THE PERCENTAGE OF INCOME PAYMENT PLAN

IN JEFFERSON COUNTY, KENTUCKY

One Alternative to Distributing LIHEAP Benefits

Part I: Feasibility

PREPARED FOR:

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TABLE OF CONTENTS

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National Consumer Law Center, Inc.
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TABLE OF TABLES

National Consumer Law Center, Inc.
Page v 7 Beacon Street, Suite 821
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INTRODUCTION

The decline in federal funding of the Low Income Home Energy Assistance Program (LIHEAP) in recent years has made more imperative than ever the need to ensure that what funds *do* exist are distributed in the most fair and efficient way possible. Fairness guarantees that some households are not ***over***paid while others are ***under***paid in relation to need. Efficiency guarantees that distribution occurs with a minimum of complexity and a maximum of understandability both by the service providers and by the benefit recipients. To seek such an end is good government, good business, and good social policy.

- From the perspective of the government, the appropriate distribution of LIHEAP funds results in promoting the goal of the program in the first instance: to distribute fuel assistance in a manner that makes home energy more affordable for low-income households.
- From the perspective of the utility business, the appropriate distribution of LIHEAP funds results in even the lowest income households with the highest usage having a reasonable chance of paying their bills in full. This reduces expenses incurred for credit and collection activity, working capital, bad debt and the like.
- From the perspective of society, the appropriate distribution of LIHEAP funds results in the reduction of the threats to low-income health, safety and welfare associated with inability to pay for a basic household necessity.

The purpose of this report is to examine the feasibility and viability of distributing LIHEAP benefits in Jefferson County, Kentucky through a Percentage of Income

Payment Plan (PIPP).[1] The report will examine the system of LIHEAP distribution in use in the 1990 - 1991 Program Year to assess its fairness and efficiency. The following review is divided into six major sections:

PART I: looks at the present distribution of LIHEAP in Jefferson County. It seeks to determine whether LIHEAP is currently administered so as to best distribute funds based on actual energy bills.

PART II: looks at potential problems which inhere in changing the distribution of LIHEAP benefits in Kentucky.

PART III: introduces the Percentage of Income Payment Plan (PIPP) as an "actual-cost-based alternative" for distributing LIHEAP funds in Jefferson County.

PART IV: examines the costs of different PIPP alternatives and assesses their financial viability.

PART V: considers the efficacy of an arrearage forgiveness program, a fundamental component of any effort to rationalize the distribution of LIHEAP.

PART VI: examines the impacts that the process of setting utility rates at a percentage of income will have on the consumption levels of program participants.

PART VII: sets forth a proposed construct within which the operation and impacts of the PIPP can be evaluated.

Data for this report was obtained from Louisville Gas & Electric Company (LG&E) as well as from the Kentucky Cabinet for Human Resources from the 1989 - 1990 LIHEAP

[1] For purposes of this study, only the Percentage of Income Payment Plan (PIPP) is examined in detail as provided for in the contract between the National Consumer Law Center, Inc. and POWER, the contracting agency.

program year.[2] Information was obtained for households receiving LIHEAP assistance in Jefferson County who designated LG&E as their source of primary heating fuel. Households who received subsidy grants, as well as households who received crisis grants, were included in the analysis.[3]

Actual utility data was matched with actual household demographic data and analyzed.[4] Current LIHEAP benefits were distributed using the matrix newly adopted by the state Cabinet for Human Resources for the 1990 - 1991 program year.[5] Unless otherwise specifically noted, the study was limited to households who designated natural gas as their primary heating fuel as provided by LG&E.[6]

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[2] The 1990 Program Year stretched from October 1, 1989 through September 30, 1990. It was possible to obtain data from this ongoing Program Year since LIHEAP applications are not taken after a time certain in the spring.

[3] It was assumed that all such households would participate in a PIPP. In other words, even if a household initially approaches the Community Action Agency or CHR for a Crisis grant, that household will be placed on PIPP.

[4] If no match could be obtained, the household was excluded from the analysis. Louisville Gas and Electric Company has expressed a concern that, conceptually, this "matching" *might* introduce some distortion into the analysis. The households who cannot be matched may be higher usage households which experienced payment difficulties and were thus disconnected. If so, the households who are included in the match would understate the cost of the various alternatives studied. This concern is lessened by the successful use of this matching technique in at least seven states without the distortion being found.

[5] The new matrix represented a fall in average benefits by nearly 30 percent ($112 in FY 1990 vs. $73 in FY 1991).

[6] A sample of 3,913 LIHEAP households was obtained. This excludes 1,354 electric heating customers. Those customers had an average annual total energy bill of roughly $880. Not all excluded households were electric heating households. Households with data errors generated for whatever reason in the data transfer between NCLC, the state Cabinet for Human Resources, and Louisville Gas and Electric Company (LG&E) were also excluded. Finally, all duplicated households were excluded. *See* notes **Error! Bookmark not defined.** - **Error! Bookmark not defined.**, *infra*, and accompanying text.

Louisville Gas and Electric Company has requested that, rather than using the matrix adopted by the state for the 1990 - 1991 heating season, this study should examine the efficacy of the LIHEAP distribution used for the period from which the population of LIHEAP recipients was drawn.[7] LG&E objected to taking the 1989 - 1990 population and distributing benefits to those households using the newly adopted 1990 - 1991 matrix. That LG&E suggestion was rejected. Since the method of distributing benefits during the 1989 - 1990 program year has been abandoned, it seems wasteful, and purposeless, to draw conclusions about either its effectiveness or its efficiency. To reach conclusions regarding an abandoned LIHEAP distribution mechanism would advance no discernible public policy.

Instead, since the Jefferson County LIHEAP populations for the two program years are nearly identical demographically, it is reasonable to use the 1989 - 1990 population for purposes of studying the issues at hand.[8]

[7] *See*, note **Error! Bookmark not defined.**, *supra*, and accompanying text.

[8] Data on the 1990 - 1991 LIHEAP population was not available at the time of this study. Accordingly, to use that population was not an option.

MAJOR FINDINGS

Based on the analysis presented below, the following major conclusions can be reached regarding both the current LIHEAP structure in Jefferson County and PIPP as an alternative to that structure:

1. The current method of distributing LIHEAP benefits in Jefferson County is unfair, inequitable, and likely in violation of the federal statutory mandate that benefits are to be targeted based on actual cost, taking into consideration household size and income.

2. Any alternative method proposed for distributing LIHEAP in Jefferson County must take into consideration the facts of uncertain LIHEAP appropriations and severely limited LIHEAP administrative budgets. Fairness and efficiency must be balanced with simplicity and practicality.

3. A Percentage of Income Payment Plan (PIPP) would better comply with the statutory mandate than the existing system.

4. As was believed at the start of this study, given current levels of LIHEAP funding in Kentucky, a PIPP is not financially feasible at this time. To make a PIPP feasible would require supplementing existing LIHEAP benefits with additional funds. The ability to pursue some type of PIPP, in other words, is dependent on the success of the private fundraising efforts that were commenced at the same time this study was commenced.

5.The amount of additional funding necessary to make a PIPP financially feasible depends on the type of PIPP desired. Four alternative PIPPs were studied, including: (a) a winter only PIPP for total energy;[9] (b) an annual PIPP for total energy; (c) a winter only PIPP for natural gas only;[10] and (d) an annual PIPP for natural gas only.[11]

6.An arrearage forgiveness program is an essential component of any redistribution of LIHEAP funds. It is reasonable to forgive pre-program arrears over a 36-month period. It is also reasonable to require households to make a contribution of three dollars ($3) per month toward those arrears.

7.A PIPP should not be expected to result in any substantial increase in energy consumption for program participants.

In short, given the statutory language that LIHEAP funds are to be distributed with the highest levels of assistance going to those households which have the lowest incomes and the highest energy costs in relation to income taking into account household

[9] For purposes of this entire report, "total home energy bills" is defined to mean bills rendered for electric and natural gas service provided to a single household. It is not intended to cover other than those two energy sources.

[10] This is intended to represent a winter only PIPP for heating. In fact, households who heat with electricity would be included in such a PIPP.

[11] *See*, note **Error! Bookmark not defined.**, *supra*.

size, changes *must* be made in the existing Kentucky LIHEAP structure. The only legitimate question is what those changes should be.

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PART I: THE CURRENT LIHEAP STRUCTURE.

The reasonableness of the distribution of LIHEAP funds in Jefferson County is to be measured by the language found in the Low Income Home Energy Assistance Act of 1981 (as amended). That statute requires that:

> the highest level of assistance will be furnished to those households which have the lowest incomes and the highest energy costs in relation to income, taking into account family size.[12]

This review of the distribution of LIHEAP benefits in Jefferson County Kentucky concentrates on whether LIHEAP is effectively targeted to actual home energy costs. Moreover, this report will examine whether LIHEAP is effectively targeted so as to minimize the risk of nonpayment to the utility. The Jefferson County program was found to be flawed in both respects.

A. THE PLIGHT OF KENTUCKY'S LIHEAP RECIPIENTS

Low-income households in Kentucky are not "making it." Data from the Low Income Home Energy Assistance Program (LIHEAP) for FY 1988 is an excellent surrogate for low-income households in general. Statewide, Kentucky households who participated in LIHEAP had an average income of $5,311 in 1988. Of that money, households devoted, on average, $874 toward their annual home energy costs (16.5 percent of their annual income). After paying winter heating bills, Kentucky's LIHEAP households had a weekly income balance of $76 for *all* other household expenses,

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[12] 42 ***U.S.C.A.*** § 8624 (1983 and 1990 Supp).

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including food, housing, transportation, clothing, medical care, telephone and water service.

Specific data on households which depend on AFDC, SSI, Social Security and unemployment as their primary source of income is even more telling of the energy plight of low-income Kentucky residents. The maximum monthly benefit for an **AFDC** household of three in 1988 in Kentucky was $207. Kentucky's AFDC households receiving this benefit have on average $22 per week remaining after paying their winter home heating costs. The maximum monthly benefit for an elderly individual receiving **SSI** in January 1988 in Kentucky was $354. That individual would have an average of $56 per week left after paying her winter home heating bills. The average monthly **Social Security** benefit to nondisabled widows and widowers in Kentucky in 1988 was $415. After paying winter home heating bills, these households have a weekly income left of $70 for all other living expenses. Finally, the average monthly **unemployment** benefit in Kentucky in 1988 was $499. After paying their winter home heating bills, these households had an average weekly income left of $90 for all other living expenses.

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Page 9 Beacon Street, Suite 821
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617-523-8010

B. BURDEN OF HOME ENERGY BILLS

IN JEFFERSON COUNTY

LIHEAP recipients in Jefferson County, too, are clearly suffering as a result of their home energy burdens. In FY 1990, the average income of LIHEAP recipients in Jefferson County was $5,080. The average annual bill for total home energy was $959. The average winter bill for total home energy was $579.

These figures reveal that the *average* burden of the total annual home energy bill in Jefferson County\13\ is 19 percent of income ($959 / $5,080). The average burden of the total *winter* home energy bill is 23 percent ($579 / $2,040). Clearly, however, there is more to the story.\14\

The level of an energy bill, standing alone, is not a good indicator of whether households might face payment troubles with that bill. Household energy use, for example, declines as income declines. In Jefferson County, total energy consumption, as well as natural gas consumption, for households heating with natural gas looks like this:

\13\This report looks at households who designate natural gas as their primary heating source.

\14\For example, as discussed in detail below, one cannot solely rely upon population averages in analysis. By their nature, averages mask the extremes.

TABLE A:

ANNUAL TOTAL HOME ENERGY BILLS BY INCOME

INCOME	TOTAL ENERGY BILL	NO. OF HHS
$0-$6,000:	$915	2742
$6,001-$10,000:	$1,037	935
$10,000+	$1,162	236

TABLE B:

ANNUAL HOME NATURAL GAS BILLS BY INCOME

INCOME	TOTAL ENERGY BILL	NO. OF HHS
$0-$6,000:	$483	2742
$6,001-$10,000:	$541	935
$10,000+	$587	236

Despite the lower bills by the lower income households, the *burden* that those bills impose on households is substantially greater. For these households, the burden of their total annual energy bills as a percent of income looks like this:\15\

TABLE C:

HOME ENERGY BURDENS BY INCOME LEVEL

\15\This is before the receipt of LIHEAP.

INCOME	ANNUAL NATURAL GAS	ANNUAL TOTAL HOME ENERGY
$0-$6,000:	14%	27%
$6,001-$10,000:	7%	14%
$10,000+	5%	10%

After paying winter home energy bills, and taking into account the receipt of fuel assistance, LIHEAP households in Jefferson County had roughly $85 per week left for all other living expenses including housing, food, transportation, medical care, clothing, telephone and water service. To put this figure in perspective, on average, low-income households nationally spend $67 per week on food alone, $60 per week on housing alone (excluding energy), and $39 per week on transportation alone.

Another important aspect of home energy in Jefferson County is the extent to which electricity plays a part in high total energy bills, even for households who heat with natural gas. As Table D shows, while the average annual total energy bill for Jefferson County LIHEAP households who heat with gas is $959, the average annual natural gas bill is only $503, 52 percent of the total. In contrast, the average annual electric bill for these households is $456, 48 percent of the annual total. While, because of heating needs, natural gas bills contribute most of *winter* total home energy bills, in other words, natural gas contributes only roughly half of *annual* total home energy bills.

TABLE D:
ANNUAL BILLS BY FUEL

	AVERAGE DOLLARS	PERCENT OF TOTAL BILL
ANNUAL TOTAL		

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ENERGY BILL:	$959	100%
ANNUAL NATURAL GAS BILL:	$503	52%
ANNUAL ELECTRIC BILL:	$456	48%
WINTER TOTAL ENERGY BILL:	$579	100%
WINTER NATURAL GAS BILL:	$387	67%
WINTER ELECTRIC BILL:	$193	33%

For one tenth of all households who heat with natural gas, the gas represented less than 30 percent of the household's annual bill; for roughly one-fifth of all households who heat with gas, the gas bill represented less than 40 percent of the annual total home energy bill. (Table E).

TABLE E:
DISTRIBUTION OF ANNUAL GAS BILL
AS PERCENT OF ANNUAL TOTAL HOME ENERGY BILL

PCT OF TOTAL BILL	NUMBER OF HHs	PERCENT OF HHs	CUMULATIVE PERCENT
0%	0	0%	0%
1-10%	122	3%	3%
11-20%	117	3%	6%
21-30%	173	4%	11%
31-40%	453	12%	22%
41-50%	791	20%	42%
51-60%	959	25%	67%
61-70%	769	20%	86%
71-80%	375	10%	96%
81-90%	92	2%	98%
91-100%	62	2%	100%
100%+	0	0%	100%
TOTAL:	3,913	100%	

C. HOME ENERGY BURDENS AFTER LIHEAP

Even after the receipt of LIHEAP assistance, substantial numbers of Jefferson County households devote substantial portions of their income toward their home energy bills. Two different aspects of the home energy situation need be examined.

1. <u>ANNUAL TOTAL HOME ENERGY BILL</u>: Two in five Jefferson County LIHEAP households[16] (n= 1,597) devote more than 20 percent of their annual income toward their home energy bills *after* the receipt of LIHEAP. More than one in five (21 percent) households (n=803) devote more than 30 percent of their income toward their total home energy bill. More than one in eight (13 percent) households (n=526) devote more than 40 percent of their income toward their total home energy bill. (Table F).[17] These results are somewhat of an improvement over the population before the receipt of LIHEAP. Before LIHEAP, one in two (46 percent) households (n=1,793) devoted more than 20 percent of their annual income toward their home energy bills; one in four (24 percent; n=931) paid more than 30 percent; one in seven (15 percent; n=588) paid more than 40 percent. (Table G).

2. <u>TOTAL WINTER HOME ENERGY BILL</u>: In many ways, low-income *winter* bills pose a more serious threat to LIHEAP households than do annual bills. Not only are bills higher during the winter, but an inability to pay represents a more serious threat to the health, safety and even life of the household.[18] During the winter months,[19] even after receiving LIHEAP, one of two (48 percent) households (n=1,866) pay more than 20 percent of their income toward their total home energy bills; more than one in four (26

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[16] Of those in the sample studied. A sample of 3,913 LIHEAP households was obtained. *See*, note **Error! Bookmark not defined.**, *supra*, and accompanying text.

[17] Throughout this report, households with zero dollars in income are deemed to devote 100 percent of their income toward their home energy bills.

[18] Kentucky does not have a winter shutoff moratorium.

[19] Throughout this report, "winter" is defined to represent the months of November through April unless otherwise specifically noted.

percent) (n=1,010) pay in excess of 30 percent of their income. During those winter months, more than one in six (16 percent; n=641) paid in excess of 40 percent of their income. (Table H).[20]

The inequity of this LIHEAP system becomes apparent when comparing those households who face real energy problems with households at the other end of the extreme. There are nearly as many households who devote more than 50 percent of their annual income (n=418) toward their annual total home energy bills after receiving LIHEAP as there are households who devote less than eight percent (n=361). The same number of households receive sufficient LIHEAP to reduce their total home energy bills to less than seven percent of their income (n=231) as those who receive *insufficient* LIHEAP to reduce their bills to less than 40 percent of their income (n=218).[21] (Table F).

[20] For winter bills, LIHEAP somewhat improves the low-income winter burden. Before LIHEAP, 58 percent (n=2,251) paid in excess of 20 percent of their income; 33 percent (n=1,275) paid in excess of 30 percent of their income, and 21 percent (n=817) paid in excess of 40 percent of their income toward winter home energy bills.

[21] This excludes households who devote more than 100 percent of their income toward home energy bills, often households who have zero income.

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Page 16
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TABLE F:
ANNUAL ENERGY BURDENS AFTER LIHEAP

PERCENT OF INCOME DEVOTED TO BILL	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
0%	2	0%	0%
1%	4	0%	0%
2%	3	0%	0%
3%	8	0%	0%
4%	29	1%	1%
5%	45	1%	2%
6%	49	1%	4%
7%	91	2%	6%
8%	129	3%	9%
9%	141	4%	13%
10%	145	4%	17%
11 - 12%	379	10%	26%
13 - 14%	375	10%	36%
15 - 16%	361	9%	45%
17 - 18%	307	8%	53%
19 - 20%	248	6%	59%
21 - 25%	494	13%	72%
26 - 30%	300	8%	79%
31 - 35%	177	5%	84%
36 - 40%	100	3%	87%
41 - 45%	69	2%	88%
46 - 50%	39	1%	89%
51 - 75%	90	2%	92%
76 - 100%	20	1%	92%
100%+	308	8%	100%

PERCENT OF INCOME DEVOTED TO BILL	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
TOTAL:	3913	100%	

TABLE G:
ANNUAL ENERGY BURDENS BEFORE LIHEAP

PERCENT OF INCOME DEVOTED TO BILL	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
0%	0	0%	0%
1%	0	0%	0%
2%	2	0%	0%
3%	4	0%	0%
4%	12	0%	0%
5%	32	1%	1%
6%	43	1%	2%
7%	61	2%	4%
8%	98	3%	6%
9%	128	3%	10%
10%	144	4%	13%
11 - 12%	303	8%	21%
13 - 14%	358	9%	30%
15 - 16%	378	10%	40%
17 - 18%	312	8%	48%
19 - 20%	245	6%	54%
21 - 25%	517	13%	67%
26 - 30%	345	9%	76%
31 - 35%	211	5%	82%
36 - 40%	132	3%	85%
41 - 45%	80	2%	87%
46 - 50%	59	2%	89%
51 - 75%	104	3%	91%
76 - 100%	30	1%	92%
100%+	315	8%	100%

PERCENT OF INCOME DEVOTED TO BILL	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
TOTAL:	3,913	100%	

TABLE H:
WINTER ENERGY BURDENS AFTER LIHEAP

PERCENT OF INCOME DEVOTED TO BILL	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
0%	22	1%	1%
1%	12	0%	1%
2%	12	0%	1%
3%	22	1%	2%
4%	35	1%	3%
5%	48	1%	4%
6%	50	1%	5%
7%	70	2%	7%
8%	89	2%	9%
9%	120	3%	12%
10%	122	3%	15%
11 - 12%	292	7%	23%
13 - 14%	317	8%	31%
15 - 16%	296	8%	39%
17 - 18%	281	7%	46%
19 - 20%	259	7%	52%
21 - 25%	512	13%	65%
26 - 30%	344	9%	74%
31 - 35%	211	5%	80%
36 - 40%	158	4%	84%
41 - 45%	94	2%	86%
46 - 50%	60	2%	88%
51 - 75%	151	4%	91%
76 - 100%	28	1%	92%
100%+	308	8%	100%

TOTAL:	3,913	100%	

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It is reasonable to conclude that there is a misallocation of resources when LIHEAP benefits are viewed in terms of actual cost taking into consideration income. Some households in Jefferson County receive "too much" when energy bills are viewed in relation to income while other households receive "too little."

D. HOME ENERGY BILLS AFTER LIHEAP

From a different perspective, one can gain insight into the ability of a household to make its utility payments by examining the *bills* (as opposed to the burdens) that remain after the receipt of LIHEAP. More than one in three households (34 percent; n=1,335) have annual home energy bills of more than $1000 left after the receipt of LIHEAP; more than one in two (54 percent; n=2,132) had bills in excess of $800 (nearly $70 per month). (Table I). At the other end of the spectrum, some Jefferson County households had almost no energy bill left after receiving LIHEAP; one in 25 (n=138) had less than $300 in annual bills after LIHEAP.\22\

The inequity is seen more starkly in the *winter* bills faced by Jefferson County LIHEAP recipients. As many households had winter energy bills of less than $100 left after receiving LIHEAP (n=121) as had winter energy bills of more than $1000 left after receiving LIHEAP (n=171). Similarly, while ten (10) percent (n=398) of the recipients had total home energy bills of $200 or less left for the six winter months after receiving LIHEAP, eight (8) percent (n=312) of the Jefferson County recipients had total home energy bills of more than $900 left for the six winter months. (Table J).

\22\Again, "total home energy" is defined to mean electricity and natural gas.

TABLE I:

ANNUAL BILLS LEFT AFTER LIHEAP

ANNUAL BILL AFTER LIHEAP	NUMBER OF HOUSEHOLDS	PCT OF TOTAL HOUSEHOLS	CUMULATIVE PERCENT
$0	2	0%	0%
$1 - $100	16	0%	0%
$101 - $200	38	1%	1%
$201 - $300	78	2%	3%
$301 - $400	151	4%	7%
$401 - $500	257	7%	14%
$501 - $600	359	9%	23%
$601 - $700	403	10%	33%
$701 - $800	477	12%	46%
$801 - $900	452	12%	57%
$901 - $1,000	345	9%	66%
$1,001+	1,335	34%	100%
TOTAL:	3,913	100%	

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TABLE J:
WINTER BILLS LEFT AFTER LIHEAP

WINTER BILL AFTER LIHEAP	NUMBER OF HOUSEHOLDS	PCT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
$0	22	1%	1%
$1 - $100	99	3%	3%
$101 - $200	277	7%	10%
$201 - $300	435	11%	21%
$301 - $400	639	16%	38%
$401 - $500	668	17%	55%
$501 - $600	565	14%	69%
$601 - $700	411	11%	80%
$701 - $800	290	7%	87%
$801 - $900	195	5%	92%
$901 - $1,000	141	4%	96%
$1,001+	171	4%	100%
TOTAL:	3,913	100%	

E. SUMMARY

It is not a sufficient answer to these inequities to state that Kentucky LIHEAP benefits are based on a variety of factors. The federal statute ***requires*** that benefits be targeted such that the highest benefits go to those households with the highest actual bills taking into consideration household size and income. The Kentucky program serving Jefferson County is failing this test.

Given that observation, the question next arises as to what alternatives might be considered to remedy these failings. That *something* must be done is apparent. What that "something" might be is not. Moving to a PIPP as an alternative course of action is considered below.

Louisville Gas and Electric has objected to the method by which the financial analysis has been performed. LG&E posits that the analysis in this section should have attributed the funding assumed available for a PIPP to the current LIHEAP program and then sought to determine the effectiveness and efficiency of the existing LIHEAP structure given that increased level of funding.

LG&E's proposed method of analysis has been rejected for three reasons. First, LG&E misconstrues the purpose of this report. Indeed, no where in this report is there an "assumed level of funding for a PIPP." From the inception of this report, all parties have recognized that existing levels of LIHEAP were inadequate to finance a PIPP. Accordingly, the stated purpose of this study from its inception was to determine the dollars that would need to be raised in order to finance a PIPP.

Second, even assuming the legitimacy of LG&E's proposed imputation of additional funds to the existing LIHEAP program *arguendo*, it is not possible to perform the requested study. On the one hand, this study examines 28 different PIP scenarios, each of which has a different budget and each of which has a different fundraising need. To impute the budget from each of those 28 scenarios to the existing

LIHEAP program, and to assess the impact of each of those 28 budgets, would be both unwieldy and unproductive.

On the other hand, even if agreement could be reached on a single budget (or on a limited number of budgets) to impute to the existing LIHEAP program, there is no means by which to determine how the Cabinet for Human Resources would allocate those funds.

- oNo reason exists to believe that the Cabinet, given an infusion of $4.5 million in new funds (associated with a 9%/10%/11% PIPP, for example), would leave the eligibility requirement at the minimum permitted by federal law. A reasonable reaction by CHR would be to increase the eligibility standards.
- oNo reason exists to believe that, even if eligibility remained the same, that CHR would allocate the increased budget in a fashion across-the-board for all Poverty Levels.
- oNo reason exists to believe that CHR would allocate all of an increased budget to subsidy grants. The agency could, instead, split the increased budget between subsidy and crisis grants.
- oFinally, no reason exists to believe that CHR would allocate all of an increased budget to cash grants. Federal law permits a designation of portions of LIHEAP to the federal Weatherization Assistance Program (WAP).

Third, LG&E's suggestion to increase the existing LIHEAP budget was rejected if it necessitated an across-the-board allocation of the increased budget. An across-the-board allocation of a larger budget would increase each LIHEAP participant's by an equal amount. Thus, even while the *absolute* benefit dollars might change, the

benefit dollars of each household *relative to each other* would remain identical. Given the need to adjust each household by the same constant, to the extent that some households are overpaid *relative to other households* and that some households are underpaid *relative to other households* would provide no further insights into the benefit allocation process.

In sum, the LG&E suggestion must necessarily involve an allocation of the increased budget in one of two alternative fashions. Either it is an across-the-board allocation or it is not an across-the-board allocation. The first approach provides no new learning; the second approach is impossible to perform since it is not possible to determine in what way increased benefits would be passed through to participants. The LG&E suggestion to increase the existing LIHEAP budget by some undesignated sum of money in order to assess the effectiveness and efficiency of the existing LIHEAP program has been rejected on both substantive and methodological grounds.

Before considering that alternative, however, the difficulties faced by Kentucky's LIHEAP agency must be considered.

National Consumer Law Center, Inc.
Page 28 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

PART II: THE PROBLEM WITH KENTUCKY'S LIHEAP BENEFITS.

Being a southern state, Kentucky is not blessed with a substantial amount of LIHEAP benefits to distribute. As a result, the per household LIHEAP benefit is not sufficient to pay a significant portion of a household's energy bill. Statewide in 1988, the Kentucky LIHEAP benefit covered only 12 percent of the total home energy bill. Not surprisingly, this problem spills over into Jefferson County. The average Jefferson County LIHEAP subsidy benefit in the 1989 - 1990 Program Year for the sample population studied was $73, insufficient to cover more than nine (9) percent of the total annual energy bill and 16 percent of the total winter home energy bill. Indeed, as Table K shows, in 95 percent of the cases, LIHEAP covers less than one-fifth of the total annual home energy bill; in fully two thirds of the cases (67 percent), LIHEAP covers less than one-tenth of the total annual home energy bill. In one fourth of the cases (26 percent), LIHEAP covers less than five percent of the total annual bill.\23\

The situation does not much improve if the analysis is limited only to winter home energy bills. As Table L demonstrates, in nine of ten cases (90 percent), less than one-third (30 percent) of the winter home energy bill is paid; in three-fourths of the cases (75 percent), less than one-fifth of the winter bill is paid.

The situation has grown worse in recent years. From 1985 to 1988 alone, average benefits in Kentucky decreased by nearly 20 percent, from $130 to $105. The

\23\ It is because of this data that the need for supplemental funds to make a PIPP financially feasible was anticipated.

percent of a household's energy bill covered by LIHEAP decreased from 22 percent in 1985 to its 12 percent in FY 1990.

Decreases in LIHEAP appropriations have impacts that extend beyond the mere reduction in program benefits. Administrative restrictions occur as well. By statute, states are limited to spending no more than ten percent (10%) of their total appropriation on LIHEAP administration. This limitation creates substantial hardship in times of diminishing resources. A reduction in appropriations from $10 million to $9 million will cut available administrative dollars from $1 million to $0.9 million. Unfortunately, however, most administrative costs do not vary by the ultimate size of the benefit provided. It costs no less, in other words, to provide a benefit check of $110 than it costs to provide a benefit check of $130.

National Consumer Law Center, Inc.
Page 30 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

TABLE K:
PERCENT OF ANNUAL BILL COVERED BY LIHEAP

PCT OF ANNUAL BILL COVERED BY LIHEAP	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
0%	0	0%	0%
1%	0	0%	0%
2%	50	1%	1%
3%	253	6%	8%
4%	339	9%	16%
5%	378	10%	26%
6%	378	10%	36%
7%	405	10%	46%
8%	315	8%	54%
9%	258	7%	61%
10%	233	6%	67%
11 - 12%	417	11%	77%
13 - 14%	289	7%	85%
15 - 16%	184	5%	89%
17 - 18%	114	3%	92%
19 - 20%	96	2%	95%
21 - 25%	116	3%	98%
26 - 30%	32	1%	99%
31 - 35%	19	0%	99%
36 - 40%	12	0%	99%
41 - 45%	4	0%	100%
46 - 50%	5	0%	100%
51 - 75%	8	0%	100%
76 - 100%	6	0%	100%
101%+	2	0%	100%

TOTAL:	3,913	100%	

National Consumer Law Center, Inc.
Page 32 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

TABLE L:
PERCENT OF WINTER BILL COVERED BY LIHEAP

PCT OF WINTER BILL COVERED BY LIHEAP	NUMBER OF HOUSEHOLDS	PERCENT OF TOTAL HOUSEHOLDS	CUMULATIVE PERCENT
0%	0	0%	0%
1%	0	0%	0%
2%	6	0%	0%
3%	33	1%	1%
4%	107	3%	4%
5%	165	4%	8%
6%	231	6%	14%
7%	221	6%	19%
8%	218	6%	25%
9%	210	5%	30%
10%	231	6%	36%
11 - 12%	424	11%	47%
13 - 14%	364	9%	56%
15 - 16%	287	7%	64%
17 - 18%	249	6%	70%
19 - 20%	191	5%	75%
21 - 25%	389	10%	85%
26 - 30%	190	5%	90%
31 - 35%	126	3%	93%
36 - 40%	93	2%	95%
41 - 45%	52	1%	97%
46 - 50%	25	10%	97%
51 - 75%	62	2%	99%
76 - 100%	17	0%	99%
101%+	22	1%	100%

TOTAL:	3,913	100%	

National Consumer Law Center, Inc.
Page 34 7 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

Accordingly, a classic paradox is created: given tight administrative budgets and an uncertain future, at the very time that innovation is most necessary to gain new efficiencies and to try new ideas, it is least likely to occur.[24] From a political perspective if no other, changes in distribution methods must involve a minimum of risk, a minimum of transition costs, and a minimum of ongoing administrative costs.

The pursuit of a PIPP as an alternative means of distributing LIHEAP in Jefferson County, as discussed in the next section, is presented within the context of these difficulties.

[24] Nonetheless, it is precisely when futures are uncertain and budgets are tight that innovation in administration is most necessary.

PART III: THE PIPP ALTERNATIVE.

The following review of PIPP as an alternative to the present Jefferson County distribution of LIHEAP benefits concentrates on whether LIHEAP can be targeted to actual home energy costs so as to more accurately meet the statutory requirements of this program. Moreover, this report will examine whether, through PIPP, LIHEAP can be effectively targeted so as to minimize the risk of nonpayment to the utility. The premise for each alternative studied below is that to better target LIHEAP benefits will result in tangible benefits to the state LIHEAP program, to participating LIHEAP recipients, and to participating utilities (and their non-low-income customers).

The alternative recommended by this report is to adopt for Jefferson County, on a demonstration basis, a Percentage of Income Payment Plan (PIPP), assuming sufficient funds can be raised to supplement existing LIHEAP appropriations.[25]

A. THE PIPP CONCEPT AND ALTERNATIVES.

The basic attribute of a Percentage of Income Payment Plan (PIPP) is that if a household makes its designated monthly payment,[26] LIHEAP will pay the difference between that household payment and the actual home energy bill. As the program name implies, the household payment is set at a pre-determined percentage of the household's

[25] At current levels of funding, a PIPP is not financially feasible for Jefferson County. Because this result was anticipated from the inception of this study, private fundraising efforts were initiated at the time of the commencement of the study. The results of this study will show the extent to which those ongoing fundraising efforts must be successful in order for a PIPP to be viable in Jefferson County.

[26] These are commonly called "copayments."

annual income, to be paid in regular equal monthly installments. Under a PIPP, once a household makes its monthly payment, the obligation arises on the part of the State to provide the requisite LIHEAP benefit for that month. If the household payment is not made, no LIHEAP benefit is provided. Through this household/LIHEAP payment process, LIHEAP benefits are distributed so that, if the copayments are kept at an affordable level, a household's entire energy bill is paid each month, even though the *household's* payment is set at a percent of income that may not cover the entire current bill.

Through a PIPP, funds are distributed using a matrix taking into account household income and household size. Households with smaller incomes or larger family sizes, in other words, pay a correspondingly smaller portion of their income toward their home energy bills. Two variations of a PIPP can be considered, including:

1. <u>Winter PIPP</u>: The first variation applies the PIPP household payments only to winter energy bills.[27] Pursuant to such a program, a household's six month winter income is assumed to be half of its annual income as verified for purposes of determining LIHEAP eligibility. The PIPP household percentage is multiplied times the income to derive the six month household payment. This payment is then subtracted from the six month winter energy bill to determine the PIPP benefit. All households are provided a minimum *heating* benefit.[28] A winter PIPP can be done either for total energy or for primary heating alone.

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[27] "Winter" is defined to be the six months of November through April.

[28] Thus, a household whose percentage of income payment exceeds the actual bill would receive a minimum payment of,

2. <u>Annual PIPP</u>: The second PIPP variation applies the PIPP household payments to household energy bills on an annual basis. Pursuant to such a program, a household's annual income is multiplied times the PIPP percent to derive the annual household payment. This payment is then subtracted from the annual energy bill to determine the PIPP benefit.\29\ As with the winter program, no household is provided less than a minimum heating benefit regardless of percentage of income payments. Moreover, as with the winter PIPP, an annual program can be done either for total energy or for primary heating alone.

The annual PIPP alternative, in fact, often results in a *smaller* expenditure of LIHEAP funds than its winter counterpart. During the non-heating months, as PIPP payments exceed current monthly consumption,\30\ households will effectively "pay back" some of the LIHEAP benefits received during the heating season.

B. PIPP RESULTS FROM OTHER STATES.

A PIPP is the ideal means of distributing LIHEAP assistance so as to tie LIHEAP benefits to the actual cost of providing energy service. It absolutely ensures that the greatest benefits go to the households with the highest energy bills taking into

(..continued)

for example, $50. So, too, would a household whose percentage of income payment falls $30 short of paying the full energy bill receive the minimum $50 payment.

\29\ Where the household receives natural gas and electricity from separate companies, two different PIPP benefits would be provided. Moreover, the heating and non-heating percentage of income household payments can differ.

\30\ Since under a PIPP, all participating households are billed on a levelized 12 month billing plan, it is not immediately apparent from the bill when this cross-over occurs.

consideration household size and income. If the payment levels are reasonable, the PIPP combines a sensitivity to the financial capability of low-income households with the proven benefits of monthly payment plans.

In addition, PIPPs have been proven to work. The Rhode Island PIPP, for example, has resulted in an improvement in payment patterns for both the natural gas and the electric companies. At the end of the first program year, instead of having 55 percent of its pre-PIPP LIHEAP households three or more months behind on their unaffordable bills, Providence Gas had 95 percent of its PIPP households totally current or only one month behind. Similarly, instead of having 45 percent of its LIHEAP households three or more months behind, Narragansett Electric had 95 percent of its PIPP households either totally current or only one month behind.

Experience from the Clark County (Washington) Public Utility District is nearly identical. Clark County has implemented what it terms its "Guarantee of Service Program" (GOSP). Through that program, household payments are set at no more than nine percent of household income. That utility reported in April 1990:

> The change in customer payment practices is best illustrated by the following statistics: Out of 1,966 GOSP participants, 86 customers were removed from the plan for default. 161 customers were two months past due. This equated to an overall success rate of 76 percent of GOSP customers who were *completely current* in their obligation. 87 percent were one payment or less in arrears. When you consider that 67 percent of all those entering the plan had a delinquent balance, the results are impressive. (emphasis added).\31\

\31\ ***GOSP: Program Evaluation, Guarantee of Service Plan, Clark County Department of Community Services***, at § 9 (September 1990).

National Consumer Law Center, Inc.
Page 39 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

According to the Clark County Public Utility District's September 1990 *Program Evaluation*:

> Everyone involved with GOSP is benefiting from the program, whether it be the low-income client, DCS[32] utilities,[33] or DSHS.[34] The majority of low-income clients on GOSP are maintaining a regular budget plan, often for the first time; DCS and DSHS are able to serve more clients, even with federal budget cuts; and the utilities are showing a lower payment delinquency rate within the low-income client base. GOSP is working in Clark County.[35]

In both Washington State and Rhode Island, the PIPP/GOSP[36] has been viewed as successful by all involved parties. Moreover, the Rhode Island PIPP in particular has experienced great success with its arrearage forgiveness program. A copy of the report of the Arrearage Forgiveness Commitee overseeing the Rhode Island PIPP has been attached as Appendix B to this evaluation.

If a PIPP is implemented as a demonstration project in Jefferson County, it can succeed in limiting energy payments required of low-income households to some reasonable percentage of household income. In seeking to accomplish this result, the

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[32] Department of Community Services (county agency).

[33] Clark County Public Utility District and Northwest Natural Gas Company.

[34] Department of Social and Health Services (state agency).

[35] Transmittal Letter, ***GOSP: Program Evaluation, Guarantee of Service Plan, Clark County Department of Community Services*** (September 1990).

[36] PIPPs have been known by a number of program names. PIP, PIPP, Fair Share, Guarantee of Service Plan, Consumer Assistance Program and the like.

PIPP proposal can offer more consumer protection than do traditional shutoff protections such as a winter shutoff moratorium, required deferred payment plans, and the like. Through the PIPP, policymakers can address the fundamental question of the "affordability" of energy.

Moreover, the PIPP is intended to do more than simply provide benefits to the low-income ratepayer. If properly designed, the program can additionally create a regulatory scheme within which customer payment responsibilities are strongly encouraged. This is done by requiring an eligible household to make regular monthly payments at a specified level in order to participate in the PIPP. This program structure seeks to recognize the benefit to utilities of regular payment plans entered into by delinquent customers. The offer of payment plans, particularly to low-income delinquent customers, has been incorporated into the customer service regulations of nearly every state public utility commission.

In addition to the potential benefits which a PIPP effort has regarding the collection or prevention of arrearages by low-income households, a PIPP can help, as well, to target weatherization and housing rehabilitation funds to households who are in particular need of assistance. The provision of PIPP benefits is necessarily tied to the level of household energy usage. As a result, the PIPP will identify households whose energy usage results in bills that significantly exceed the assigned percentage of income contribution. The State, as well as Louisville Gas and Electric, can thus choose to target priority energy conservation to these high usage households.

National Consumer Law Center, Inc.
Page 41 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

This targeting of households for the provision of housing assistance is beneficial on a number of different levels. Targeting helps: (a) the low-income households in making their energy bills more manageable; (b) the utility and its ratepayers in bringing about a decline in revenues subject to the risk of non-collection, (c) the state in lowering the cost of the energy assistance program, and (d) society in general by eliminating the inefficient use of a scarce resource.

Finally, stabilizing the energy payment situation of Jefferson County's low-income residents will be good for the city and county government. The disconnection of service often leads to the outright abandonment of property. While data is not available for Louisville, this phenomenon has been documented elsewhere.

Utility collection practices, unto themselves, can be a major factor in drawing low-income households into a cycle of "forced mobility," NCLC found in Pennsylvania.[37] Columbia Gas, for example, files reports with the Bureau of Consumer Services, of the state Public Utilities Commission, each fall pursuant to PUC Rule 56-100. These reports look at the extent to which households that have been disconnected within the previous twelve months remain without heating service. The Columbia Gas reports indicate that from January 1, 1989 through November 30, 1989, 1,807 "heat related properties" had their service terminated for nonpayment. As of December 13, 1989, 897 of those "heat-related residential properties" had not been reconnected. In turn, 380 of those 897 (42 percent) were vacant premises, indicating the been abandoned subsequent to the

[37] *See*, National Consumer Law Center, ***Controlling Uncollectible Accounts in Pennsylvania: A Blueprint for Action*** (December 1990).

shutoff. Similar results were experienced in 1988. From January through November, 1988, 1,902 households had service disconnected for nonpayment. As of December 13, 1988, 1,041 of those households were not reconnected. In turn, 439 of those 1,041 (42 percent) represented abandoned premises.\38\

Similar results were found with other Pennsylvania utilities. A summary listing of the premises which were found "vacant" at the start of the winter heating season after an *electric* disconnection during the years 1988 and 1989 is presented in Table M below. A summary listing of the premises which were found "vacant" at the start of the winter heating season after a *natural gas* disconnection during the years 1988 and 1989 is presented in Table N below.

\38\ No specific study has been undertaken, however, to determine in which direction the causation runs. Studies have not been undertaken, in other words, to determine whether the nonpayment and disconnection led to the abandonment or whether the abandonment led to the nonpayment and disconnection. However, regardless of the exact direction of causation, work done by Wisconsin Public Service Corporation indicates that those low-income households who move, move because they cannot afford their utility bills. Michael Kiefer & Ronald Grosse, "Why Utility Customers Don't Pay Their Bills," ***Public Utilities Fortnightly***, at 41 (June 21, 1984); *see also*, ***Wisconsin Public Service Corporation: Lifestyle Study: Selected Payment Patterns*** (July 1983).

TABLE M
PREMISES FOUND VACANT AFTER ELECTRIC DISCONNECTION
1988 AND 1989

	1988		1989	
	SHUTOFFS	VACANT	SHUTOFFS	VACANT
DUQUESNE LIGHT	1,701	133	1,369	173
PENELEC	3,326	665	3,802	832
PENN POWER	940	190	933	183
PP&L	541	142	2,945	568
MET ED	614	130	509	115
PECO	18,405	982	21,999	1,644
WEST PENN	5,812	602	5,372	219
UGI	701	75	735	19
TOTAL	32,040	2,919	37,664	4,194

National Consumer Law Center, Inc.
Page 44 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

TABLE N
PREMISES FOUND VACANT AFTER NATURAL GAS DISCONNECTION
1988 AND 1989

	1988		1989	
	SHUTOFFS	VACANT	SHUTOFFS	VACANT
PEOPLES	4,069	616	3,973	450
NAT'L FUEL	2,488	367	2,937	406
PG&W	944	73	1,188	88
UGI	2,243	200	2,669	232
EQUITABLE	1,845	291	2,840	279
TOTAL\39\	13,491	1,986	15,414	2,963

\39\Includes Columbia Gas figures.

Low-income mobility will contribute to poor payment records primarily because the mobility, itself, is costly.\40\ In addition to the actual cost of moving, the low-income household faces the costs of rental deposits, telephone connection fees, bank fees on minimum balances, and the other expenses associated with changing residences. As a result, household income that would otherwise have been available to devote to current utility bills is instead siphoned away for the costs of moving. By taking care of home energy bills through a PIPP, this cycle of despair can be broken.

\40\ *See*, National Consumer Law Center, ***The Forced Mobility of Low-Income Households: The Indirect Impacts of Shutoffs on Utilities and Their Customers*** (January 1991).

PART IV: THE COST OF PIPP ALTERNATIVES.

This Part will present a financial analysis of a Percentage of Income Payment Plan (PIPP) in Jefferson County, Kentucky. The analysis has several elements to it. The following analysis looks at all households receiving LIHEAP in FY 1990, either subsidy grants or emergency crisis grants, and assumes their participation in a future PIPP. All duplicated[\41\] households were removed or consolidated. In other words, if the same household was in the LIHEAP records three times, it appears only once in this sample.[\42\]

The financial analysis looks only at natural gas heating customers. Electric heating customers were not included in the sample studied. Nevertheless, the conclusions drawn with regard to a *total* (10,000) apply to both electric and natural gas heating customers. Since LIHEAP has historically provided proportionately higher benefits to electric heating customers, electric heaters would comfortably fit into the projected 10,000 Jefferson County LIHEAP customers. As a result, this analysis can be applied to both electric and natural gas heating households.

The following financial analysis provides an evaluation of twenty-eight (28) different PIPP scenarios. These scenarios include four different types of PIPP including as follows:[\43\]

[\41\] A "duplicated" household is one which received either (1) *both* a subsidy grant *and* a crisis grant, or (2) more than one crisis grant. In these cases, the household would appear in the LIHEAP records twice.

[\42\] The benefits from each grant of benefits, however, were summed. Thus, if the household received both a subsidy grant and a crisis grant, the total of the two grants was taken.

[\43\] No emergency crisis grants were provided for in this financial analysis. An emergency component, as well as a

1.An "annual total energy PIPP" which would pay for both electric and natural gas energy bills for a full twelve months.

2.A "winter total energy PIPP" which would pay for both electric and natural gas energy bills for a six month heating season (November - April).

3.An "annual natural gas PIPP" which would pay all natural gas bills for a full twelve months.

4.A "winter natural gas PIPP" which would pay all natural gas bills for a six month heating season (November - April).

For each of the four types of PIPP studied, alternative Percentage of Income Payment scenarios were studied. Each scenario involves three percentages, applied to households as follows: (a) households at 0 - 50 percent of Poverty; (b) households at 51 - 100 percent of Poverty; and (c) households above 100 percent of poverty.

Five different scenarios were developed for each of the four PIPP variations. These scenarios differ as to the percentage of income payment required. The "Base" scenario sets household percentage of income payments at five percent (for households at 0 - 50 percent of poverty); six percent (for households at 51 - 100 percent of poverty); and seven percent (for households above 100 percent of poverty). The variations on that "Base" scenario include as follows (with the first percentage listed always being the

(..continued)

cushion to guard against cold weather, a bad economy and the like would need to be included as an additional cost component. Historically, a cushion for emergencies as well as a "crisis" component has been set at eight (8) percent of the total program budget. Historically, within other PIPP programs, one major benefit of the percentage of income approach is to reduce the need for crisis grants. *See*, pages 36 - 38, *supra*.

percentage for households at 0 - 50 percent of Poverty and the third percentage always being for households over 100 percent of poverty):

a.6 - 7 - 8 percent

a.7 - 8 - 9 percent

b.8 - 9 - 10 percent

c.9 - 10 - 11 percent.

In addition to these PIPP alternatives, four additional scenarios were considered involving even higher household percentages for both an annual total energy program and a winter-only total energy program.\44\ The additional percentages studied for these total energy scenarios include:

a.10 - 11 - 12 percent

b.11 - 12 - 13 percent

c.12 - 13 - 14 percent

d.13 - 14 - 15 percent.

Tables O - T below represent the financial analysis. The following definitions apply:

1.The "Sample PIPP Benefits" represent the sum of the PIPP benefits that would have been provided for the sample population for the actual energy consumption

\44\Remember, "total energy" is defined to mean the sum of electric and natural gas bills.

provided by LG&E. The PIPP benefits generally represent the shortfall between the household PIPP payment and the actual energy bill. However, no household receives less than a minimum $50 benefit. Thus, a "nonparticipant"[45] receives a $50 benefit. Moreover, every participating household receives a minimum benefit of $50 each year.

2. The "Average PIPP Benefit" is the *per household* mean PIPP benefit that would have been provided for the sample population for the actual energy use provided by LG&E.[46]

3. The "Standard Deviation" is the standard deviation for the average dollars of PIPP benefits for the sample population.

4. The "Net PIPP Benefit Dollars" is the "Sample PIPP Benefits" minus the existing LIHEAP appropriation for the sample population. The existing LIHEAP appropriation was assumed to be the dollars actually provided to this sample population in the 1989 - 1990 program year.[47]

5. The "Total Population PIPP Benefits" is the projection of the net cost of each PIPP scenario for a population of 10,000 households (absent electric heat and

[45] This concept is explained below.

[46] Again, this Table incorporates minimum payments to all households found eligible for LIHEAP.

[47] The existing LIHEAP resources include both subsidy and emergency crisis monies.

National Consumer Law Center, Inc.
Page 50 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

subsidized housing) for Jefferson County.[48] This figure is obtained by multiplying the Average PIPP Benefit Dollars times 10,000. ***This Table represents the amount of money that would need be raised above and beyond existing LIHEAP resources to finance each particular PIPP scenario.***[49] The "Total Population PIPP Benefits ±" is the degree of statistical variance projected for the "Total Population PIPP Benefits." Thus, for example, the net additional cost of the Annual Total PIPP (above and beyond existing LIHEAP resources) at a level of 9/10/11 percent is $3,646,989 ± $122,512.

6.In addition to the costs set forth below, some provision would need to be made for a modest Crisis program as well as for a contingency against factors such as cold weather, a failing economy and an increase in rates. For the most part, however, the Crisis component of LIHEAP can be absorbed by the PIPP. Rather than simply giving households short-term assistance under a Crisis grant, in other words, households applying for, and being found eligible for such grants, would be placed on the PIPP program so that future

[48] No firm number exists from this study on precisely how many unduplicated LIHEAP recipients (Crisis and Subsidy) exist in Jefferson County. Neither the state nor the local Community Action Agency track the number of unduplicated LIHEAP recipients. This study was not designed to develop that figure. Instead, this study takes as its sample the number of unduplicated LIHEAP recipients who can be matched with actual utility data. The number matched is something less than the total. Nevertheless, a total of 10,000 recipients (not taking energy from public housing authorities) does not seem unreasonable given other data.

[49] If a different population size would be desired to calculate the "Total Population Sum Dollars," one need only multiply the mean dollars times the new population size.

payments would be set at a percentage of income. Hence, significant Crisis funding will not be necessary.

National Consumer Law Center, Inc.
Page 52 7 Beacon Street, Suite 821
Boston, MA 02108
617-523-8010

TABLE O:

PIPP BENEFITS FOR SAMPLE POPULATION					
HOUSEHOLD PAYMENT PERCENTAGES		TOTAL ENERGY PIPP		NATURAL GAS PIPP	
		ANNUAL	WINTER	ANNUAL	WINTER
BASE	5/6/7%	$2,570,413	$1,678,003	$999,876	$998,405
+.01	6/7/8%	$2,389,636	$1,586,737	$894,915	$929,828
+.02	7/8/9%	$2,218,105	$1,498,779	$804,427	$867,133
+.03	8/9/10%	$2,056,861	$1,415,127	$726,397	$809,435
+.04	9/10/11%	$1,906,029	$1,336,166	$661,149	$757,224
+.05	10/11/12%	$1,765,938	$1,261,540	N/A	N/A
+.06	11/12/13%	$1,637,831	$1,191,832	N/A	N/A
+.07	12/13/14%	$1,521,615	$1,126,670	N/A	N/A
+.08	13/14/15%	$1,415,822	$1,065,961	N/A	N/A

TABLE P:

AVERAGE PIPP BENEFIT					
HOUSEHOLD PAYMENT PERCENTAGES		TOTAL ENERGY PIPP		HEATING ONLY PIPP	
		ANNUAL	WINTER	ANNUAL	WINTER
BASE	5/6/7%	$657	$429	$256	$255
+.01	6/7/8%	$611	$406	$229	$238
+.02	7/8/9%	$567	$383	$206	$222
+.03	8/9/10%	$526	$362	$186	$207
+.04	9/10/11%	$487	$341	$169	$194
+.05	10/11/12%	$451	$322	N/A	N/A
+.06	11/12/13%	$419	$305	N/A	N/A
+.07	12/13/14%	$389	$288	N/A	N/A
+.04	13/14/15%	$362	$272	N/A	N/A

TABLE Q:

STANDARD DEVIATION					
HOUSEHOLD PAYMENT PERCENTAGES		TOTAL ENERGY PIPP		HEATING ONLY PIPP	
		ANNUAL	WINTER	ANNUAL	WINTER
BASE	5/6/7%	389	265	236	206
+.01	6/7/8%	391	266	228	202
+.02	7/8/9%	392	266	219	197
+.03	8/9/10%	392	265	211	193
+.04	9/10/11%	391	264	202	188
+.05	10/11/12%	388	262	N/A	N/A
+.06	11/12/13%	384	260	N/A	N/A
+.07	12/13/14%	379	257	N/A	N/A
+.08	13/14/15%	374	254	N/A	N/A

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TABLE R:

NET PIPP BENEFIT DOLLARS					
HOUSEHOLD PAYMENT PERCENTAGES		TOTAL ENERGY PIPP		HEATING ONLY PIPP	
		ANNUAL	WINTER	ANNUAL	WINTER
BASE	5/6/7%	$2,067,413	$1,174,662	$496,535	$495,064
+.01	6/7/8%	$1,886,295	$1,083,396	$391,574	$426,487
+.02	7/8/9%	$1,714,764	$995,438	$301,086	$363,792
+.03	8/9/10%	$1,553,520	$911,786	$223,056	$306,094
+.04	9/10/11%	$1,402,688	$832,825	$157,808	$253,903
+.05	10/11/12%	$1,262,597	$758,597	N/A	N/A
+.06	11/12/13%	$1,134,490	$688,491	N/A	N/A
+.07	12/13/14%	$1,018,274	$623,329	N/A	N/A
+.08	13/14/15%	$912,481	$562,620	N/A	N/A

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TABLE S:

TOTAL POPULATION PIPP BENEFITS					
HOUSEHOLD PAYMENT PERCENTAGES		TOTAL ENERGY PIPP		HEATING ONLY PIPP	
		ANNUAL	WINTER	ANNUAL	WINTER
BASE	5/6/7%	$5,374,387	$3,054,121	$1,290,991	$1,287,166
+.01	6/7/8%	$4,904,367	$2,816,828	$1,018,094	$1,108,866
+.02	7/8/9%	$4,458,387	$2,588,138	$782,222	$945,859
+.03	8/9/10%	$4,039,152	$2,370,643	$579,946	$795,844
+.04	9/10/11%	$3,646,989	$2,165,345	$401,301	$660,147
+.05	10/11/12%	$3,282,753	$1,971,318	N/A	N/A
+.06	11/12/13%	$2,949,675	$1,790,075	N/A	N/A
+.07	12/13/14%	$2,647,511	$1,620,654	N/A	N/A
+.08	13/14/15%	$2,372,450	$1,462,813	N/A	N/A

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TABLE T:

TOTAL POPULATION PIPP BENEFITS ±					
HOUSEHOLD PAYMENT PERCENTAGES		TOTAL ENERGY PIPP		HEATING ONLY PIPP	
		ANNUAL	WINTER	ANNUAL	WINTER
BASE	5/6/7%	$121,885	$83,032	$73,946	$64,546
+.01	6/7/8%	$122,512	$83,346	$71,439	$63,293
+.02	7/8/9%	$122,825	$83,346	$68,619	$61,726
+.03	8/9/10%	$122,825	$83,032	$66,113	$60,473
+.04	9/10/11%	$122,512	$82,719	$63,293	$58,906
+.05	10/11/12%	$121,579	$82,098	N/A	N/A
+.06	11/12/13%	$120,326	$81,471	N/A	N/A
+.07	12/13/14%	$118,759	$80,531	N/A	N/A
+.08	13/14/15%	$117,193	$79,591	N/A	N/A

Mean ± 1.96 x ($\sigma \div \sqrt{n}$)

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In addition to the financial analysis provided above, the nonparticipation rate in the PIPP program has been calculated. "Nonparticipants" are households whose PIPP household payment within in each scenario would exceed their actual bill (either for annual total energy, winter total energy, annual gas, winter gas) depending on the type of PIPP being examined. A household is considered a "nonparticipant," for example, if its PIPP payment would be $800 and its actual energy bill is only $700. In such a case, the household would likely choose to take the $50 minimum payment and pay the actual home energy bill.[50]

This report makes no recommendation as to the type of PIPP that might, or should, be implemented in Jefferson County. Given current funding levels, *no* PIPP is feasible. *Any* PIPP would require supplementing existing LIHEAP resources with additional funding. The type of PIPP to be pursued, therefore, depends on the level of supplemental funding obtained.

Note, however, that the higher the household percentage of income payment is driven, the higher the level of nonparticipation. The significance of this observation is simple: the higher the PIPP household payment requirement, the more likely it will be that the PIPP payment requirement will exceed the actual home energy bill and the LIHEAP applicant will choose

[50] A household might participate, notwithstanding the mismatch between household PIPP payments and actual home energy bills, if there existed substantial preprogram arrears subject to the forgiveness provision.

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simply to pay the actual bill while *not* participating in PIPP.[51] The Table below sets forth the number of projected nonparticipants given an assumed LIHEAP population of 10,000 households.

TABLE U:

PIPP NONPARTICIPANTS					
HOUSEHOLD PAYMENT PERCENTAGES		**TOTAL ENERGY PIPP**		**NATURAL GAS PIPP**	
		ANNUAL	**WINTER**	**ANNUAL**	**WINTER**
BASE	5/6/7%	312	271	2,522	1,439
+.01	6/7/8%	498	406	3,177	1,802
+.02	7/8/9%	772	549	3,792	2,208
+.03	8/9/10%	1,086	777	4,309	2,602
+.04	9/10/11%	1,423	1,068	4,922	2,985
+.05	10/11/12%	1,774	1,314	N/A	N/A
+.06	11/12/13%	2,193	1,638	N/A	N/A
+.07	12/13/14%	2,645	1,942	N/A	N/A
+.08	13/14/15%	3,092	2,274	N/A	N/A

[51] These households, however, *would* still be LIHEAP recipients and would receive a minimum LIHEAP benefit amount.

PART V: ARREARAGE FORGIVENESS

Arrearage forgiveness is an essential component of any redistribution of LIHEAP benefits. It makes little sense to rationalize the system of accounting for current bills if low-income households face unpayable burdens for pre-program arrears. An arrearage forgiveness program helps provide a program participant with a clean slate. And, under the newly formulated LIHEAP program, since households should not incur new arrears, the utility will not face an ongoing exposure to unpaid debt. The State and the utilities can, in other words, expect a synergism to exist between the redistribution of LIHEAP and an arrearage forgiveness program. While the LIHEAP program will ensure that current bills are accounted for, the arrearage forgiveness program will account for pre-program arrears.

Under an arrearage forgiveness program, the pre-program arrears for participating households will be reduced over a period of time. In a 36-month program, for example, for every payment made by a household toward its current energy bill, the utility will reduce the household's pre-program arrears by 1/36th.[52] At the end of the 36 month period, therefore, a household will be "even," owing no current bill and having had the entire amount of pre-program arrears forgiven.

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[52] A household must successfully complete the first six months of the PIPP before obtaining any forgiveness, however. At that time, she receives her first six months of forgiveness and a *pro rata* portion thereafter.

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In the Jefferson County sample of 3,913 households studied, 2,923 households had arrears, totalling $358,493. This projects to a total arrears for a population of 10,000 LIHEAP households of $943,255 (with 7,760 of those households having arrears).

A. THE POLICY JUSTIFICATION.

In approving an arrearage forgiveness program associated with the Rhode Island Percentage of Income Payment Plan (PIPP), the Rhode Island Public Utilities Commission noted the need for both elements of the program:[53] (1) the percentage of income payment to take care of current bills, and (2) the arrearage forgiveness to take care of pre-program debts. These two program components, the Rhode Island Commission said, must be viewed "as a unified design and strategy."[54] What results, the Commission said, "should be a synergism predicated upon the ability to erase previously incurred bills with current consumption patterns."[55]

In fact, there is little chance that households in arrears will be able to successfully complete any payment plan designed to retire those arrears. Households having substantial arrears are in significantly "worse" shape than

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[53] ***In Re. Percentage of Income Pilot Program Petition, Filed by the Coalition for Consumer Justice***, Docket No 1725, Rhode Island Public Utilities Commission.

[54] ***In Re. Percentage of Income Pilot Program Petition, Filed by the Coalition for Consumer Justice***, Docket No 1725, Decision and Order, at 7, Rhode Island Public Utilities Commission (January 1987).

[55] Id., at 7.

households without arrears. Those households in debt tend to have both less income and higher annual bills. The average annual energy burden they bear as a percentage of income is greater as well.

Louisville Gas & Electric LIHEAP households with arrears have an average income of $5,530, an average annual total home energy bill of $996 and an average energy burden as a percent of income of 24 percent. The average arrears of households having arrears is $123.[56] As Table V sets out, higher arrears are associated with both higher energy bills *and* burdens.

[56] In April, 1991, LG&E questioned the level of arrears used in this report. LG&E posited that the arrears of LIHEAP participants were higher than reported. The Company based its challenge on its assessment of arrears as of March, 1991. March arrears in *any* given year will be higher than September arrears. The reason this report recommends that only September arrears be made subject to forgiveness is so that the utility can forgive only those arrears taken at a time when arrears are at a minimum. To find that heating arrears are higher at the end of the heating season than at the beginning of the heating season, in other words, is not particularly surprising. March and September arrears are not comparable and March arrears have no relevance to an arrearage forgiveness program.

TABLE V:
INCOME, TOTAL ENERGY BILL AND ENERGY BURDEN
BY AMOUNT OF ARREARS

SIZE OF ARREARS	ENERGY BURDEN	ENERGY BILL	AVG. HH INCOME	NUMBER OF HOUSEHOLDS\57\
$0 - $100	22%	$919	$5,345	1,367
$101 - $250	25%	$1,059	$5,655	1,097
$251 - $500	24%	$1,148	$6,262	173
$501 - $750	24%	$1,148	$5,561	29
$750+	32%	$1,545	$6,220	11

This phenomenon can be examined from several angles. Table W, for example, indicates that average arrears tend to increase as the size of the bill increases. More importantly, however, is not simply the size of the bill, but rather the size of the bill in relation to the level of income.\58\

\57\This analysis excludes households with zero incomes even if they have arrears.

\58\It is interesting to note again the direct relationship between the size of the bill and the level of income, as well.

TABLE W:

ARREARS BY AVERAGE ANNUAL BILL SIZE					
BILL RANGE	**BILL AS PCT INC**	**AVERAGE INCOME**	**ANNUAL BILL**	**AVERAGE ARREARS**	**N0.OF HOUSEHOLDS**
$0 - 250	5%	$3,516	$186	$90	34
$251 - 500	10%	$4,212	$401	$92	190
$501 - 750	15%	$4,264	$636	$107	588
$7,501 - 1,000	18%	$4,924	$876	$113	842
$1,000+	23%	$5,717	$1,332	$142	1,269

Table X shows these relationships as well. Arrears flow neither from income alone, nor from the size of the bill alone. Rather, the size of the arrears is most associated with the energy burden as a percentage of income.

TABLE X:

ARREARS BY AVERAGE ENERGY BURDEN (PERCENT OF INCOME)					
PCT OF INC. RANGE	**BILL AS PCT INC**	**AVERAGE INCOME**	**ANNUAL BILL**	**AVERAGE ARREARS**	**N0.OF HOUSEHOLDS**
0 - 10%	**8%**	**$8,930**	**$677**	**$109**	**378**
11 - 20%	**15%**	**$6,320**	**$917**	**$115**	**1,003**
21 - 30	**25%**	**$4,485**	**$1,091**	**$121**	**684**
31 - 50%	**37%**	**$3,382**	**$1,231**	**$138**	**408**
51 - 100%	**65%**	**$2,132**	**$1,332**	**$149**	**118**
100%+	**N/A[59]**	**$81**	**$922**	**$138**	**270**

[59] Since this range includes households with zero dollar incomes, a "percentage of income" cannot be calculated.

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The National Consumer Law Center has studied arrearage forgiveness programs in a number of states.\60\ Households simply have insufficient funds to absorb current bills plus arrears into their budgets, NCLC has found. The impact of "requiring" households to retire arrears in addition to paying current bills is to push total bills into unaffordable ranges. Even during the least expensive non-heating months, arrears push monthly household payments into the range of 15 - 20 percent of income. During the more expensive heating months, the average payment required to pay current bills plus arrears would reach an impossible 25 - 35 percent of income.

Moreover, as always, looking at the average masks the extremes where hardship really lies. For example, for LG&E's households receiving LIHEAP grants from the Cabinet for Human Resources, the distribution of energy burden as a percentage of income when payments for arrears are added to actual winter monthly energy bills resulted in the following: in November, one in seven households (14%) would be required to pay in excess of 40 percent of their income toward their home energy bills; in December, 32 percent would be asked to pay more than 40 percent of their income (with 18 percent being asked to pay more than 50 percent of their income). In both January and February, 12 percent of these households would be required to pay more than 40 percent of their income. It is because of the futility of making such demands that an arrearage forgiveness program is proffered.

\60\ *See*, ***Controlling Uncollectible Accounts In Pennsylvania: A Blueprint for Action*** (December 1990); ***Fuel Assistance Alternatives for Utah*** (June 1989); ***An Evaluation of Low-Income Utility Protections in Maine: Fuel Assistance and Family Crisis Benefits***, Vol. III (July 1988); ***An Evaluation of the Warwick (Rhode Island) Percentage of Income Payment Plan*** (January 1988).

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B. CUSTOMER PAYMENTS TOWARD ARREARS.

Despite the importance of the arrearage forgiveness component of a program to address the plight of low-income households, it is important, as well, for the program not to overreach its purpose. The intent of the arrearage forgiveness provision is to allow low-income households who have fallen "hopelessly behind" a fresh start. If a household, in contrast, is "only" one or two months behind, those are not the arrears sought to be addressed by this type of provision.[61]

It is reasonable to have households make some contribution toward their pre-program arrears. The goal is to have households pay what they can. It is important, however, not to attempt too much in this regard. If a utility seeks to collect more than what is affordable, it risks losing not only the unaffordable portion of the household contribution, but the affordable portion as well. From the household's perspective, if no benefit arises from making partial payments, no partial payments will be made.

A household contribution of $3 per month for 36 months will significantly reduce a utility's exposure to forgivable arrears. NCLC has found in a number of studies that such a provision will tend to reduce the forgivable arrears by any where from 40 to 60 percent.[62] In Vermont, for example, the household payment reduced the total forgivable arrears exposure by more than fifty percent.[63] The Vermont study found

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[61] Assuming that these months do not represent winter heating bills.

[62] All this means is that most households have arrears less than $108.

[63] Direct Testimony and Exhibits of Roger D. Colton, on behalf of the Vermont Department of Public Service, ***In Re.***

that the household would result in the payment of the *entire* pre-program arrears for a substantial number of accounts, ranging from a low of 42 percent of all delinquent accounts for Vermont Gas to a high of 59 percent for Green Mountain Power. Similar results have been found in Rhode Island,[64] Utah[65] and Maine.[66]

(..continued)

Investigation and Implementation of Low-Income Energy Programs, Docket 5308 (October 1989).

[64] ***An Evaluation of the Warwick (Rhode Island) Percentage of Income Payment Plan*** (January 1988).

[65] ***Fuel Assistance Alternatives for Utah*** (June 1989)

[66] ***Low-Income Utility Protections in Maine: An Evaluation of Low-Income Utility Protections in Maine: Fuel Assistance and Family Crisis Benefits***, Vol. III (July 1988).

These results are consistent with those found in Jefferson County, as well. For LG&E's LIHEAP customers,[67] a $3 per month contribution will reduce the arrears subject to forgiveness by 64 percent.[68] Forty-seven percent (47%) of the accounts originally having forgivable arrears would still have arrears left after a $3 per month payment for 36 months.[69]

Each dollar of additional customer contribution, however, yields smaller returns. An increase from $3 per month to $4 per month, for example, lowers the total exposure of a utility less than a move from $2 to $3.[70] The increase in the required customer payment, in other words, results in substantially increased risk that no payment will be received while yielding only marginally increased benefits. The impact of various household arrears contributions is set out in Table Y.

TABLE Y:
IMPACT OF VARIOUS HOUSEHOLD ARREARS CONTRIBUTIONS
FOR TOTAL POPULATION

[67] Unlike the remainder of this report, for purposes of calculating a total arrears subject to forgiveness, as well as for purposes of testing the sensitivity of the total arrears subject to forgiveness to different levels of customer payments, households who use natural gas for their primary heating fuel ***and*** households who use electricity as their primary heating fuel were included in this analysis.

[68] Arrears subject to forgiveness were reduced from $943,255 to $339,572 (or roughly $110,000 per year over the three years of the forgiveness program). The remaining arrears represent 36 percent of the total.

[69] The number of accounts still having arrears would reach 3,605 of the original 7,760 households having arrears from the original 10,000.

[70] This result is constant over the range of arrears. Thus, a move from $4 to $5 would result in a smaller reduction in arrears than a move from $3 to $4.

	CUSTOMER PAYMENT PER MONTH			
	NO PAYMENT	**$2/MONTH**	**$3/MONTH**	**$4/MONTH**
TOTAL ACCOUNTS	10,000	10,000	10,000	10,000
TOTAL ACCTS WITH ARREARs	7,760	7,760	7,760	7,760
TOTAL FORG. ARREARS	$943,255	$943,255	$943,255	$943,255
AVG ARRS WITH ARRS	$123	$123	$123	$123
STD DEVIATION	111	111	111	111
PCT ACCTS LEFT	N/A	65%	47%	32%
PCT ARREARS LEFT	N/A	52%	36%	24%
NO. OF ACCTS LEFT	N/A	4,986	3,605	2,454
DOLLARS OF ARRS LEFT	N/A	$490,493	$339,572	$226,381

Given the marginal increase in benefits to the utility from the increase to a household contribution of $4 per month, and the danger of risking the overall affordability of the program, monthly household contributions to pre-program arrears should not be pushed to that level. The benefit of a $2 per month or a $3 per month contribution, given the marginal reduction in exposure to write-offs, is closer and is a decision to be made at the local level.

Finally, it is important to structure an arrearage forgiveness provision properly so as to encourage the retirement of arrears and not *vice versa*. Accordingly, the arrears subject to forgiveness should be the arrears that appear on a bill on a date

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certain. Historically, this has been the arrears appearing on the September bill. In this way, a household does not have the incentive to delay entering the PIPP until spring, taking advantage of winter shutoff protections in the meantime, so as to make the winter bills subject to the arrearage forgiveness provision.

C. WHO BEARS THE COST OF FORGIVEN ARREARS.

Having established all of the above, the fundamental issue of who bears the cost of the forgiven arrears must be addressed. The net cost of the arrearage forgiveness provision should be included in rates to be charged to all ratepayers. As used for other utilities participating in an arrearage forgiveness program, the "net costs" are to be determined by the following formula:

$$NC = FA - (OBD + AND + CS + WCS + LTV + O)$$

where:

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NC=	net costs of arrearage forgiveness
FA=	amounts of arrears to be forgiven
OBD=	amount of arrears forgiven that would otherwise have become bad debt in any event
AND=	bad debt avoided by having households participate in EAP
CS=	savings in collection activities
WCS=	savings in working capital costs as revenue lag days are decreased
LTV=	savings from elimination of lost time value of money
O=	Other factors deemed relevant by the utilities, the Commission or other interested parties.

In fact, universally, utilities involved with arrearage forgiveness programs have found that there is *no* net cost to be included in rates, as calculated by this formula. These utilities find, in other words, that the arrearage forgiveness program results in net savings to ratepayers.

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PART VI:INCOME-BASED ASSISTANCE AND CONSUMPTION PATTERNS.

Some analysts rely upon blackboard economic theory to oppose income-based programs. They argue that such programs are contrary to public policy promoting energy conservation. These analysts assert that implementation of such a program will inexorably lead to the waste of energy. They reason that programs that tie energy bills to a percentage of income reduce the marginal cost of energy to zero for all costs above the income-based payment, thus eliminating any incentives for households to ration their energy consumption.

This reliance on blackboard economics is misplaced for a variety of reasons and the conclusions reached are demonstrably in error.

A. THE EMPIRICAL RESULTS.

The conclusion that income-based programs will lead to the indiscriminate waste of energy is not supported by the experience in states which have implemented such projects. A number of those states have expressly considered the consumption impacts of income-based programs in after-the-fact evaluations. The evaluations of programs in Rhode Island, Minnesota, Ohio, Montana, Illinois and Philadelphia are discussed below.

Rhode Island

The Rhode Island Percentage of Income Payment Plan (PIPP) involves two basic components: (1) a copayment mechanism; and (2) an arrearage forgiveness

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mechanism. The first component is oriented toward current bills. Under the program, so long as a participant makes regular monthly payments toward its home energy bill based on a predetermined and reasonable percentage of its income, LIHEAP will pay the difference between the household payment and the actual bill. The second component is oriented toward pre-program arrears. So long as the participant continues to make complete and timely payments toward its current bills, any pre-program arrears it might have had will be forgiven over a three year period.

An evaluation of natural gas consumption under the Rhode Island program concluded that the "presence of PIPP does not appear to be a factor affecting the energy consumption by PIPP participants."[\71\] The analysis was limited to households with 12 months of consumption.

[\71\] National Consumer Law Center, ***Evaluation of Warwick (Rhode Island) Percentage of Income Payment Plan (PIPP) Demonstration Project*** (1988).

The Rhode Island evaluation looked at natural gas consumption on a household-by-household basis.\72\ Over 60 percent of the Rhode Island PIPP participants fell within a narrow range of variation from their pre-PIPP consumption under the new income-based program. These households experienced from a ten percent increase (34 percent of participants) to a ten percent decrease (27 percent of participants) in natural gas consumption during the 1986 - 1987 Program Year.\73\ Some households, however, did increase their consumption under the Rhode Island PIPP, with eleven percent increasing their consumption by more than 20 percent. However, a roughly equal number, eight percent, experienced a consumption decrease of more than 20 percent.

No systematic increase in household consumption occurred *as a result of* the Rhode Island PIPP. The conclusion to be drawn from the Rhode Island data is that, whatever factors influenced consumption decisions by low-income households, the presence or absence of PIPP was not one. Household energy consumption under a PIPP was just as likely to go down as up.

Minnesota

\72\ This is to be contrasted to approaches like Ohio and Montana where consumption was examined on an aggregate class basis.

\73\ The 1986 - 1987 Program Year was compared to the 1985 -1986 Program Year. The Program Year ran from October 1 through September 30.

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During Fiscal Year 1985, two community action agencies in Minnesota operated two different programs for the distribution of federal LIHEAP benefits. At the core of the programs was the premise that a low-income household should be asked to pay only a reasonable percentage of its income for its home energy or heating fuel. The LIHEAP program would pay the difference between the household income-based payments and the actual bills of program participants.

Results similar to Rhode Island were found in an evaluation of household total energy consumption under the Minnesota Fair Share programs.\74\ Of the clients served in Anoka County, 57 percent of all participating households fell within the range of a ten percent increase to a ten percent decrease (37 percent increased consumption; 20 percent decreased). An equal number experienced "significant" increases as decreases, with ten percent using at least 25 percent more and eleven percent using at least 25 percent less.

The second Minnesota pilot program involved the BICAP community action agency. With BICAP, the data was almost identical. For participating households, 67 percent of all households fell within the plus or minus ten percent range (21 percent increased; 46 percent decreased). Similarly, while eight percent of participating households increased consumption by at least 25 percent, nine percent decreased their consumption by at least 25 percent. Electric and natural gas consumption was aggregated in the analysis.

\74\ National Consumer Law Center, ***Evaluation of Minnesota Fair Share Pilot Programs*** (1986).

The similarity in results between the two programs in Minnesota are significant in several respects. Primarily, though, the Anoka program design included a benefit cap for individual households along with a positive conservation incentive that allowed households to share in any energy savings. If households conserved energy, they were permitted to pocket part of the savings. Moreover, there was an absolute cap placed on consumption, over which LIHEAP would not pay. In contrast, the BICAP program had an open-ended design; all consumption above the household income-based payments was covered by public assistance benefits. The program involved neither incentives for conservation nor penalties for waste. Despite this difference in conservation designs, results for the two programs were virtually identical.

Ohio

The Ohio Percentage of Income Plan (PIP) was the first income-based program in the nation. Under the Ohio PIP, households are required to make payments equal to a predetermined portion of their income. So long as such payments are made, while the household remains "responsible" for the shortfall, the utility may not use the disconnection of service as a collection device.\75\ The Ohio PIP does not involve any redistribution of LIHEAP benefits. Indeed, participating households often do not even apply for and receive LIHEAP assistance.

\75\ The utility may, however, use any other lawful collection mechanism.

In an evaluation of the Ohio program,[\76\] significant differences were found in consumption impacts as between natural gas and electric PIP versus non-PIP customers as well as between customers of different utilities.[\77\] The Ohio PIP participant was found to have consumed significantly more natural gas than the non-PIP customer. While the magnitude of the difference varied widely among the various utility companies, the direction of the difference was uniform. In its evaluation, however, Ohio looked only at aggregate data; the consumption for the PIP class as a whole, it found, exceeded the consumption for the non-PIP class as a whole. Ohio found further that the difference between the two populations could be attributed to a "relatively small customer population." A small number of extremely high use customers, in other words, was found to have skewed the aggregate analysis.

Moreover, the Ohio conclusion as to aggregate use by PIP customers did not address the *change* in consumption due to the implementation of the PIP. Ohio found that patterns of gas consumption by PIP customers remained reasonably consistent during the two years before, and the two years after, the PIP implementation. The same differences that existed *after* the PIP had been implemented in Ohio, the state found, had existed *prior* to the time PIP had been implemented. No explanation for this phenomenon was proffered.

[\76\] Tractell, Inc., ***A Study of the Results of the Commission's Procedural Determination of Customer Payment Options Pursuant to the Investigation into the Long-Term Solutions Concerning Disconnect or Gas and Electric Service in Winter Emergencies*** (1985).

[\77\] Ohio placed significant restrictions on the validity of its analysis. The consultant, for example, expressly stated that the sample it studied was insufficient to draw sound conclusions without further study.

According to the Ohio study, there were "minimal" net differences in electrical usage for PIP and non-PIP customers in Ohio when summed over all utilities.\78\ Ohio noted that there were "opposite, yet wide, differences" as between companies. The Ohio analysis, for example, looked at consumption by year, by season and by month. Ohio found that all PIP minus non-PIP differences were positive for Cincinnati Gas and Electric; all differences were negative for Ohio Edison; and the difference pattern for Dayton Power and Light varied with consumption month. Ohio did not address why there might be increases in gas consumption but no changes in electric consumption.

\78\ Again, aggregate analysis was used.

Montana

The Montana PIP was modelled closely on the Rhode Island PIPP. Montana implemented a LIHEAP-based program. Bills beyond the income-based payments by households were paid by federal fuel assistance benefits. Montana represents an interesting situation in that the participating utility was Montana Power Company, a combination utility. A combination utility provides *both* the natural gas and electric service to customers. In addition, Montana Power uses a unitary billing process, whereby the natural gas and electric bills are aggregated into one "amount due" on the monthly bill.

While the Montana PIP was evaluated for impacts of the PIP on participating client consumption, as with Ohio, due to data collection problems, the consultant warned that "a comprehensive analysis of the energy consumption data and correlation to the PIP files* * *was not possible."\79\ Nevertheless, the study looked at both electric and natural gas consumption.\80\

The Montana electric analysis looked at 13 accounts which had the same customer in the year before the PIP and the year of the PIP.\81\ The study used a methodology similar to Ohio in that it aggregated consumption for the entire sample

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\79\Schneider, ***Evaluation of Montana's Ravalli County Percentage of Income Payment Plan (PIPP) Pilot Project*** (1989).

\80\The Montana evaluation reported that it had insufficient data to reach statistically significant conclusions. Its conclusions, the report said, were "qualitative" in nature.

\81\Montana, too, limited the analysis to households with 12 full months of data.

PIP population and compared that aggregate figure to the aggregate figure for the pre-PIP year.[82] The study concluded that the total PIP population increased its electric use by 12 percent from the 1986-87 program year to the 1987-88 program year. The January consumption, in particular, the report noted for these 13 accounts, increased by 18 percent as between those two time periods.

The study concluded that "it is reasonable to conclude from these results that annual electric use increased by 11-12 percent under essentially normalized weather conditions.[83]* * *It is doubtful whether additional large systematic increases would occur in subsequent years."

The Montana study looked, also, at natural gas consumption. Average annual gas consumption for PIP participants increased by only one percent, the study found. Similarly, January consumption increased by only four percent from 1986-87 to 1987-88. The consultant concluded that "it does not appear that there was a significant increase in gas use between 1986-87 (LIHEAP) and 1987-88 (PIP) on an essentially weather-normalized basis for the same accounts (addresses)."

Illinois

[82] Unlike Ohio, the Montana evaluation did not comment whether a limited number of customers with abnormal consumption characteristics skewed the aggregate results.

[83] While weather conditions were not normalized, the consultant found that the number of degree days was virtually identical. Based upon that observation, without considering the patterns or stretches of cold vs. warm weather, the consultant concluded that weather in the two years was effectively the same.

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In 1985, Illinois implemented a utility-based Percentage of Income Plan (PIP) largely based on the Ohio model: the Illinois Residential Affordable Payment Program (IRAPP). Participation in IRAPP is limited to individuals who are otherwise eligible for the Illinois LIHEAP program. Under IRAPP, a household is required to make an income-based payment during the winter season (December 1 through April 30). For each month during the summer season (May 1 through November 30), participants must pay either the percentage of income payment or the current month's bill, whichever is greater.

Illinois implemented a strict consumption cap. In the absence of medical excuse, participants are required to pay for any monthly heating season consumption that exceeds an officially designated average residential use. Responsibility for above-average usage becomes due and payable only when a household leaves the program.

Illinois found that in five of seven utilities measured, participants increased their winter gas consumption.\84\ (Griffith 1989). For only three of these companies was the consumption increase statistically significant. Moreover, in all of the utilities providing natural gas, there was increased summer consumption. However, for only one was the difference statistically significant.

\84\ Griffith. ***IRAPP: Preliminary Evaluation of the Illinois Residential Affordable Payment Program*** (1985).

The impact of IRAPP on electricity consumption varied from one utility service area to another. Winter electricity consumption increased for three of the six utilities. For each of these utilities, the difference was statistically significant. For the remaining three utilities, winter electricity consumption by participants decreased. For each of these utilities, however, the difference was not statistically significant. In contrast, summer electricity consumption increased in three utility service areas and decreased in two utility service areas. The difference in each instance was not statistically significant.

Philadelphia Electric Company

The Philadelphia Electric Company has implemented an income-based program aimed at its payment troubled customers. The PECO Customer Assistance Program (CAP) provides that income-based rates are available under two sets of circumstances. First, households who live at or below 75 percent of the poverty level are conclusively presumed to be incapable of paying their full electric bill. Second, households who are above 75 percent of poverty, but below 150 percent of poverty, have the right to demonstrate their inability to pay. In both instances, however, the customer must have experienced prior payment difficulties as manifested by nonpayment of bills.\85\

\85\ This program requirement has been challenged before the state public utilities commission by Philadelphia Community Legal Services representing income-eligible clients. The PUC was told that such a requirement provides an unreasonable incentive for customers not to pay their electric bill so as to become eligible for the CAP program.

Under PECO's CAP, households in the first category must pay three percent of their income to PECO if they use electricity for non-heating and eight percent if they use electricity for heating. In contrast, households in the second category must make either the percentage of income payments, or what PECO finds to be their available discretionary income, whichever is greater. PECO reports that roughly two of three households make percentage of income payments.

In addition to the payment plan, customers who participate in the PECO CAP receive extensive counselling on energy saving measures. Low-cost/no-cost conservation measures are also provided for installation in the homes of such participating households. As a result, PECO's program evaluation found that, despite the limitations on payment responsibility, because of these aggressive conservation efforts, households participating in the CAP actually experienced an aggregate decrease in consumption of nearly seven percent.\86\

B. PRICE SIGNALS AND INCOME-BASED PROGRAMS.

Whatever the reason behind concerns over consumption impacts within an income-based program, the blackboard economics advanced by some opponents of such programs is an insufficient foundation for such concerns. In general, what utility analysts who preach the gospel of blackboard economics ignore is that low-income energy bills rarely are a mechanism through which price signals are sent to

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\86\ The Conservation Company, ***Evaluation of Philadelphia Electric Company's Customer Assistance Program*** (April 1987).

low-income households. The reliance upon blackboard economics in this instance has both theoretical and practical shortcomings.

1. The Theoretical Shortcomings.

Price theory has little real world applicability to low-income energy rates. Low-income households do not respond to "price signals" tied to rates. For price signals to be effective, the household must be responsible for paying its entire home energy bill. That, however, is not the case.

The mere receipt of LIHEAP assistance, for example, effectively distorts the price signal for consumption paid for by the benefit. Moreover, price signals assume that households pay their entire home energy bills. With low-income households, that most often is not the case. If, in other words, a household can afford to pay only $60 toward its home utility bill in the first place, rendering a bill for $120 rather than $100 provides no price signal to that consumer.[87]

Third, winter payment plans tend to render price signals irrelevant. Through a winter payment plan, households in many states are allowed to pay less than their full monthly bill during the winter months so long as the accrued shortfall is retired before the start of the subsequent heating season. During neither the winter nor the summer months, therefore, is there a price signal being provided to the low-income

[87] Direct Testimony of Barbara Alexander, Before the Maine Public Utilities Commission, ***Re. Central Maine Power Co.***, Docket No. 89-68 (January 1990).

household. In the winter, consumption is "under-priced"; in the summer, consumption is "over-priced."

Finally, equal budget payment plans render price signals irrelevant. Substantial effort is made to solicit low-income participation in budget billing (often known as level billing) plans. In this fashion, the household pays an equal monthly bill throughout the year. At the end of the year, there is a true-up, with the difference rolled into the next year's budget. These plans are promoted as a mechanism to take the peak off of winter heating bills. In so doing, however, the efficacy of any price signal incorporated into monthly rates is destroyed.

2. The Practical Shortcomings.

The blackboard theory used in opposition to income-based energy assistance programs faces practical shortcomings also. These theoretical arguments ignore the practical implementation of such programs which render the theory inapplicable. Income-based programs are not implemented in isolation from affirmative efforts to promote conservation.

Indeed, PIP programs are ideal vehicles through which to target low-income conservation efforts. In contrast to traditional programs, income-based programs expressly incorporate usage data as an essential part of the determination of benefits. As a result, high use customers, as well as customers whose usage substantially increases over prior periods, are readily identifiable. Conservation efforts are then directed to these households on a priority basis. Indeed, because high usage means

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high benefit payments, income-based programs effectively create incentives for the government to target conservation programs, to increase the efficiency of the distribution of benefits.

Even without such affirmative conservation efforts, it is unreasonable to expect that households will indiscriminately waste energy merely because the energy usage above the income-based payment is being paid for by someone other than the household. Instead, what happens is that households seek out a zone of comfort within which to live. When that zone has been reached, additional consumption will not occur regardless of the "price signals" provided through a marginal cost of zero.[88]

This result is particularly true for heating consumption. There is no reason to believe that a household wishes to live in a home with a temperature of 80 degrees rather than 72 degrees, for example, merely because the financial responsibility of the household is limited to a percentage of income. Nor is there reason to believe that a household will open windows while heating a home as a result of the placement of financial responsibility on other parties. If energy waste does occur because of a lack of weatherization, because of broken windows, or similar reasons, that usage is not tied to inappropriate price signals but rather to insufficient income to provide repairs. Moreover, this type of excess consumption can be identified, as discussed above, and the program can offer affirmative measures to address these problems.

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[88] Barnes, ***A Study of Client Satisfaction: The Percentage of Income Payment Plan*** (1987).

Non-heating consumption results in a different analysis. With non-heating consumption, an income-based program does not necessarily lower the "marginal cost" of additional consumption to zero. In order to increase non-heating consumption, households would likely need to make a capital investment in new appliances.\89\ Despite the benefits provided through the income-based fuel assistance program, the availability of discretionary income for such investments is limited.\90\

C. SUMMARY.

As income-based energy assistance programs become more common, it is important to gain an understanding of what impact such programs will have on important conservation principles. The conclusion flowing from this review of past studies is that an income-based program, unto itself, has no discernible impact on consumption. Whatever factors might influence household consumption decisions, the presence of an income-based assistance program is not such a factor. Consider that:

oIn Rhode Island, household consumption was as likely to increase as to decrease under that state's PIPP. Most households, however, fell within a narrow band of usage (plus or minus ten percent), thus effectively representing no change.

\89\In the South, increased non-heating consumption may result from increased cooling consumption as well.

\90\Direct Testimony of Michael Sheehan, Before the Massachusetts Department of Public Utilities, ***Re. Western Massachusetts Electric Company***, Docket No. DPU-86-280 (April 1987).

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oIn Ohio, while the PIP participants in that state had higher natural gas consumption than non-PIP participants, the PIP household consumption did not increase because of the program. The consumption prior to program implementation was the same as the consumption after program implementation. No difference was found for electric consumption.

oIn Minnesota, results similar to Rhode Island were found. On an individual household basis, consumption was just as likely to go up as to go down. In addition, no differences were found in Minnesota as between the agency which implemented a consumption cap and the agency which did not implement a cap.

oIn Montana, natural gas consumption was found to have increased for PIP participants while no change was found for electricity consumption. This result is puzzling in that the same company provides both natural gas and electric service and the bills for both services are aggregated into one "amount due."

oIn Illinois, natural gas consumption was found to have increased for some utilities and to have decreased for others. Similar results were found for electric consumption. For those Illinois utilities that did have increases, the increases came despite a strict cap on the provision of benefits.

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VII. EVALUATION

Within the first three years after initiation of the proposed PIPP, an evaluation should be undertaken. The purpose of such an effort is to allow the state, the utility and the local Community Action Agency to provide for the structured evaluation of a variety of factors regarding the program. The evaluation should involve both a process evaluation and an impact evaluation.

A. PROCESS EVALUATION.

Any evaluation of a PIPP should involve a process evaluation of the program. This evaluation should examine the design, development and implementation of the program. The purpose of the process evaluation is to make assessments that will improve program development and make the program operate more efficiently and effectively.

The process evaluation proposed for Jefferson County PIPP will assess the structure and functioning of the program within the Community Action Agency, within the state LIHEAP agency, and within the utility. It will, as well, examine the coordination among and between these organizations. Specific areas to be included in this evaluation should include, but not be limited to, the adequacy of program plans and procedures; whether practice adheres to the plans and procedures; the flow of clients through the program; the flow of paper processing; the timeliness of client and paper processing; the administration of eligibility criteria; client selection; and the adequacy of staffing and staff training.

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Specific issues to be examined in the process evaluation should include: the interaction between agencies; communication between agencies (including the utility) and the clients; communication amongst the agencies; the implementation of energy education components; the costs of conducting each component of the program; the agency process of reaching and entering clients; the ability to retain participants; the paper flow; and periodic report processes.

In short, in undertaking a process evaluation, several observations are relevant: A program must work. It must operate in a manner such that the LIHEAP providers, the utility and the clients can understand and operate it. The program must be inherently understandable. It cannot be personnel dependent. It must be able to survive staff turnover. It must be able to survive the unexpected.

At the same time, a process evaluation must assess whether the program is accomplishing what it purports to accomplish. Is it reaching the population it seeks to reach? Is it providing benefits in a timely and effective manner? It is inclusive or exclusive? What are its impacts on other aspects of utility operations, LIHEAP operations and the like?

B. IMPACT EVALUATION.

In addition to undertaking a process evaluation, there must be an impact evaluation as well. This evaluation will develop data sufficient to serve as a basis upon which to render opinions on the success and/or impact of the program in addressing the needs of and assisting the LIHEAP population.

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The effectiveness and the cost-effectiveness of the program (from the utility viewpoint, the client viewpoint, and the LIHEAP provider viewpoint) depend in large part on consumption and demographic data. The "effectiveness" of the program measures whether the program generates the desired results. "Effectiveness" encompasses, also, whether the program generates adverse results that overcome or outweigh the desirable impacts. Effectiveness, in other words, involves a balancing process of the good impacts versus the bad.

Cost-effectiveness, too, must be considered in this evaluation. Cost-effectiveness is to be determined from three perspectives.

oFirst, one must determine whether the benefits outweigh the costs. This evaluation is not sufficient unto itself, however.

oA second level of analysis must be an assessment of whether the level of benefits, in some absolute form, is sufficient to merit the effort. A benefit level of 1.1, for example, may simply be insufficient to merit continuation of the program given reasonably anticipated risks of future changes. (If, in other words, the program is marginally beneficial, but is made so by an assumed continuation of federal fuel assistance at current levels, perhaps additional thought should go into that finding.)

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oFinally, the evaluation must look beyond the program actually being administered. This evaluation must be of whether the program obtains the benefits in a manner that is less expensive (or more beneficial) than available alternatives.

Among the factors to consider in the impact evaluation include:

1. **COST COMPARISON (administrative):** The purpose of the cost comparison is to determine the relative costs to the utility, the state, and the Community Action Agency regarding the handling of low-income customers through the PIPP program and through the more traditional LIHEAP structure. Expenses should include the start-up and administration of an ongoing program including data processing, outreach, staff training, client education and the like.

2. **COST COMPARISON (benefit):** Sensitivity analysis should be performed to determine the extent to which, if at all, the success or failure of the PIPP is sensitive to external factors. These factors might include, for example: (a) participation levels; (b) rate levels; (c) weather; and (d) federal LIHEAP appropriation levels. The projected impact of variation in each of these four factors on program results should be considered.

3. **COST COMPARISON (utility collection):** Another purpose of the cost comparison, also, is to determine the extent to which, if at all, the PIPP results in increased revenue and decreased credit and collection

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expenses for the participating utility. Credit and collection expenses would include, for example, traditional collection notices; field visits for collection action, termination and reconnection; negotiating, setting up and monitoring payment agreements; carrying arrearages; and writing-off uncollectible balances. A revenue analysis should examine total dollars collected, percentage of bills paid, the "bills behind" which a client experiences at any given time.\91\ In addition, a revenue analysis should quantify the additional revenue received by maintaining customers during times that otherwise such customers would, voluntarily or involuntarily, have been disconnected from the system.\92\ For example, during the warm weather months, when in the absence of a PIPP, LG&E might have lost some customers altogether, under PIPP, it might instead bill and collect most of its revenue.

4. **PARTICIPANT USAGE CHARACTERISTICS:** There will be a need to track participant consumption patterns to determine whether consumption

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\91\"Bills behind" is a measure of arrears created by the Pennsylvania Public Utilities Commission. Instead of looking at dollars, it divides total arrears by average bills to determine how many "bills behind" the customer is. The measure helps in making cross-utility comparisons where different rates, different weather and the like might make a comparison of dollar arrears misleading.

\92\Note that in Philadelphia, for example, Philadelphia Gas Works loses roughly 14,000 to 17,000 residential accounts during the summer months, only to gain those accounts back by the following December and January. Each of those lost accounts represents a lost revenue stream for the company. In contrast, the Energy Assurance Program being operated by PGW kept those households on the system during the warm weather months. In addition, more than 70 percent of the participating households were current in their bills over those months while more than 90 percent were either current or less than three months behind. This is particularly promising from the perspective of generating revenue that otherwise would be lost because the warm weather month payments for the PGW sample represented $127,051 in income while the fully embedded bill represented $128,432.

increases when amounts billed to customers are tied to a percentage of income (rather than varying with the amount of energy consumed). Along with this inquiry into whether use of service increases, decreases or does not change with program participation, an inquiry should be pursued into the impacts of energy education on these usage patterns. Some of the issues to examine in this broader inquiry will include:

A.Individual household consumption.

1.How many individual households increased consumption.

2.How many individual households decreased consumption

B.Class consumption patterns.

1.Did the aggregate participant class consumption increase, decrease or stay the same.

2.Do particular individual households disproportionately affect the aggregate.

C.Consumption patterns by demographics.

1.Elderly.

2.Housing type (single family detached, multi-family, etc.).

3.Housing tenure (renter, owner).

4.Length of tenure.

D.Controllability of consumption.

1.Renter/owner.

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2.Available conservation investment capital.

3.Extenuating circumstances.

5.**CUSTOMER PAYMENT PATTERNS:** The crux of the evaluation will be the extent to which households make current payments under the PIPP. The intent of the PIPP is to set home energy rates at an affordable level. Having accomplished that purpose, it is reasonable to expect home energy payments thus to be made. Among the issues to be examined in this inquiry are an identification of factors associated with succeeders and non-succeeders; the reasons for the success or non-success of particular customers; and a demographic analysis of both succeeders and non-succeeders. Some of the other issues to be examined in the broader inquiry into customer payment patterns include:

A.Most recent year.

1.Sum bills vs. sum payments.

2.Count monthly bills paid in full by due date

3.Examine "treatment history"[\93\]

4.Calculate percent of monthly bill by vintage:

a.Percent of total bill which is current bill.

[\93\] A customer's "treatment history" is the history of collection efforts directed toward that household. It includes, for example, reminder notices, shutoff notices, disconnects for nonpayment, and the like.

b.Percent of total bill which is 30-day arrears.

c.Percent of total bill which is 60-days arrears.

5.Calculate percent of monthly bill by vintage by season:

a.Pre-winter (October)

b.Dead of winter (February)

c.Post winter (May)

B.Compare most recent year of program participants to prior year (preferably pre-participation year) for program participants.

C.Compare payment patterns by demographic classes.

1.Elderly vs. non-elderly.

2.Housing type

3.Pre-program arrears

4.Length of tenure

D.Separately compare first year of participation to second year of participation.

E.Compare most recent year of program participants to general residential population sample.

F. Compare payment patterns of program participants to payment patterns of samples of residential

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customers on traditional LIHEAP program.

G. Compare proportion of billed revenues paid by household, as well as proportion of billed revenues paid by LIHEAP, before and after PIPP as well as between households receiving PIPP benefits and households receiving traditional LIHEAP.

6. **DEMOGRAPHIC ANALYSIS:** In addition to the various demographic analyses discussed above, demographic analysis should be pursued both of client participation and nonparticipation[94] and of client gainers and losers.[95] Among the demographics to examine in such an inquiry will be:

1. Income level
2. Income source
3. Age of head of household
4. Presence of children under 18
5. Housing type (single family detached, multi-family, etc.)
6. Housing tenure (owner or renter)
7. Other

[94] As discussed above, some LIHEAP recipients will find that their household percentage of income payment will exceed their actual energy bill and will, accordingly, choose not to participate in PIPP.

[95] Since the PIPP will involve a redistribution of LIHEAP benefits, some clients will receive more benefits (hence, "gainers") and other will receive fewer benefits (hence, "losers").

Other issues to consider within the PIPP evaluation should include as follows:

A. **Telephone service:** Does the lack of telephone service by Program participants interfere with the success of the Program.

B. **In-service date:** Does the in-service date of Program participants affect their successful participation in the Program.

C. **Education:** Does the educational level of Program participants affect their successful participation in the PIPP.

D. **Poverty Level:** Does the poverty level (i.e., income taking into consideration family size) of program participants affect their successful participation in the PIPP.

E. **Mobility:** Does the "mobility" of program participants affect their successful participation in the PIPP.

F. **Children in household:** To what degree to program participants represents households with children? Is the presence of children associated with program participant success or failure? Does the presence of children present an opportunity to tie the program into supplemental (or

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complementary) funding provided by the federal Title IV-A Emergency Assistance (E.A.) program.

C. ASSESSMENT OF SUCCESS OR FAILURE.

Before any "evaluation" of the PIPP occurs, participants must develop clear measures of success or failure for the program. This development should precede the actual evaluation both (1) to ensure that adequate data is developed and maintained to permit evaluation on the desired factors, and (2) to ensure that the data collection and evaluation inquiry is developed so as to test the measures of success or failure (rather than fitting the measures of success or failure to whatever data might later be found to exist).

The following measures of success and failure are set forth below as "results" (successes) and "consequences" (failures) in terms that are subject to empirical measure:

1. RESULTS

1.Does the program result in a reduction in shutoffs among the affected population.

2.Does the program result in a reduction in accrued arrears among the affected population.

3.Does the program result in reduced collection activity directed toward the affected population.

4.Does the program result in cost savings to participating utilities.

5.Does the program result in a more rational distribution of federal fuel assistance funding in that LIHEAP benefits are more closely matched to actual costs, taking into consideration household size.

6.Does the program result in a better working relationship between the utilities, their customers and the fuel assistance agencies.

7.Does the program result in regular monthly payments by customers who historically have not made such payments.

2. CONSEQUENCES

1.Can the program be operated at a reasonable cost.

a.Are the program/benefit costs reasonable.

b.Are the administration costs reasonable, both to the utilities and to the state.

2.Is the program feasible from the perspective of administrative complexity/simplicity.

3.Does the program result in satisfactory customer acceptance.

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4.Can the program be operated without significant increases in customer usage.

5.Can the program be operated without unacceptable adverse consequences for those not participating as well as for those losing degree of benefits.

6.Is the program sufficiently stable to "survive" changes in weather, energy costs, LIHEAP appropriations, and client participation levels.

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CONCLUSION

Based on the analysis presented above, the following conclusions can be reached regarding the distribution of LIHEAP benefits in Jefferson County, Kentucky:

1. The current method of distributing LIHEAP benefits in Jefferson County is unfair, inequitable, and likely in violation of federal statutory mandates.

2. A Percentage of Income Payment Plan (PIPP) would better comply with the statutory mandate than the existing system.

3. As was believed at the start of this study, given current levels of LIHEAP funding in Kentucky, a PIPP is not financially feasible at this time. To make a PIPP feasible would require supplementing existing LIHEAP benefits with additional funds. The ability to pursue some type of PIPP, in other words, is dependent on the success of the private fundraising efforts that began at the same time this study was commenced.

4. The amount of additional funding necessary to make a PIPP financially feasible depends on the type of PIPP desired. Given the high percentage that electric bills play of total home energy bills in Jefferson County, a "total energy" PIPP is preferable to a PIPP directed only at heating.

5. Because of the significant non-heating month consumption by Jefferson County LIHEAP recipients, and because a 12-month PIPP would, in fact, have a less expensive budget than a PIPP operated only during

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the heating season, an annual PIPP is preferable to a heating-month only PIPP.

6. A total energy household percentage of income matrix of 9/10/11 percent is not unreasonable given a consideration of the combined factors of payment affordability to the household and program affordability to the state.

7. An arrearage forgiveness program is an essential component of any redistribution of LIHEAP funds. It is reasonable to forgive pre-program arrears over a 36-month period. It is also reasonable to require households to make a contribution of three dollars ($3) per month toward those arrears. An arrearage forgiveness program would impose insignificant burdens, if any, on remaining ratepayers.

8. A PIPP should not be expected to result in any substantial increase in energy consumption for program participants.

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APPENDIX A

INCOME RANGES EQUAL TO

100 PERCENT OF POVERTY

The following was provided by the Kentucky Cabinet for Human Resources as representing the incomes at which households of different sizes live at 100 percent of the federal Poverty Level:

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APPENDIX B:
REPORT OF THE ARREARAGE FORGIVENESS COMMITTEE
RHODE ISLAND PIPP
JANUARY 1988

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Page 10 Beacon Street, Suite 821
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Page 10
Page 10 Beacon Street, Suite 821
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Page 18
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