enrollment is
9 contrary to the PUC order.¹¹

10 **Q. WHERE HAS THE COMPANY ERRED?**

11 A. The Company's universal service program as it pertains to CAP has erred in two ways.
12 First, the Company has added additional eligibility criteria not permitted by the PUC.
13 Second, it has converted targeting criteria that were set forth in the disjunctive ("or") and
14 converted them into eligibility criteria set forth in the conjunctive ("and"). Thus, instead
15 of targeting enrollment based on arrears *or* shelter burdens, the Company has
16 inappropriately said eligibility depends on meeting the arrears standard *and* the shelter
17 burden (*and* the residence requirement).

18 **Q. DO YOU OBJECT TO ANY OTHER ELIGIBILITY CRITERION IMPOSED BY**
19 **DUQUESNE'S CAP PROGRAM?**

¹¹ For example, consider that LIHEAP is targeted to specific populations, including the elderly, handicapped and households with children. This targeting does not allow for states to set eligibility criteria limited to those targeted populations.

1 A. Yes. The requirement that a CAP participant have 12 months residency at the current
2 address is unreasonable and objectionable for three reasons

3 Q. **WHAT IS THE FIRST REASON?**

4 A. First, the PUC articulated three eligibility criteria for CAP programs. By adding another
5 eligibility criterion, the Company has restricted CAP participation to a narrower class of
6 customers than the PUC has provided in its Final Order.

7 Q. **WHAT IS THE SECOND REASON?**

8 A. The residency requirement unreasonably restricts CAP availability to a smaller class of
9 low-income consumers than would otherwise be eligible for CAP. I recently published
10 research on "frequent mobility" amongst Head Start families in Missouri.¹² That research
11 found:

12 These unaffordable home energy bills represent a substantial cause of the frequent
13 mobility amongst Missouri's low-income school age children. Of the 231 five year
14 frequent mover households identified by this study, 96 (41.6 percent) listed
15 unaffordable heating bills as a "very important" factor contributing to their most
16 recent move; another 25 (10.8 percent) listed these bills as "somewhat important."
17 As can be seen, therefore, of the frequent mover population, unaffordable energy
18 bills played a role in the move in more than half of the cases.

19 . . .

20 The data reveals, also, that it is, indeed, *unaffordable* energy bills and not merely
21 the disconnection of service which contributes to the forced mobility of the low-
22 income Missouri households. Three-fourths (71 of 96) of the low-income

¹² Colton (Sept. 1996). "The Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility And Childhood Education in Missouri." 2 *Journal on Children and Poverty* 23.

1 households who moved because of unaffordable energy bills did so notwithstanding
2 the fact that they either had been paying their bills, or had at least not fallen so far
3 behind as to warrant the disconnection of service.

4 As you can see, the Duquesne 12 month residency eligibility criterion thus makes no
5 sense. It is the very fact of unaffordable home energy bills which causes frequent
6 mobility. To limit the universal service program only to those households who have not
7 been adversely affected by unaffordable home energy makes no sense.

8 **Q. WHAT IS THE THIRD REASON?**

9 A. Enforcing the 12-month residency limitation has an adverse impact on households of color
10 and on female-headed households, in that it disproportionately disqualifies such
11 households from participation in the CAP program. Such disproportionate impacts would
12 be violations of federal fair housing and credit discrimination statutes.

13 In the proceeding in which the Pennsylvania PUC first considered adoption of CAPs, I
14 presented information to the PUC regarding the mobility of consumers in Pennsylvania on
15 behalf of the Office of Consumer Advocate. That information is attached as Exhibit RDC-
16 1R and provides an empirical basis for a finding of disproportionate impacts.

17 **Q. HOW DO YOU RESPOND TO MR. FLYNN'S STATEMENT THAT THE PUC**
18 **DOES NOT REQUIRE THAT ALL CUSTOMERS WITH HOUSEHOLD INCOME**
19 **AT OR BELOW 150% OF THE FEDERAL POVERTY GUIDELINES TO BE**
20 **ELIGIBLE FOR ALL UNIVERSAL SERVICE PROGRAMS?**

1 A. Mr. Flynn is partially correct. The PUC said that a CAP applicant must meet the
2 following eligibility criteria: (1) status as a ratepayer or new applicant is verified; (2)
3 household income is verified at or below 150% of the Federal poverty guidelines; and (3)
4 the CAP applicant is payment troubled. The Company and I then followed precisely the
5 same procedures:

- 6 o We estimated the universe of eligible customers;
- 7 o From that universe, we projected the number of customers who would actually be
8 enrolled.

9 It is difficult to understand what the Company's complaint is with my estimate of a 50%
10 enrollment rate. The difference between the Company's estimated 40% enrollment of
11 eligible customers (Statement 14R, at 15; Exhibit JPF-1, at 5) and my estimated 50%
12 enrollment rate seems minimal. Mr. Flynn's complaint that I propose to require "set
13 levels of dollars or persons" (Statement 14R, at 20) is misplaced. We both simply
14 estimate the projected costs based on estimated participation levels. Our differences come
15 in the different definitions of the "eligible" population underlying our participation
16 estimates. Mr. Flynn's statement (Statement 14R, at 19) that the Commission's Guidelines
17 specifically include other non-income criteria in the definition of eligibility is wrong to the
18 extent that it is used to convert targeting and prioritizing factors into eligibility criteria.

19 **Q. WHAT IS YOUR REACTION TO MR. FLYNN'S REFERENCE TO THE PUC'S**
20 **RATE CAP?**

1 A. In a number of instances (Statement 14R, at 3, 6, 16), Mr. Flynn states that if the
2 Company is directed to increase its universal service funding, it will seek PUC approval to
3 exceed the rate cap. This statement is at direct odds with the PUC's *Final Order* on
4 universal service, which provides that: "Funding for universal service and energy
5 conservation programs should not be determined after all other funding requirements are
6 met. The total amount of dollars available under the rate cap should be adjusted to meet all
7 the requirements of the Act including universal service and energy conservation." If total
8 expenditures by the Company were to exceed the rate cap, Universal Service costs would
9 be no more the "cause" than any other expenditure of the Company.

10 **Q. PLEASE RESPOND TO MR. FLYNN'S CITATION TO THE PUC'S**
11 **"APPROPRIATE AND AVAILABLE" UNIVERSAL SERVICE LANGUAGE.**

12 A. Mr. Flynn's citation to the PUC's directions that funding for universal service programs
13 be "appropriate" so as to make the universal service program "available" is a somewhat
14 limited reading of the PUC's *Final Order*. For example, the Commission said: ". .
15 .neither the Act nor these guidelines define 'appropriately funded and available' nor
16 specify any particular spending level for universal service and energy conservation as a
17 whole. No inherent increase or decrease in spending is mandated, *provided that* the total
18 level of resources directed to universal service and energy conservation is 'appropriate'
19 and the benefits are made 'available'." (emphasis added).

1 Amongst the other directions the PUC gave include:

- 2 o "Given the results of impact evaluations already reviewed, we expect that EDCs
3 will choose to *enhance their CAPs* as a cost effective strategy for serving
4 low-income customers."
- 5 o "CAPs have been operated to date as pilots with limited enrollment. Given the
6 positive evaluations of CAPs in meeting their goals of affordable payments and
7 reduced utility costs, the plans should address anticipated changes in CAP
8 enrollment levels that reflect the strategic use of CAPs as a cost effective
9 component of universal service."
- 10 o "The EDCs should identify the current level of spending and/or the amounts
11 included in existing rates to support the existing efforts. Current expenditures
12 include, in part: write-off of uncollectible expenses; operational costs associated
13 with collections, termination and reconnection activities; cash working capital
14 associated with arrearages; costs associated with CAP, CARES, and LIURP
15 programs; and administration of hardship funds. In identifying existing operational
16 costs associated with collection activities, the EDCs should use the top-down
17 approach outlined in Equitable's EAP's impact evaluation."

18 The Company's universal services programs do not fulfill these additional directives.

19 **Q. DOES THE COMPANY'S PROPOSED PROGRAM FULFILL THE "ADEQUATE"**
20 **AND "AVAILABLE" TESTS?**

21 A. No. As my Direct Testimony clearly establishes, the Company's programs do not address
22 the needs in the Company service territory.

23 **Q. PLEASE RESPOND TO THE COMPANY'S PROPOSAL TO CREATE AN**
24 **"ARRAY OF SERVICES" AIMED AT AFFORDABILITY.**

25 A. Mr. Flynn indicates that the Company will create an "array of services" aimed at
26 affordability. (Statement 14R, at 13). The Company's universal service program proposes

1 that this array of services include "alternative metering or usage control devices." (Exhibit
2 JPF-1, at 9). To the extent that these "alternative metering and usage control devices"
3 include prepayment meters, they are objectionable as universal service strategies. In
4 1995, I prepared an overview of prepayment meters under contract to Hydro Quebec for
5 presentation at a Hydro Quebec credit and collections symposium. The analysis presented
6 in Exhibit RDC-2R is taken from that work.

7 **Q. HOW DO YOU RESPOND TO MR. FLYNN'S OBJECTION TO YOUR**
8 **RECOMMENDED FUNDING FOR LIURP?**

9 A. Mr. Flynn objects to my LIURP funding recommendation as requiring "set levels of
10 dollars or persons" (Statement 14R, at 20). That objection mis-characterizes my
11 recommendation. As my Direct Testimony establishes, the "need" for usage reduction
12 assistance outstrips the ability to deliver usage reduction services in any single year. As a
13 result, there must be some rational decision rule to govern what portion of the need will be
14 served each year. I have set forth a decision rule that justifies funding at something less
15 than 100 percent of the need. The intent of my recommendation was to fund electric
16 LIURP at the same levels as set forth in 52 *Pa. Code* § 58.4, which states: § 58.4.
17 Program funding. (a) General guidelines for gas utilities. Annual funding for a covered
18 natural gas utility's usage reduction program shall be at least .2% of a covered utility's
19 jurisdictional revenues."

1 It is important to recognize that I do not make this recommendation simply to have electric
2 and natural gas funding be at similar levels. Instead, I use the natural gas standard as
3 evidence of the PUC's previous decision that 0.2% of revenue represents a reasonable
4 balancing of budget considerations and need considerations.

5 **Q. PLEASE RESPOND TO MR. FLYNN'S SUGGESTION THAT YOU EQUATE**
6 **"UNIVERSAL SERVICE" WITH CAP.**

7 A. That assertion is simply wrong. As is evident from Mr. Flynn's response to my Direct
8 Testimony, in most of the instances outside CAP and LIURP, we do not have serious
9 disagreements (e.g., maintain CARES and Hardship fund funding, continuing to contract
10 with CBOs, making an explicit tie between LIURP and CAP, assuring personal follow-up
11 to eliminate de facto electric heating or water heating). My testimony simply reflects
12 those areas of disagreement where the PUC should exercise decisionmaking. In this
13 regard, I appreciate Mr. Flynn's agreement that pursuit of BOSS and EITC promotion
14 may be merited (Statement 14R, at 20). I agree with him that whether or not these are
15 "income supplement" programs may represent definitional differences that have no readily
16 evident policy significance.

17 **Q. PLEASE RESPOND TO MY FLYNN'S RESPONSE TO YOUR CONSUMER**
18 **EDUCATION PROPOSAL.**

19 A. Mr. Flynn defers response to my 11-part consumer education proposal to Mr. Hoffman.
20 Mr. Hoffman's response is that my "plan is one way of approaching the issue, it is not the

1 only workable method to evaluate the effectiveness of education initiatives." (Statement
2 6R, at 24). While I would obviously agree with Mr. Hoffman that there are any number
3 of ways to implement an evaluation plan (of any type), I disagree with Mr. Hoffman that
4 my recommendations can be so casually dismissed. My 11-part evaluation outline
5 contains the fundamental elements of an evaluation from a planning perspective, each of
6 which elements *must* be present irrespective of the *specific* evaluation methodology that is
7 employed.

8 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

9 A. Yes it does.

MEMORANDUM
RESIDENTIAL MOBILITY AND THE LOW-INCOME CONSUMER

Barbara Linden & Anne Wicks, NSSLC

September 10, 1985

This memorandum provides a statistical analysis of the differences between mover and non-mover family households. It presents data on mobility rates among families with varying income levels, by receipt of public assistance income, and by age, race and employment status.

A legal services program in Pennsylvania presented NSSLC with the following research question:

Do changes in telephone installation rates affect all income groups equally, or do low-income consumers change residences at a higher rate than other families, thus becoming more likely to be affected by installation charges?

To address this issue, NSSLC reviewed published data from government sources on residential mobility rates (i.e., the proportion of households which change residence over a one-year period) of families with different characteristics and with varying income levels. Original source tables are attached.

The first section of this memo focuses on the differences between mover and non-mover family households. Selected household characteristics for these families are presented for the 1982-83 survey year, the most recent year for which data are available. Since some data sources include only national or regional information, extrapolations have been made to the Pennsylvania population.

National mobility rates of different population groups are examined in the second section of this memo. For example, mobility rates are presented by income level, receipt of public assistance, employment status, and so forth. Family household mobility rates are used whenever possible, since the rates for persons would overstate mobility and would not be appropriate for a discussion of the impact of utility rates.

A. A COMPARISON OF MOVERS TO NON-MOVERS

The characteristics of families who change residences can be compared to those of families who do not move in order to examine the differences between these two groups. Table 1 below, comprised of Northeast regional data, shows that households that move are disproportionately poor, are receiving public assistance, are headed by females, or are minority families, in comparison to non-movers.

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TABLE 1: Northeast Region
 Characteristics of Family Households: Movers Compared to Non-Movers, 1982 - 1983

<u>Characteristics</u>	<u>% of Non-Mover Households</u>	<u>% of Mover Households</u>
Below Poverty:	9.4%	22.6%
Receive Public Assistance	6.1%	16.4%
Non-White	9.0%	11.8%
Female-headed	16.3%	23.1%

Source: Tables 34 and 36: pages 89, 90 and 105, Geographical Mobility: March 1982 to March 1983, U.S. Department of the Census, Current Population Reports, Series P-20, No. 393, Washington D.C., G.P.O., 1984. (hereinafter Geographic Mobility).

Using the distribution of mover and non-mover characteristics for the Northeast displayed above, extrapolations have been made to the Pennsylvania population in Table 2. Approximately 295,894 family households in Pennsylvania will have a change in residence during the next survey year. In the Northeast, only 12 percent of all families who moved relocated to a different state, while 88 percent moved to different residences in the same state.^{13/} By applying the telephone ownership rate of 95%^{14/} to in-state mover households only (295,894), we estimate that at least 247,367 of the Pennsylvania families who move will be subject to telephone installation charges.

TABLE 2: PENNSYLVANIA
 Estimates & Characteristics of Mover Family Households

	<u>Percent</u>	<u>Total</u>
All family households	100.0%	3,147,809
Mover family households	9.4%	295,894
Below Poverty	22.6%	66,872
Receive Public Asst.	16.4%	48,546
Non-White	11.8%	34,915
Female-headed	23.1%	68,351

^{13/} Table 40: pages 125-126, Geographic Mobility.

^{14/} Table H-1, 1980 Census of Population & Housing: Provisional Estimates of Social, Economic & Housing Characteristics, U.S. Bureau of the Census, G.P.O., 1982.

Source: Estimates derived from distribution data in Table 1 and Table 64, 1980 Census of Population, General Social and Economic Characteristics: Pennsylvania, U.S. Bureau of the Census, Washington D.C.: G.P.O., 1983.

B. NATIONAL MOBILITY RATES FOR DIFFERENT POPULATION GROUPINGS:

1. Level of Income: Poor family households have a higher mobility rate (24%) than non-poor families (12%), regardless of race. Therefore, families below the poverty level are twice as likely to move as are those with higher incomes. Based on these figures, the poverty population undergoes residential turnover every four years, while families above poverty undergo turnover every eight years.

TABLE 3:

Mobility Rates for Family Households By Poverty Status and Race

<u>Race</u>	<u>Above Poverty</u>	<u>Below Poverty</u>
White	12.0%	25.1%
Black	13.5%	21.2%
Total	12.2%	24.2%

Source: Table 36: p. 102, Geographic Mobility.

2. Receipt of public assistance: Table 4 illustrates that families receiving public assistance are two and half times more likely to move than families not receiving assistance; public assistance recipients have a 30.9 percent mobility rate, compared to a 12.6 percent mobility rate for non-recipient families. This is true for blacks as well as whites, and for female-headed and male-headed households.

TABLE 4:

Mobility Rates of All Families By Receipt of Public Assistance and Race

<u>Race:</u>	<u>Not Receiving Public Assistance</u>	<u>Receiving Public Assistance</u>
White:	12.4%	35.1%
Black:	13.9%	24.3%
Total	12.6%	30.9%

Source: Table 35: p. 97, Geographical Mobility.

3. Sex of Households: Female-headed families have a higher mobility rate than families in general, although this factor varies somewhat by race. Thirteen percent of all white families moved in a

one-year period, while 20 percent of white families headed by women moved. The difference in mobility between black families in general and those headed by females is not as great -- 16 percent versus 19 percent, respectively.

TABLE 5:
Mobility Rates by Family Type and Race

<u>Race:</u>	<u>All Families</u>	<u>Female-Headed Families</u>
White	13.3%	19.8%
Black:	16.0%	19.4%
TOTAL:	13.7%	19.9%

Source: Tables 35 and 36, Geographic Mobility.

Female-headed families that receive public assistance are much more likely to move than are those not receiving benefits, as shown in Table 6 below. Almost one-third (32.4%) of the female-headed families that receive public assistance moved, while only one-sixth (15.9%) of female-headed families not receiving assistance did. White female-headed families that received public assistance had the highest residential mobility rate --37.9% percent moved during the 1982-1983 year.

TABLE 6:
Mobility Rates of Female-Headed Families By Receipt of Public Assistance & Race

<u>Race:</u>	<u>Not Receiving Public Assistance</u>	<u>Receiving Public Assistance</u>
White	15.9%	37.9%
Black	15.1%	25.8%
Total	15.9%	32.4%

Source: Table 35: p. 97, Geographic Mobility.

4. **Households 65 and older:** Residential mobility rates for household heads who are 65 and older are much lower than these for all other families, regardless of poverty status. That is, only about 3 percent of older household heads changed residences during the year-long period, compared to 14 percent of all families. The mobility rate of the elderly not living with family members (5.9%) is nearly twice that of elderly persons living in families (3.3%).

TABLE 7:
Mobility Rates for Elderly Household Heads, By Poverty Status and Family Type

<u>Family Type:</u>	<u>Above Poverty</u>	<u>Below Poverty</u>	<u>All Families</u>
Householder over 65	3.2%	4.0%	3.3%
Householder over 65 & unrelated individual:	5.8%	6.1%	5.9%

Source: Table 35: p. 97, Geographic Mobility.

5. **Unrelated Individuals:** Persons who are classified as unrelated individuals (i.e., those living alone, or with non-family members) are much more likely than the general population to change residences, whether incomes are below or above poverty. The moving rate for this group, 27.6 percent, is also higher than the national mobility rate for the poverty population, 24.2 percent.

TABLE 8:
Mobility Rates Among Unrelated Individuals, By Poverty Status and Race

<u>Race:</u>	<u>Above Poverty</u>	<u>Below Poverty</u>	<u>Total</u>
White	26.5%	32.3%	27.8%
Black	26.0%	24.5%	25.4%
Total:	26.6%	30.7%	27.6%

Source: Table 36: p. 102, Geographic Mobility.

6. **Employment Status:** Table 9 provides mobility rates for employed and unemployed persons. (Note that these rates are not household figures, but refer to persons 16 years of age and over in the civilian labor force.) The unemployed were nearly twice as likely to have moved during the survey year as were individuals who were employed - 25.7 percent versus 14.8 percent. Slightly over one-quarter of the unemployed changed residences; these rates did not vary between men and women. Among movers who were employed, however, women were less likely to move (11.9%) than were men (17%).

TABLE 9:
Mobility Rates of Persons By Employment Status and Sex

<u>Sex:</u>	<u>Employed</u>	<u>Unemployed</u>	<u>Total</u>
-------------	-----------------	-------------------	--------------

Males	17.0%	25.0%	18.0%
Females	11.9%	26.8%	18.4%
Total:	14.8%	25.7%	18.1%

Source: Table 27: p. 53, Geographic Mobility.

C. **Conclusion.**

In general, the data show that socio-economic differences exist between families who move and those who do not move. Households that move are disproportionately poor, are receiving public assistance, are headed by females, or are minority families. Since low-income consumers change residences at a higher rate than other families, they are more likely to be affected by higher telephone installation charges than is the general population.

PREPAYMENT METERS AND LOW-INCOME CONSUMERS

Proponents of prepayment meters have posited a variety of benefits to the use of such technology. These benefits tend to be variations on a common theme. Proponents assert that prepayment meters will allow consumers to gain control over their usage, will help impose discipline on consumer budgets, and will make consumers more aware of their energy consumption. While the theme is common, each of these claims makes unwarranted assumptions and will be examined separately.

Consumer Control of Energy Consumption

Prepayment meter proponents claim that such meters will allow consumers to gain control over their consumption. By allowing customers to monitor their consumption on a constant basis, these proponents assert, prepayment meters will thus provide the information necessary to make affirmative decisions as to which appliances and other consumption to pursue and which to forego. This claim assumes, of course, that consumers have control over their usage and can make affirmative adjustments in the extent of the energy they consume. In fact, that assumption is often in error. Low-income energy consumption can be divided into two different genres: (a) discretionary consumption; and (b) nondiscretionary consumption. Nondiscretionary consumption is by far the biggest block of the two. Consider, for example, the three largest uses of electric energy in a typical electric household: (a) space heating; (b) water heating; and (c) refrigeration. Each of these is largely beyond the ability of the household to control.

Space heating usage in low-income households is often driven by factors largely outside of the ability of the low-income household to control. The age and efficiency of the space heating equipment, the age and energy efficiency of the dwelling unit, the number of household members, and the extent to which household members are home during the day⁵¹ are all factors that are beyond the household's ability to control. Moreover, the condition of the physical structure, including not only the structural integrity of the unit but factors such as the location of an apartment within the multifamily structure, the weatherization characteristics of the unit, the orientation of a home or apartment *vis a vis* direct sunlight, and the like, are all factors beyond a household's ability to control.

Water heating and refrigeration, too, depend largely on factors beyond a household's ability to control. The age and relative energy efficiency of the appliance, itself, is the

⁵¹This might be a function of whether household members are employed outside the home or not.

primary driving factor in energy consumption of these household uses. In addition, high hot water consumption is often driven by leaks, particularly in low-income households.^{16/}

In sum, it may be easy to create the image of people turning off lights, turning down thermostats, and taking other affirmative steps to control consumption by behavioral changes. The savings potential through such steps is insufficient to predicate the introduction of an entirely new generation of meters based upon such savings. Moreover, it may be easy to create the image of a vast savings potential that would arise if low-income households only turned off "wasteful" appliances. However, it is not the number of new appliances, but rather the age, condition and energy efficiency of basic appliances, that drives low-income consumption levels.^{17/}

Assistance in Consumer Budgeting

Prepayment meter proponents posit that these meters will help consumers impose a "discipline" over their family budget process. Within the context of low-income households, however, this argument erroneously assumes that inability-to-pay is a budgeting problem. In fact, low-income households have an absolute mismatch between household income and household expenses. As my discussion in this testimony points out, even households with incomes approaching \$20,000 have inadequate incomes to cover all household expenses *before* taking home energy bills into account.

In spite of this lack of household resources --or perhaps because of it-- research finds that low-income households tend to be excellent at household budgeting. A late 1985 Pennsylvania State University (Penn State) study looking at payment-troubled households in Pennsylvania, for example, debunked the myth that nonpaying households are characterized by "deadbeats." The Penn State study found that

^{16/}According to the American Housing Survey, performed by the Census Bureau and the U.S. Department of Housing and Urban Development (HUD), while only 13 percent of all occupied units in the country were occupied by households living below the Poverty Level, nearly 20 percent of all households with leaking pipes were in low-income homes. *American Housing Survey for the United States in 1989*, at Table 2-7, p 46 (July 1991). In addition, the AHS reports, nearly one-quarter of all leaks that were "unreported" but discovered upon inspection of the housing being surveyed were in homes occupied by households living below the Poverty Level. *Id.* Overall, nearly one in six low-income households (16%) had water leaks. *Id.* The AHS reports that 22 percent of the occupied households experiencing "severe" physical problems with their plumbing were low-income households, while in addition, 34 percent of the occupied households experiencing "moderate" physical problems with their plumbing were low-income households. *Id.*

^{17/}Consider, for example, new refrigerators in 1990 would be 96 percent more efficient than a new model in 1972. *Housing Characteristics 1990, Residential Energy Consumption Survey*, at 23, 25. According to DOE/EIA, however, more than 35 percent of all households eligible for federal fuel assistance had the older refrigerators. *Id.*, at 114.

"payment-troubled households are experiencing considerable socioeconomic stress when compared to the pattern for the average (general) customer sample." The study noted that families encountering payment problems have a higher number of female heads of household, dependents, disabled members, nonmarried heads of households, and unemployed household members while also having lower levels of education, income and home ownership than households that do not experience difficulties. Ultimately, the study concluded: "thus, with regard to their socio-economic and demographic characteristics, the groups that encounter payment problems have higher proportions of the type of customers intended for protection by public policy."

The Penn State study found that six of ten customers who had utility payment problems indicated that some unusual condition hindered timely payment of their utility bill. Employment related problems (such as being laid off, having reduced working hours, or being unemployed) were most frequently cited as the cause for the receipt of a shutoff notice as well as for the actual termination of service (22% for shutoff notice; 18% for termination of service). Unusually high medical expenses (resulting from hospitalization or illness) and unusually high bills (resulting from seasonal usage variations) were the second and third most common reasons cited for the termination of service. (19% and 18% percent respectively). The Penn State study concluded: "in view of the lower-income levels and higher number of dependents in the payment-troubled households when compared to the general sample, it is not surprising that these difficulties readily manifest themselves in the form of overdue bills." Moreover, Penn State found that 20 percent of the households with payment troubles reported that they simply lacked adequate income.

Consumer Awareness of Energy Consumption

Proponents of prepayment meters claim that such meters will make consumers more aware of their energy consumption. These proponents assume, in other words, that customers can gain access to their meters, can accurately read their meters, and can translate the information provided by their meters into the operation of discrete home energy consumptive uses. These assumptions about consumer information are likely in error.

The first assumption made by proponents of prepayment meters is that households have ready access to their meter. Occasional access, of course, does not help since it would not permit the consumer to gauge the rate at which the meter was running as a function of different appliances operating at any given time. According to one study of prepayment meters, customers checked their meters for the dollar amount remaining as

many as 28 to 35 times a week. The most common type of meter provides a myriad of information, including: (a) present dollars remaining; (b) present use; (c) amount used in past 24 hours; (d) amount used in last month; and (e) amount of last purchase.

Few low-income customers, however, particularly tenants in multi-family dwellings, will have ready access to their meters. And tenancy is the norm within the low-income community. If one assumes a multifamily dwelling in which access to meters is restricted generally, let alone the unlimited access assumed by arguments holding that consumers will link the operation of their meters with the operation of specific energy consuming appliances, it becomes unlikely that prepayment meters will help make payment troubled low-income consumers more aware of their energy consumption.