

EVALUATION OF WARWICK (RHODE ISLAND)
PERCENTAGE OF INCOME PAYMENT PLAN (PIPP)
DEMONSTRATION PROJECT

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Prepared For:

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January 1988

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INTRODUCTION

In July 1986, the Rhode Island Governor's Office of Energy Assistance (GOEA) embarked on a journey to implement the nation's first Percentage of Income Payment Plan (PIPP) based on a redistribution of federal Low-Income Home Energy Assistance Program (LIHEAP) funds. The Rhode Island PIPP was undertaken in the service territory of the Warwick Community Action Agency. The Warwick PIPP involved two utilities: Providence Gas Company and Narragansett Electric Company. The Warwick PIPP was directed toward both a household's primary heating source and its secondary energy source.

The Warwick PIPP completed its first program year on September 30, 1987. This evaluation is of that first year. The evaluation was prepared by the National Consumer Law Center under the supervision of a committee consisting of representatives of the Governor's Office of Energy Assistance, the Rhode Island Department of Elderly Affairs, Rhode Island Legal Services Corporation, the Rhode Island PIPP Coalition, the Providence Gas Company, the Narragansett Electric Company and the Warwick Community Action Agency. This committee was a small working group of "hands-on" representatives from each agency represented on a broad-based PIPP Technical Advisory Committee. The Technical Advisory Committee consisted of representatives from a cross-section of government, utilities and consumer groups. A list of the members of the Technical Advisory Committee is presented in Appendix A. A list of the

members of the working group supervising this evaluation is presented in Appendix B.

The conclusions presented herein are based upon a descriptive statistical analysis included in the Rhode Island Evaluation Statistical Appendix. In addition, some conclusions in this evaluation are based upon a document entitled "A Study of Client Satisfaction: The Percentage of Income Payment Plan," prepared by Dr. Noran Ganim Barnes, Southeast Massachusetts University, for the Governor's Office of Energy Assistance in conjunction with the Rhode Island Consumer Council.

For the convenience of the reader, the conclusions reached are presented below in numbered paragraphs.

Before beginning the Warwick evaluation, the reader should become familiar with the following commonly used terms:

1. Copayment: A copayment is the payment required of a household based upon a predetermined portion of that household's income.
2. Cure of default: A cure of a default is a payment that is made after it is due and that makes up for one or more previously missed copayments.
3. Defaulting household: A defaulting household is a household that falls three or more months behind in making copayments.

4. Elderly household: An elderly household is a household with at least one person over age 60, whether or not that person is the head of household.
5. Forgiveable arrears: Forgiveable arrears are those arrears appearing on a PIPP participant's bill on or before September 30, 1987.
6. Gainer: A gainer is a household which receives greater benefits under PIPP than it would have received under the traditional LIHEAP program.
7. LIHEAP Categories: A LIHEAP Category (I, II or III) is the classification by which benefit levels were determined under the traditional LIHEAP distribution scheme in Rhode Island. The Categories are a measure of need based upon a combination of income and family size. Households in Category III have been determined to be in the greatest need.
8. Loser: A loser is a household which receives benefits under PIPP, but whose benefits are lesser than those that it would have received under the traditional LIHEAP program.
9. Non-participant: A non-participant is a household who is eligible for LIHEAP but who, in the absence of

forgiveable arrears, is not qualified to participate in PIPP because the household's annual copayment would exceed the annual home energy bill.

10. Participant: A participant is a LIHEAP client who participated in PIPP during the 1987 LIHEAP program year.

11. Program Year: The Program Year referenced in this evaluation is October 1, 1986 through September 30, 1987.

12. Unforgiveable arrears: Unforgiveable arrears are bills rendered in September 1986 that remained unpaid. They are not forgiveable arrears but neither are they bills toward which a copayment may be made.

The PIPP Technical Advisory Committee collectively endorses the following conclusions and recommendations as supported by the data and justified in the premises. Each conclusion is based on data obtained specifically from the Warwick PIPP.

What follows is a discussion in four parts. First, the criteria by which to judge the success or failure of the Warwick PIPP are presented. Second, empirical observations are made about the actual operation of the Warwick PIPP. Each of these observations is intended to address one or more of the criteria used to evaluate the program. Third, the ultimate

conclusions with regard to each criterion are presented.

Fourth, the recommendations regarding PIPP are set out.

In short, this evaluation finds that PIPP reasonably attains the goals set for it; is a superior mechanism for distributing LIHEAP funds as compared to the traditional distribution; has minimal adverse consequences arising from it; and should be expanded for regulated utilities statewide in a manner phased for administrative feasibility.

Before beginning the substantive examination of Warwick's PIPP, it is necessary to obtain an overview of the structure and operation of the program.

THE WARWICK PIPP

The Warwick PIPP involved two basic components: (1) a copayment mechanism; and (2) an arrearage forgiveness mechanism. The first component was oriented toward current bills while the second addressed the problem of past due debts.

The first component of PIPP was designed to assist households to make payments toward current utility bills. Under the program, so long as households made regular monthly payments toward their home energy bills based on a predetermined and reasonable percentage of their income, LIHEAP would pay the difference between the household payment and the actual bill. Through the program, in other words, if a PIPP participant received a \$100 bill and made a \$30 household payment, LIHEAP would pay the \$70 shortfall. This element was to further the first fundamental purpose of the program: to allow current utility bills to be paid in a full and timely fashion.

The required monthly household payment was called a "copayment." This copayment is set at a percentage of household income. These percentages were based on a sliding scale which, in turn, was based on need. Persons with the lowest incomes and the largest families were determined to be in the greatest need. Separate sliding scales, or "copayment matrices," were developed for primary gas heating and secondary energy (electric). For 1988, a third matrix was added for all electric homes. The matrices developed for the 1988 Program Year are attached as Appendix C.

The second basic component of PIPP was to relieve low-income customers from the burdens of past-due utility bills through an arrearage forgiveness provision. Under the theory of the program, if a household's current payments could be made a reasonable percentage of income (with LIHEAP paying the difference between that payment and the actual current bill), PIPP participants could and would remain reasonably current on their payments for home energy services. Without designing a component to deal with past due bills, however, a PIPP oriented toward current costs would fail to keep total energy burdens within a reasonable percentage of a household's income, the goal of the program in the first instance. Accordingly, in addition to addressing the problem of current bills, the PIPP addressed the problem of arrears as well.

As the Rhode Island Public Utility Commission noted in its January 1987 order approving the Warwick program, the copayment mechanism and arrearage forgiveness element were to "be viewed as a unified design and strategy." As the PUC correctly observed, "what results should be a synergism predicated upon the ability to erase previously incurred bills with current consumption payments."

A third component of PIPP in Warwick was designed to encourage conservation by program participants. Households that were found to have significantly increased their energy usage under PIPP were placed on priority lists to receive state weatherization assistance. Moreover, beginning with the 1988 Program Year, benefits are denied to the extent they to pay for

energy usage in excess of the prior year's consumption plus 20 percent.

The actual process of paying benefits in Rhode Island involved two-steps. First, PIPP benefits are paid to the utility (and thus to the client) on a monthly basis. The participating utilities, at month end, notify the state of which PIPP households have made copayments. Second, a year-end "reconciliation" process was developed to true-up any disparities in payments that might have occurred. The "reconciliation" referenced at later points in this evaluation is this year-end true-up.

CRITERIA FOR SUCCESS OR FAILURE:

In November 1986, the third month of the PIPP's operation in Warwick, the PIPP Technical Advisory Committee developed criteria by which to judge the success or failure of the Warwick program. Two types of criteria were articulated:

- o Those concerning program results; and
- o Those concerning program consequences.

The "program results" were determined to be benchmarks by which to judge whether the Warwick PIPP accomplished the goals which it was designed to attain. The "program consequences" were determined to be the guides by which to judge whether the PIPP had adverse impacts which might merit the program's discontinuance regardless of other considerations.

The criteria adopted by the PIPP Technical Advisory Committee are presented in Appendix D. The empirical observations that follow are designed to address these criteria. Again, the supportive quantitative data is under separate cover in the Rhode Island Evaluation Statistical Appendix.

EMPIRICAL OBSERVATIONS REGARDING PIPP

PIPP'S REDISTRIBUTIVE EFFECTS:

1. PIPP succeeds in redressing the inherently poor targetting of LIHEAP benefits under the "traditional" LIHEAP program. The traditional LIHEAP grant covers from 5.5 percent to 133.3 percent of a client's total annual gas bill. With PIPP, the percent of bill covered ranges from 0 percent to 88.4 percent.
2. PIPP succeeds in equalizing the energy burdens borne by households as measured by percentage of income devoted to home energy payments. The average portion of income used to pay home heating bills under both PIPP and non-PIPP is 6.4 percent. However, without PIPP, household heating payments range from 48.7 percent to -3.0 percent of income; under PIPP, payments range from 3.8 percent to 8.2 percent of income.
3. PIPP succeeds in helping to target LIHEAP benefits to fully pay energy bills. With PIPP, because LIHEAP pays the shortfall between a household copayment and the household's actual energy bill, a household's copayment results in the full payment of a utility bill. (The extent to which copayments are actually paid is addressed below). In contrast, if the traditional LIHEAP program would have been

in place in Warwick during the Program Year, nearly 70 households (of 638) would have had gas bills of more than \$800 left after applying LIHEAP benefits to their annual bill; about 20 would have had bills of over \$1000 left after their LIHEAP benefit.

4. Under the traditional LIHEAP program, regular grants were not provided for secondary energy sources. A household could, however, apply all or part of an emergency grant to a secondary energy source if a bill for that source was outstanding and if a disconnection of that service was pending. As a result of these limitations in the traditional LIHEAP program, no comparisons can be made of the redistributive impact of a PIPP for secondary energy sources.
5. PIPP succeeds in targetting LIHEAP payments to households with the least ability to pay. 758 of the total 1,111 PIPP households (both participants and non-participants) were from LIHEAP Category III. Non-participants tended to be in the higher income brackets; 101 of the 179 non-participants came from Category I while only 44 came from Category III.
6. PIPP succeeds in targetting additional benefits to households who had not previously been able to pay their entire bill in full. While 42 percent (98) of all households with gas forgiveable arrears of less than \$100

were "gainers" (and 58 percent "losers"), 65 percent (13 of 20) of households with gas forgivable arrears of more than \$1000 were gainers and 35 percent losers. For households with gas forgivable arrears of more than \$750 (32 total), the gainer/loser split was 60 percent/40 percent (18/14). In the instance of large forgivable arrears, even those households who were "losers" tended to "lose" small amounts of benefits.

PIPP PAYMENT PATTERNS:

7. In spite of their low-income status, PIPP households had a strong record of making their home energy payments. Over half of Providence Gas PIPP participants were completely current as of the end of the Program Year; nearly 70 percent (431) were either current or only one month behind. Fifteen percent (93) of PIPP gas participants fell three or more copayments behind by the end of the Program Year (and were thus considered in "default").

8. Electric payments were nearly identical to natural gas payments. As of August, the last date for which complete data was available at the time of this evaluation, approximately 55 percent (268) of Narragansett customers were completely current on their bills while almost 70 percent (342) were either current or only one month behind. Roughly one in four (118) electric customers (not distinguishing between primary and secondary electric customers) fell three or more copayments behind.

9. PIPP clients who end the year in default (by being three or more copayments behind), however, must cure that default in order to participate in the next year's PIPP. This requirement prompted many customers to make such cures. By November, for example, the households in default for Narragansett had fallen to one in eight (12 percent). Providence Gas service representatives, while not being

able to quantify the cures at the time of this evaluation, qualitatively believed that a substantial number of cures had occurred.

10. A fewer number of households ended the Program Year with arrears under PIPP than under the traditional LIHEAP program. More than 50 percent of natural gas and 40 percent of electric customers entered PIPP with forgiveable arrears. Forgiveable arrears were comprised of pre-PIPP arrears that were more than one month old at the start of the Program Year. In contrast, under PIPP, only 30 percent of PIPP participants (both gas and electric) had arrears that were more than one month old.

11. PIPP payments were made across the entire spectrum of income and household sizes. The PIPP matrix did not result in a systematic "unaffordability" of payments at any given household size or income.

12. Defaulters were not concentrated in the upper copayment amounts. 70 of the 93 gas defaulters had primary copayments of less than \$40 per month. Roughly the same number had total copayments (primary and secondary) of less than \$60 per month. For the electric company, 96 of its 118 defaulters had primary copayments of less than \$40. Moreover, 70 had secondary copayments of less than \$30. Of Narragansett's 118 defaulters, 80 had total copayments of

less than \$60. In comparison, for the program as a whole, the average primary copayment was \$42 per month, the average secondary copayment was \$28, and the average total copayment was \$59 per month.

13. Defaulters were not concentrated among late applicants. For the gas company, only 15 of the 93 defaulters applied after March 1, 1987; none applied after April 30, 1987. Similarly, for Narragansett, only 15 of the 118 electric defaulters applied after March 1, 1987.

14. "Unforgiveable arrears," which are those arrears owed as a result of an unpaid September 1986 utility bill, were not a factor in causing PIPP defaults. In total, only 38 of the 921 PIPP participants had both gas and electric unforgiveable arrears. Fewer than 20 had a combined gas and electric unforgiveable arrears of more than \$50. Persons with unforgiveable arrears were as likely to have made their last copayment in July 1987 or later as in June 1987 or earlier. (A July payment indicates that the household was not in default at the end of the program year; a June 1987 payment indicates that the household was in default by being three or more copayments behind at the end of the program year).

15. A substantial majority of households who had forgiveable arrears at the beginning of the Program Year kept current

on their PIPP payments. On the gas side, roughly 370 of the 439 customers with forgiveable arrears were not in default at the end of the Program Year. Of the 60 households that were in default, however, some had substantial forgiveable arrears; eight had such arrears in excess of \$1000.

16. Narragansett Electric did not have significant numbers of customers with large forgiveable arrears and forgiveable arrears did not play a factor in whether PIPP electric participants defaulted or not. Of the 200 Narragansett customers with forgiveable arrears, 116 were not in default at the end of the Program Year. Of the 84 electric defaulters with forgiveable arrears, 54 had arrears of less than \$100. Only 17 electric defaulters had forgiveable arrears in excess of \$150. A total of five electric defaulters had forgiveable arrears greater than \$400 and one in excess of \$700.

PIPP'S GAINERS AND LOSERS:

17. There are some households who receive greater benefits under PIPP than under the traditional LIHEAP program and some households that receive lesser benefits. Those who receive more are, for purposes of uniform terminology, labelled "gainers". Those who receive less are labelled "losers." The presence of "gainers" and "losers" is a logical outgrowth of the redistributive effects of PIPP. The amount of "gain" or "loss," it should be noted, is different than the amount of the PIPP benefit. The "gain" or "loss" is the amount by which the PIPP benefit is higher than (or lower than) the benefit under the traditional LIHEAP program.
18. The largest gains went to households with the lowest incomes and the largest family sizes. Category III LIHEAP households experienced the greatest gains. Residents of single family homes were more likely to be gainers than residents of multi-family dwellings.
19. Roughly 40 percent of the 446 households that were "losers" lost less than \$100. In contrast, roughly 25 percent of the 362 households that were "gainers" gained less than \$100. 36 households lost more than \$350, while 126 households gained more than \$350. 30 households gained more than \$800, 21 of whom were Category III LIHEAP recipients.

20. Persons reporting zero income were among those benefited by PIPP. A significant number (21 of 931) of PIPP participants had zero income. 20 of those 21 participated in the entire PIPP program (with one participating in the gas program but not the electric). A substantial portion of these zero income clients had either gas (10) or electric (7) forgiveable arrears. Roughly half the gas customers (10 of 19) and one-third of the electric customers (6 of 20) were completely current at the end of the Program Year. The natural gas and electric companies each had only one of the zero income clients in default (i.e., three or more copayments behind) at the close of the Program Year.

PIPP'S IMPACT ON THE ELDERLY:

21. A significant number of total PIPP participants were elderly households. Nearly three in ten of all participants were elderly households.
22. Participant elderly households had a greater percentage of Category I and Category II households than the population as a whole. Moreover, the average elderly primary copayment slightly exceeded the total population's average primary copayment (\$44 vs. \$42) as did the average secondary copayment (\$31 vs. \$28).
23. A disproportionately higher percentage of the elderly population were PIPP non-participants (21 percent for the elderly vs. 16 percent for the entire population). The elderly non-participants, however, tended to have a substantially higher average annual income than elderly participants (\$8,522 vs. \$6,548).
24. There tended, also, to be a greater proportion of elderly "losers" than there were "losers" in the population as a whole. Moreover, the elderly as a group proportionately tended to lose more than the population as a whole. In the aggregate, the elderly population as a whole, before taking into account forgivable arrears, "lost" \$7,000 or roughly ten percent of its total former benefits.

25. One reason for the loss of benefits to the elderly is their relative overpayments under the traditional LIHEAP program. Of the 129 elderly gas participants, 45 percent would have paid less than five percent of their income for home heating without PIPP. This compares to roughly 35 percent of the total population that would have been similarly situated. At the other end of the spectrum, only five percent of the elderly households would have paid more than 15 percent of their income for home heating and only one household would have paid more than 20 percent (that household paying 24.6 percent). For the elderly, PIPP tends to lower the number of households paying small portions of their income toward home heating and, as a result, increases the average household contribution and lowers LIHEAP benefits to the elderly as a class.

PIPP'S NON-PARTICIPANTS:

26. A significant percent of total LIHEAP-eligible households (16 percent or 179 households) did not qualify to participate in PIPP because their annual copayment levels exceeded their annual energy bill. Despite their non-participant status, these households received a flat PIPP grant of \$100 for their primary energy source.

27. Non-participating households tended to be Category I (97 households or 54 percent) as opposed to Category III (39 households or 22 percent). This stands in sharp contrast to the split among PIPP participants (66 households or 7 percent for Category I, and 719 households or 77 percent for Category III). The average income for non-participants was \$10,905 while the average income for participants was \$6,665.

28. Within the population of elderly non-participants, the split between LIHEAP Categories was almost identical as the non-participant population as a whole (30 households or 54 percent for Category I and 11 households or 20 percent for Category III). Elderly non-participants had an average income (\$8,522) noticeably below the average income of the population of all non-participants; household size, however, was also correspondingly lower.

29. Not surprisingly, non-participants were concentrated in families having only one member and in families with incomes greater than \$9200.
30. Electric primary non-participants did not develop particularly poor payment histories during the Program Year, notwithstanding their loss of some LIHEAP benefits. Of the ten electric primary non-participants, six were completely current, with an additional two only one month behind.
31. Of the two electric primary non-participants more than one month in arrears, each had extraordinary circumstances. One (with an arrears of \$259.23) made equal monthly payments each month as though making copayments; it is suspected that at the time of the year-end reconciliation, this person will be found to be a participant with the remainder of her bill being paid by PIPP. The other (with an arrears of \$786.02) made regular monthly payments (although not for all months). These payments were not, however, sufficient to pay the entire home energy bill. Given the size of the bill, non-participation in PIPP by this customer is inexplicable. At an average copayment level, the actual total payments, alone, represent seven months of copayments. Had they been made as copayments, these payments would have provided an additional \$593 in PIPP benefits for the seven months represented by those copayments.

32. Gas non-participants, although they did not fare quite as well as their electric counterparts, still did quite well in making current payments. Of 106 gas non-participants, 73 were current as of September. Of the remaining 33 households, 11 were only one month behind (seven of whom owed less than \$10). An additional five households were two or more months behind but owed less than \$20.
33. The 17 remaining non-participants represent a range of circumstances. Most (10) owed from \$100 - \$200. The remaining were evenly split, with three owing less than \$100 and four owing more than \$200. None owed more than \$300.
34. Most disturbing are the five households who made regular payments --two households made eight payments during the Program Year while three others made ten payments-- but still could not "keep up." In contrast, six households made little effort to pay, with two making no payments at all and four making either two or three payments. Six non-participants who were two or more months behind made six payments during the year.
35. Of the five gas non-participants making eight or more payments over the year, two would have benefited by making copayments as a PIPP participant (the other three had an actual annual bill less than their annual copayment). One

household made eight actual payments that would have equalled 10.4 copayments; one made eight actual payments that would have equalled 14 copayments. Similarly, of the six households making six payments, one would have benefited by making copayments. That household made six payments that would have equalled nearly ten (9.9) copayments.

36. The relatively high ability of non-participants to continue utility bill payments notwithstanding their non-participation in PIPP may in large part be attributed to the amount of their benefit loss (or lack of loss). Nearly 100 of the 180 non-participants would have received Category I benefits of \$125 under a traditional LIHEAP distribution rather than the \$100 benefit for PIPP non-participants. For those households, therefore, the non-participant status did not significantly decrease the total LIHEAP benefit level.

PIPP'S IMPACT ON CUSTOMER CONSERVATION:

37. The presence of PIPP does not appear to be a factor affecting energy consumption by PIPP participants. Over 60 percent (196) of PIPP participants with 12-months of consumption data fell within a range of from a ten percent increase to a ten percent decrease in consumption during the Program Year. Within that group, slightly more households went up (34 percent) as went down (27-percent).
38. Consumption was examined on a weather-normalized basis. Actual consumption is compared to utility-developed "budgets." While these budgets have generally been found extremely accurate, substantial divergence --either up or down-- may reflect inaccuracies in the budget rather than actual changes in consumption. Such inaccuracies may result, for example, from a household that has newly moved into a dwelling and thus has little history upon which budgets can be based.
39. An insignificant number of PIPP participants substantially increased their energy consumption during the Program Year. Roughly eleven percent (34) increased their consumption by more than 20 percent.
40. An equal number of households decreased their energy consumption by a similar amount. Roughly eight percent (25) experienced consumption decreases of more than 20 percent.

41. Households that do substantially increase their consumption are readily apparent. For example, one household doubled its energy consumption under PIPP, two increased their consumption by 90 to 100 percent, zero increased their consumption by 80 to 90 percent, and five increased their consumption by 70 to 80 percent. The Warwick PIPP had a conservation component as part of its basic design. However, due to other administrative problems with the start-up of the program, the conservation provisions were not invoked. Even though no effective conservation component was implemented during the Program Year, in the future, these high consumption households will be made subject to the PIPP's conservation provision.

ARREARAGE FORGIVENESS:

42. The arrearage forgiveness element of PIPP is an essential part of the total PIPP program for both gas and electric customers. 200 of Narragansett Electric's eligible PIPP customers had forgivable arrears; the average forgivable arrears for those having such arrears was \$98. 198 of those customers participated in PIPP, 187 of which were Category III LIHEAP customers.

43. On the gas side, arrearage forgiveness was even more important. 443 of Providence Gas Company's eligible PIPP customers had forgivable arrears; the average forgivable arrears for those having such arrears was \$208. 439 of those customers participated in PIPP, 372 of which were Category III LIHEAP customers.

44. Natural gas customers with forgivable arrears included some with substantial amounts. Of the 439 PIPP participants with forgivable arrears, 21 customers had forgivable arrears greater than \$1000 and over 50 had forgivable arrears greater than \$500. In contrast, for electric customers, fewer than 20 had forgivable arrears greater than \$200; fewer than ten were greater than \$250. Only one electric customer had forgivable arrears greater than \$700 (\$1803).

45. Despite the importance of the arrearage forgiveness element of the PIPP, it appears that the program may overreach its purpose. The intent of the arrearage forgiveness provision was to allow low-income households who had fallen "hopelessly behind" a fresh start. In the Warwick PIPP, however, 66 of the 200 electric customers with forgiveable arrears had arrears of less than \$50 and 114 had arrears of less than \$75. These amounts likely represent one or two months of arrears and do not constitute the arrears sought to be addressed by the PIPP program. On the gas side, 174 of the 439 customers with forgiveable arrears had arrears of less than \$50 and 224 had arrears of less than \$75.

46. Making clients responsible for the first \$50 of arrears (over three years) seems to reasonably implement the intent of the arrearage forgiveness program without imposing a significant additional burden on those clients (roughly \$15 per year).

47. Making clients responsible for the first \$50 of arrears reallocates the cost of the arrearage forgiveness program. This step alone for Providence Gas customers leaves roughly \$22,000 of responsibility with the PIPP participants (of the \$92,000 total forgiveable arrears) and places roughly \$74,000 of responsibility on the gas company. On the electric side, PIPP participant costs would be \$11,000 (of the \$20,000 total forgiveable arrears) with company costs

being roughly \$11,000. Further increases in client responsibility, however, do not yield proportionate incremental cost reallocations. To double client responsibility from \$50 to \$100, in other words, would not correspondingly cut the cost responsibility of the utilities in half.

48. To require customers to pay some initial portion of their bill as a prerequisite to obtaining arrearage forgiveness does place an additional portion of the forgivable arrears beyond utility collection efforts for up to three years. While the utilities may not write-off the \$50 as uncollectibles like the forgiven arrears, neither may the utilities seek to collect those arrears through normal collection procedures.

49. A recognition that, in principle, arrearage forgiveness is an essential part of a PIPP does not answer the difficult question of who should pay for the forgiven arrears. A special sub-committee of the PIPP Technical Advisory Committee was established to resolve that issue. A list of the members of the sub-committee is attached as Appendix E. A copy of the report of that sub-committee, adopted by consensus, is attached as Appendix F.

CUSTOMER ACCEPTANCE:

50. PIPP participants as a whole overwhelmingly preferred PIPP to the traditional LIHEAP program. More specifically, the working poor preferred PIPP by a 74 percent to 13 percent margin (with 14 percent expressing no preference). Households on public assistance preferred PIPP by an 81 percent to 18 percent margin.
51. In addition, clients in PIPP are generally very satisfied with their experience. Not only did most participants (roughly eight of ten) indicate that they had no changes they would make in the program, but so, too, did most non-participants (six in ten).
52. The reported behavior of PIPP participants further indicates approval of the program. When participants were asked if they were able to keep their homes warmer or more comfortable under PIPP, most said yes. Among public assistance recipients, 73 percent reported warmer homes during the winter.
53. The elderly as a group, however, were less favorable than other demographic groups. Four of ten elderly respondents (42 percent) preferred PIPP over the traditional LIHEAP program; one in four (24 percent) preferred the traditional LIHEAP program over PIPP; and one in three (35 percent) had no preference. On the one hand, this is not surprising

since the elderly received fewer benefits and had fewer forgiveable arrears. On the other hand, the elderly reported a benefit of feeling more able to keep their homes warmer during the heating season.

54. The client satisfaction study contains some responses that, at first glance, seem more favorable than the statistical data might warrant. For example, households receiving fewer benefits because of their non-participant status still reported favorable responses to the program. Similarly, thirty percent of PIPP's non-participants chose PIPP over the previous method of distributing LIHEAP benefits even though those non-participants received fewer benefits. Possible explanations for these favorable responses might include such intangibles as the favorable feelings generated by close contact with the Warwick Community Action Agency staff, the perceived equity inhering in the redistribution of LIHEAP benefits to better match actual energy bills, and the elimination of the adversarial relationship with the utility.

PROGRAM ADMINISTRATION:

55. Projections of statewide PIPP program costs based on Warwick data indicate that had the Warwick matrix been used statewide in the Program Year for regulated utilities, LIHEAP would have spent less than budgeted for such regulated companies. Of a Fiscal Year 1987 \$5.63 million regulated fuel budget, a statewide PIPP would have required from \$4.90 to \$5.50 million. The costs of a statewide PIPP are discussed in detail in Appendix G.

56. PIPP program costs are, however, subject to change within any given program year based on a number of uncontrollable factors. A winter equalling the all-time record heating degree days (1917 - 1918) would, for example, have increased the cost of PIPP by 13 percent. A 30 percent increase in natural gas prices would have increased the program costs by 36 percent. A 20 percent increase in the participation rate would have increased the PIPP costs by 19 percent. The likelihood of these full cost increases occurring, however, are extremely remote. To suffer the full increase, each of the driving factors would be required to increase late enough to be after the PIPP matrix is developed but nevertheless soon enough to be effective for the entire 12 months of the PIPP program. The sensitivity of PIPP costs to a variety of factors is discussed in Appendix G.

57. The PIPP payment process on a month-to-month basis pays the utility the difference between a utility-developed levelized "budget" amount and the household copayment. If the client makes all 12 monthly payments, the entire difference between an annual copayment and the actual annual bill automatically is paid over the year. Even if, however, a client stops making copayments in mid-year, at the time of the year-end reconciliation, the state will pay the entire difference between a copayment and the actual bill for months in which the copayment was made. This payment process worked satisfactorily with no significant mismatch of billed amounts and payments at year's end. Of \$430,000 in Providence Gas bills, before reconciliation, that Company had been underpaid by less than \$4,500. Of \$250,000 in Narragansett bills, before reconciliation, that Company had been underpaid by roughly \$24,000. In each instance, the utility received payment for the difference at reconciliation.

58. The primary administrative impact on Providence Gas Company was the start-up cost of the PIPP. Providence Gas reported that it spent roughly \$253,000 for the two-year Warwick pilot PIPP. This expense figure was developed by assigning an hourly wage/benefit to time expended by Providence Gas employees on the PIPP. While these costs do not

necessarily represent an additional out-of-pocket expense to the Company, there nevertheless was a substantial impact. Stafftime devoted to PIPP data processing, for example, required the Company to postpone some activities that had been planned for those employees. In general, costs fell into four primary areas: executive time (including meetings, hearings, conferences); data processing (including primarily programming, planning, design); customer relations (including meetings, trainings, processing, answering inquiries, and data review); and customer accounting (including verifying, processing, training and meetings).

59. The costs of implementing the data processing necessary to administer a PIPP were by far the most substantial investment by Providence Gas. Of the 11,000 hours devoted to PIPP over two years, 9,000 were assigned to data processing. Of the total \$253,000 cost to Providence Gas, \$207,000 was associated with data processing.

60. In contrast, the costs of customer relations and customer accounting imposed relatively insignificant costs on Providence Gas. Less than 2,000 of the 11,000 total hours devoted to PIPP were in the areas of customer relations and customer accounting. Less than \$40,000 of the total \$253,000 cost to Providence Gas was in these areas.

61. Narragansett Electric reported that while it experienced a number of internal administrative problems during the first year of the PIPP, for the most part, these problems were overcome with the development of a computerized system for handling PIPP transactions. This system allowed Narragansett to participate in the PIPP without incurring excessive administrative costs. The costs associated with developing this system were approximately \$60,000.

CUTS IN LIHEAP FUNDING:

62. Potential cuts in federal funding levels for LIHEAP represent a threat to the efficacy of PIPP just as they do to the LIHEAP program as a whole. Household percentage of income payment levels are determined by the amount of available LIHEAP resources. Accordingly, if LIHEAP resources are substantially decreased, without an infusion of funds from other sources, household copayment amounts could become so high as to be unaffordable. In such a situation, the value of PIPP is lost.
63. Current copayment levels for the Warwick PIPP (for the 1988 program year) are based on three matrices. One matrix is for primary heating (gas), one is for secondary energy (electric), and one is for "all-electric" homes (combining the primary and secondary matrix). Current funding levels permit primary copayment amounts to range from 3.2 percent to 6.6 percent, secondary copayment amounts to range from 3.1 percent to 4.5 percent, and "all-electric" copayment amounts to range from 6.4 percent to 11.2 percent.
64. A fifteen percent reduction in LIHEAP funds to the Warwick PIPP, without the infusion of funds from any other source, would have affected both primary and secondary PIPP participants. A matrix reflecting such a 15 percent cut would result in the primary gas matrix having household copayment amounts ranging from 3.8 percent to 7.8 percent;

the secondary matrix having copayment amounts ranging from 3.8 percent to 5.7 percent; and the "all-electric" matrix having copayment amounts ranging from 8.3 percent to 13.3 percent.

65. A thirty percent cut in LIHEAP funding could not be absorbed by across-the-board increases in copayment levels for primary and secondary energy sources. However, the loss of benefits could be concentrated in the secondary copayment matrix. To do so would be consistent with Rhode Island's policy that LIHEAP benefits generally go to pay for home heating costs.

66. A primary matrix reflecting a 30 percent funding cut would range from 4.2 percent to 8.5 percent; a secondary matrix range from 6.0 percent to 9.0 percent; and an "all-electric" matrix range from 9.2 percent to 14.6 percent.

67. Cuts in federal LIHEAP funds beyond a 30 percent level would need be absorbed by the further reduction, or possible elimination, of PIPP benefits for secondary energy sources.

SUMMARY AND CONCLUSIONS:

The proper criteria to use in evaluating the Warwick PIPP are those "Criteria for Success or Failure" adopted by the PIPP Technical Advisory Committee at the beginning of the PIPP. Notwithstanding those criteria, however, unfortunately it is not possible to study the impact of the first year of PIPP on service disconnections. As administrative problems were worked out in the first year, clients were not removed from the program. (The potential for removing clients for reasons attributed to program start-up as opposed to client non-payment was deemed to be unacceptable and to be avoided, even if the result in the first year was to carry some households which perhaps should have been removed.) Aside from the inability to consider that "shutoff" criterion, the following ultimate conclusions are reached:

1. In spite of their low-income status, PIPP households had a strong record of making their home energy payments. Although it is not possible to determine whether the actual level of year-end arrearages went down under PIPP, it is possible to conclude that PIPP resulted in fewer households ending the Program Year with arrears. The overwhelming majority of PIPP participants (70 percent) were either totally current on both their gas and electric bills or were only one month behind. Under the traditional LIHEAP program fewer than one-half of households were that current

for the gas company and only 60 percent that current for the electric company.

2. PIPP results in a more rational distribution of federal LIHEAP funds. PIPP eliminates the extremes. On the one hand, no longer are there households who receive LIHEAP benefits greater than their annual energy bill. On the other hand, no longer are there households devoting in excess of 20, 30 and 40 percent of their annual income to pay their home heating bill.
3. PIPP succeeds in making home energy bills more affordable. Not only are households paying a more reasonable percentage of their annual income for home energy bills, but most households are making full and timely payment of their bills.
4. PIPP results in most households making regular monthly payments toward their home energy bills. At the end of the Program Year, roughly 15 percent of both natural gas and electric customers were in default (three or more copayment behind).
5. PIPP payment records confirm the original consensus that the majority of eligible households would be able to make home energy payments under PIPP. Nevertheless, the payment records further support the

view that some families will not meet some or all of their payments despite attempts to make copayments "affordable."

6. Current LIHEAP funding levels allow PIPP to operate with reasonable household percentage of income payments, and those percentages allowed PIPP to operate within its program budget for the Program Year. Future reductions in federal funding, absent an infusion of funds from some other source, would result in increasing required household percentage of income contributions. It is not possible to determine at what funding levels household copayment amounts would become "unaffordable." It is possible to determine, however, that cuts in program funding would likely most adversely affect the PIPP program component directed toward non-heat energy.

7. PIPP met not only with customer acceptance, but with customer preference over the traditional LIHEAP program. Overwhelming customer preference for PIPP over the traditional LIHEAP program cut across all income levels and demographic groups other than the

elderly. While of the elderly expressing a preference, most preferred PIPP, the level of preference was less than other demographic groups. Moreover, among the elderly, there was a high level of no preference either way.

8. PIPP operated without unacceptable adverse consequences to primary non-participants. The PIPP non-participants were generally able to make their home energy payments. This is likely due to the fact that most non-participants tended to be Category I LIHEAP recipients (receiving \$125 under the traditional program) who, under PIPP, instead received a benefit of \$100 (thus having a loss of only \$25 in benefits as a result of non-participation).

9. Increasing energy consumption resulting from limiting household payments to a pre-determined level of income, unrelated to consumption, did not result in the conservation problems anticipated early in the program. Households tended not to significantly vary their energy consumption as a result of PIPP and, of those households that did, as many decreased consumption as increased it. Data routinely reported as a part of PIPP does identify high usage customers who can be provided conservation services through the PIPP conservation program component.

10. The ability to administer PIPP remains the biggest concern. The Warwick Community Action Agency successfully administered the program in its first year (with problems not considered unreasonable in light of the fact that this was the first PIPP of its type in the nation). Data processing, as well as cooperative data exchange, at both the state and utility level is considered essential. A fulltime PIPP coordinator appears necessary for the local LIHEAP provider. The successful administration of a PIPP is also vitally dependent on communication links between the LIHEAP provider and the involved utility company.

11. As anticipated, administrative costs associated with PIPP were concentrated among start-up costs. For example, only \$39,000 of the total Providence Gas expenditure of \$253,000 was devoted to customer relations and customer accounting while a non-recurring expense of \$207,000 was devoted to the design, planning and programming of data processing changes necessary to administer PIPP.

12. The program costs of a statewide PIPP are reasonable. Based on Warwick's experience, projected statewide PIPP expenditures would have been less during the Program Year than expenditures for the traditional LIHEAP program. These program costs, however, are

sensitive to uncontrollable factors such as increased participation rates, increased energy prices, and heating degree days. These factors might fluctuate during any given program year and may drive the cost of the program up after the PIPP matrix has been developed.

RECOMMENDATIONS:

The Governor's Office of Energy Assistance and the PIPP Technical Advisory Committee make the following recommendations regarding the future of Rhode Island's PIPP:

1. PIPP in Rhode Island should be extended statewide and should be adopted as the means by which to distribute federal LIHEAP funds for regulated utilities.
2. The expansion of PIPP statewide should occur in a phased process. For the 1989 Program Year, PIPP should be extended to include the following two LIHEAP providers: (1) Senior Services (so as to permit the inclusion of Blackstone Valley Electric Company and Valley Gas Company); and (2) ProCAP (so as to include the City of Providence).
3. Expansion into Providence for the 1989 program year is predicated on the ability of the state Governor's Office of Energy Assistance to perform the following:
 - A. Either to have its in-house computer system on-line or to finalize a data processing contract with an outside consulting firm;
 - B. To devote at least one additional fulltime equivalent staff position to assist in the start-up and administration of PIPP by the two new LIHEAP providers for at least the initial program year; and

- C. To demonstrate a willingness to commit adequate administrative dollars to the LIHEAP providers for the initial program year and beyond.
4. Expansion into Providence for the 1989 program year is further predicated on the ability of the ProCAP Community Action Agency to perform the following:
- A. To provide a fulltime PIPP supervisor under the agency's LIHEAP coordinator for at least the initial program year;
 - B. To provide adequate staffing to accommodate PIPP client interviews;
 - C. To provide adequate intake space for initial client interviews;
 - D. To provide a dedicated phone line for communication between the agency and both the GOEA and the affected utilities;
 - E. To maintain a year-round presence for the energy assistance component of the agency's activities; and
 - F. To work with GOEA to prepare a detailed month-by-month workplan to govern the implementation of PIPP in Providence.
5. Due to concerns expressed by the involved utilities, expansion into Providence for the 1989 program year is finally predicated on the ability of the affected utilities to provide adequate staffing, staff training to their own respective personnel, and data processing capability.

6. In the event that expansion into Providence is determined not to be feasible for the 1989 program year, PIPP should be extended to include a different LIHEAP provider in addition to Senior Services, the determination of which agency is to be made at a later date.
7. Expansion of PIPP to the remainder of Rhode Island should occur in the 1990 program year.
8. Future PIPP copayment matrices should include an income disregard provision for elderly households in the event that the elderly are found to have experienced a disproportionate loss of LIHEAP benefits. The level of this income disregard, if any, should be calculated when the extent of the loss of elderly LIHEAP benefits is finally determined at the year-end reconciliation for the Program Year.
9. The design of a PIPP for non-regulated fuel vendors should continue in the 1989 program year with possible implementation in the 1990 program year.
10. Due to the sensitivity of total PIPP program costs to a variety of factors that cannot be foreseen at the time the

annual PIPP matrix is developed, the state should maintain an adequate reserve to guarantee PIPP payments even in light of increased program costs attributable to unforeseeable factors such as colder than normal weather, increased participation rates, and unanticipated energy price increases.

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APPENDIX A

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*Representing the PIPP Coalition. The PIPP Coalition consists of the following consumer groups: (1) Coalition for Consumer Justice; (2) Comunidad en Accion; (3) Direct Action for Rights and Equality; (4) George Wiley Center; and (5) Urban League of Rhode Island.

APPENDIX B

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APPENDIX C
 Page one of three
 1988 Program Year Primary Matrix (gas)

	\$0 - \$2500	\$2501 - \$4800	\$4801 - \$7600	\$7601 - \$9200	\$9201+
1	\$6/mo	5.8%	6.1%	6.6%	N/A
2	\$6/mo	5.0%	5.3%	5.8%	6.4%
3	\$6/mo	4.3%	4.6%	5.1%	5.6%
4	\$6/mo	3.8%	4.2%	4.5%	5.0%
5	\$6/mo	3.5%	3.8%	4.2%	4.3%
6	\$6/mo	3.2%	3.2%	3.5%	3.8%
7	\$6/mo	3.2%	3.2%	3.2%	3.5%
8+	\$6/mo	3.2%	3.2%	3.2%	3.2%

APPENDIX C
 Page two of three
 1988 Program Year Secondary Matrix (electric)

	\$0 - \$2500	\$2501 - \$4800	\$4801 - \$7600	\$7601 - \$9200	\$9201+
1 \$6/mo		4.2%	4.3%	4.5%	N/A
2 \$6/mo		3.7%	3.9%	4.0%	4.6%
3 \$6/mo		3.4%	3.6%	3.7%	4.2%
4 \$6/mo		3.1%	3.3%	3.4%	3.9%
5 \$6/mo		3.1%	3.1%	3.1%	3.4%
6+ \$6/mo		3.1%	3.1%	3.1%	3.1%

APPENDIX C
 Page three of three
 1988 Program Year Primary Matrix (all electric)

	\$0 - \$2500	\$2501 - \$4800	\$4801 - \$7600	\$7601 - \$9200	\$9201+
1 \$6/mo		10.1%	10.6%	11.2%	N/A
2 \$6/mo		8.8%	9.3%	9.9%	11.2%
3 \$6/mo		7.8%	8.3%	9.0%	9.9%
4 \$6/mo		7.0%	7.5%	8.0%R	9.0%
5 \$6/mo		6.7%	7.0%	7.4%	7.8%
6 \$6/mo		6.4%	6.4%	6.7%	7.0%
7 \$6/mo		6.4%	6.4%	6.4%	6.7%
8+ \$6/mo		6.4%	6.4%	6.4%	6.4%

APPENDIX D

CRITERIA: SUCCESS OR FAILURE

Two types of criteria exist by which to measure the success or failure of the Rhode Island pilot PIPP. First, can the PIPP accomplish the goals which the program was designed to obtain? Second, does the program have flaws which merit its discontinuance regardless of its accomplishments? As stated below, these are the "results" and the "consequences" of the program. These criteria are stated separately below.

I. Program Results:

- A. Does the program result in a reduction in shutoffs among the affected population?
- B. Does the program result in a reduction of the accrual of arrears among the affected population?
- C. (Each of A and B go to whether the program makes home energy bills "more affordable").
- D. Does the program result in a more rational distribution of federal fuel assistance funds?
- E. Does the program result in a better working relationship between the utilities, their customers and the fuel assistance agencies?
- F. Does the program result in regular monthly payments by customers who historically have not made such payments?

II. Adverse Consequences.

- A. Can the program be operated at a reasonable cost?
 - 1. Are the program costs reasonable?
 - 2. Are the administration costs reasonable to both the utility and the state?
- B. Is the program feasible from the perspective of administerability?
- C. Does the program result in satisfactory customer acceptance?
- D. Can the program be operated without significant increases in customer energy usage?
- E. Can the program be operated without unacceptable adverse consequences for those not participating or on those losing some degree of benefits?

APPENDIX E

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APPENDIX F

REPORT OF THE COMMITTEE ON ARREARAGE FORGIVENESS WARWICK (RHODE ISLAND) PIPP

February 1988

All parties involved with the Warwick Percentage of Income Payment Plan (PIPP) agree that the forgiveness of arrears is an essential part of a PIPP. The purpose of a PIPP is to bring home energy bills for income-eligible households within an "affordable" level. This is done through a two-step process. The first step is to address the ability to pay current bills through the copayment/LIHEAP process. The second step is to address the ability to retire burdensome arrears. This is done through the arrearage forgiveness provision.

All parties agree with the observation of the Rhode Island Public Utilities Commission that these two program elements should be viewed "as a unified design and strategy" and that "what results should be a synergism predicated upon the ability to erase previously incurred bills with current consumption payments."

Having agreed to this principle, however, does not resolve the basic issue of who bears the cost of the forgiven arrears. Fairness would dictate that all of the involved interests bear some portion of the cost, or at least of the risk, involved with such a provision. This conclusion is based upon the recognition that all of the involved groups --the clients, the utilities, and the state-- obtain some unique benefit from the PIPP. Clients who make their copayments are assured that their

entire current energy bill is paid. The utilities obtain a greater degree of payment by low-income customers and a guarantee that if the poor make some payment within their financial capability (even if only for a portion of their bill), the state will pay the rest of the bill. The state is assured that the limited funds that it has to distribute is provided to clients in a way designed to maximize benefits to the client population thus limiting costs in this and other programs in both the short and long-term.

Accordingly, each of the involved parties will provide some contribution to ensure the feasibility of the arrearage forgiveness program and, through it, of the PIPP.

First, the clients will not have their entire pre-program arrears subject to forgiveness. This program element, in the first instance, was intended to relieve customers who had fallen "hopelessly behind" as a result of their poverty status. Arrears of less than \$50 do not represent the type of arrears that implicate this policy concern. Accordingly, clients will be responsible for the first \$50 of their pre-PIPP arrears.

Second, despite the best efforts of the utilities and the state to determine whether there will be a net cost to the utility and its ratepayers as a result of the arrearage forgiveness program --the forgiveness of arrears will drive uncollectibles up, at least in the short-term, while the guarantee of payment by the state will correspondingly drive both collection costs and uncollectibles down-- it has not been possible to develop quantification of the net cost (if any)

taking into consideration the entire spectrum of factors that affect such a figure. However, in consideration of the agreement by the state LIHEAP program to pay the difference between a client's copayment and the actual current bill, thus ensuring that current bills will remain paid, the utilities agree that the risk of whether there will be a net cost resulting from the arrearage forgiveness program will be borne by the company and its ratepayers.

Third and finally, it is agreed that it would be unfair for the utilities to bear the risk of shouldering the cost of past due bills and the risk of non-payment of current bills attributable to PIPP program shortfalls. Accordingly, the state agrees that it will seek to guard, through legislative or other appropriate means, against PIPP financial shortfalls developed during a program year. Such shortfalls might result, for example, from such uncontrollable factors as increased energy prices, increased program participation rates, colder than normal winters, or federal funding cutbacks occurring after the development of a program year matrix.

In sum, each party recognizes that it obtains a unique, real and substantial benefit from the PIPP. All parties further recognize that they bear some responsibility for the success of the PIPP and that they must play an integral part in assuring that the PIPP will be feasible and will succeed. Accordingly, the customer will bear the cost of the first \$50 of arrears; the utilities and their ratepayers will bear any net additional cost associated with payment of forgiveable

arrears; and the state will bear the cost associated with guaranteeing the payment of current bills in light of uncontrollable program cost increases occurring during the program year.

To effectuate these agreements, the parties agree that they will jointly seek such legislation as is deemed desirable expressly authorizing the arrearage forgiveness component of a PIPP as an additional exemption under the state's utility rate "non-discrimination" statute.

APPENDIX G

THE COST OF A STATEWIDE RHODE ISLAND PIPP AND COST SENSITIVITY TO INCREASED ENERGY PRICES, INCREASED PARTICIPATION RATES AND COLDER THAN NORMAL WINTERS

The "costs" of a Percentage of Income Payment Plan (PIPP) for the state of Rhode Island can be divided into two primary categories: (1) administrative costs; and (2) program costs. The term "program costs," which are the costs this analysis addresses, refers to the actual benefits distributed to clients. Thus, reference to a \$100 program cost would mean that \$100 in benefits were distributed to PIPP clients.

This Appendix looks at the program costs of a statewide PIPP for Rhode Island. All statewide figures are statistically valid projections based on cost figures for the Warwick PIPP. The statewide figures were developed for a range within a 95 percent confidence level. For purposes of this discussion, unless otherwise noted, the medium range statewide projections are used. The entire ranges are set forth in the accompanying Tables.

The statewide conclusions drawn herein are based on the Fiscal Year (FY) 1987 statewide participation rate of 13,792 natural gas clients and 960 electric clients. This evaluation does not attempt to project what will happen in future years of a Rhode Island PIPP. Rather, it looks at what the FY 1987 statewide program for Rhode Island would have cost had PIPP been in effect rather than the traditional LIHEAP program.

STATEWIDE PROGRAM COSTS

Statewide fuel assistance expenditures would have been less during FY 1987 under a PIPP than under the traditional LIHEAP program. In FY 1987, Rhode Island had a total LIHEAP budget of \$12.2 million. Of that money, roughly \$5.63 million was distributed through traditional LIHEAP payments to customers using regulated natural gas and electric service. Had PIPP been in place for those identical customers in that year, the regulated portion of LIHEAP would have instead cost the state roughly \$5.2 million. In FY 1987, therefore, PIPP would have yielded a savings (assuming the mid-range budget) of \$400,000. In comparison, if the PIPP benefits had been at the high end of the range, the savings would have fallen to \$100,000; if the benefits had been at the low end of the spectrum, savings would have risen to \$700,000.

Three primary reasons for the budget savings can be identified. First, under PIPP, benefits are tied to actual consumption. As a result, situations where benefits exceed actual annual home energy bills have been eliminated. Second, similarly, if households leave the utility system before the end of the program year under PIPP, their fuel assistance benefits cease. Under the traditional system, households received a full year of benefits whether or not they retained utility service for the full year. Finally, under PIPP, fuel assistance benefits are used to leverage household payments. PIPP benefits are not used as the exclusive source of funds to pay for home energy bills; some reasonable portion of household income is also devoted to bill payment.

The total statewide program cost of a PIPP, had the PIPP been in effect statewide in FY 1987, is set out in Table A. It should be noted, however, that Table A includes two "totals." The first sets out the total benefits paid (\$4.8 million in the medium range projection); the second is the total benefits paid plus an eight percent reserve (\$5.2 million in the medium range projection). The importance of this distinction becomes apparent in the sensitivity discussions below. While the total benefits may change based upon a variety of factors, the reserve is set at the beginning of the year and will not increase as a result of such things as weather, participation rates, and energy prices.

THE SENSITIVITY OF PROGRAM COSTS

PIPP program costs are sensitive to factors that are both uncontrollable and unpredictable on a year-to-year basis. These factors include, for example, participation rates, energy prices, and weather (as reflected in heating degree days). Increases in natural gas prices, in particular, can be sudden and substantial. Similarly, increased participation may occur, for example, as a result of a major plant closing. Colder than normal weather may occur at any time.

These factors might fluctuate during any given program year. The factors that are the cause for concern, and that are

TABLE A
 TOTAL STATEWIDE COST
 RHODE ISLAND PERCENTAGE OF INCOME PAYMENT PLAN^{1/}
 (Cost Range: 95% Confidence Level)^{2/}

GAS COST:

Low:	\$3,199,744
Medium:	\$3,365,248
High:	\$3,530,752

ELECTRIC (secondary) COST:

Low:	\$ 880,343
Medium:	\$1,005,851
High:	\$1,131,358

ELECTRIC (primary) COST:

Low:	\$ 332,458
Medium:	\$ 393,715
High:	\$ 454,973

TOTAL COST:

Low:	\$4,542,878
Medium:	\$4,815,200
High:	\$5,087,522

TOTAL COST (plus 8% reserve):

Low:	\$4,906,309
Medium:	\$5,200,416
High:	\$5,494,524

NOTES:

^{1/} Based on Warwick data. February 1988.

^{2/} Based on FY 1987 participation rates. 13,792 gas customers. 960 electric customers.

thus discussed herein are those that both: (1) occur after the PIPP matrix (and thus the program budget) has been set, and (2) tend to drive program costs up. The reason these factors in particular are cause for concern is because once a household copayment has been made, the state does not have the option under PIPP to not make a payment because the program "ran out of money." In considering program cost sensitivity to these factors, however, it is important to remember that the factors might move so as to reduce the benefits that need to be paid --and thus the program cost-- as well as to increase the benefits. It is no more likely, in other words, for Rhode Island to experience colder than normal weather than it is to experience warmer than normal weather.

Sensitivity runs for increased program costs attributable to temperature, price and participation rates are discussed below. These sensitivity runs represent "worst case" scenarios in each instance in that they assume the factors increase too late to be reflected in the program year's matrix but nevertheless early enough to affect the full twelve months of the program. This assumption is most likely to hold true for temperature variations since weather can turn cold at any time. It is least likely for program participation rates given the backward looking income verification procedures for LIHEAP in general. Those procedures are not unique to PIPP. Even if, in other words, a plant closing occurred on Day One of a given program year, the requirement that LIHEAP eligibility be determined on income from prior months (not future months)

would act to exclude newly unemployed persons from immediate LIHEAP eligibility (whether receiving benefits through PIPP or through the traditional LIHEAP program).

The following discussion looks at the sensitivity of statewide PIPP program costs to the three factors of weather, energy prices and PIPP participation rates. The discussion takes the medium PIPP budget and the worst case scenario of each of the various factors.

COLD WEATHER:

Had the all-time record cold occurred in FY 1987, statewide PIPP benefits would have increased over the medium range budget by \$626,000. There are two ways to look at the impact of this increase on the distribution of benefits. First, one can assume that the "reserve" included in the original program budget will be devoted in its entirety to pay for the increase. Second, one can assume that the increased benefits will be paid while still maintaining the reserve for other contingencies.

Assuming that the entire reserve is devoted to paying for the increased benefits attributable to cold weather, the total cost of the PIPP given an all-time record cold winter would be \$5.44 million. This assumes that the cold weather will have an incremental cost of \$240,000. The incremental cost in this case is calculated by taking the total increased benefits attributable to the cold (\$626,000) and subtracting the reserve margin of \$385,000.

TABLE B
COST SENSITIVITY RUNS
TEMPERATURE VARIATIONS

	BASE CASE###	RECORD COLD*	RECENT RECORD**	MODERATE COLD***
GAS:	\$279,994	\$333,795	\$304,041	\$296,662
ELEC. SECOND:#	\$125,914	\$125,914	\$125,914	\$125,914
ELEC. PRIM:	\$ 45,659	\$ 54,956	\$ 50,894	\$ 49,869
8% RESERVE:+	\$ 36,125	\$ 36,125	\$ 36,125	\$ 36,125
TOTAL:##	\$487,692	\$550,790	\$516,974	\$508,570
PERCENT OF BASE:	100%	113%	106%	104%

NOTES:

*1917 - 1918 heating season: 6856 heating degree days.

**1976 - 1977 heating season: 6333 heating degree days.
(1976 - 1977 was coldest winter in last 20 years).

***Five percent increase in heating degree days. Not tied to year.

#Secondary electric assumed not to be temperature sensitive.

##Non-participants assumed to become participants as bills increase. Non-participant benefits not held constant at \$100.

###Normal heating degree days: 5908. All temperature data obtained from National Weather Service in Providence.

+Reserve held constant at pre-program levels.

TABLE C

TOTAL STATEWIDE COST
 RHODE ISLAND PERCENTAGE OF INCOME PAYMENT PLAN^{1/}
 Sensitivity to All-Time Cold Weather
 (Cost Range: 95% Confidence Level)^{2/}

\$4,815,200	PIPP budget without reserve
\$5,200,416	PIPP budget with 8% reserve
\$ 385,216	Amount of 8% reserve standing alone
\$ 625,976	Amount of cold weather cost increase
\$ 240,760	Amount of cold weather increase after having used reserve to pay for part of it.
\$5,441,176	Total PIPP program cost having used reserve
\$5,826,392	Total PIPP program cost having maintained reserve

NOTES:

^{1/} Based on Warwick data. February 1988.

^{2/} Based on FY 1987 participation rates. 13,792 gas customers. 960 electric customers.

If, instead, the state decides to maintain a reserve even in the face of all-time cold temperatures, the total cost of the PIPP would be \$5.83 million. This cost is calculated simply by adding the cost attributable to the cold (\$626,000) to the total cost of the program including the reserve (\$5,826,392).

In the event that FY 1987 would have experienced all-time record cold weather, the state would have underspent the regular LIHEAP program by roughly \$200,000 had it devoted the PIPP reserve to the increased costs; if the state had retained the reserve, it would have overspent the traditional LIHEAP program by the same \$200,000.

The sensitivity of Warwick costs to cold weather is set out in Table B. The impact of cold weather on statewide PIPP program costs is set out in Table C.

PRICE INCREASE:

Had Rhode Island experienced a statewide 30 percent increase in natural gas costs in FY 1987, PIPP benefits would have increased by \$1.73 million. Again, there are two ways to look at the impact of this increase on the distribution of benefits. First, one can assume that the "reserve" included in the original program budget will be devoted in its entirety to pay for the increase. Second, one can assume that the increased benefits will be paid while still maintaining the reserve for other contingencies.

Assuming that the entire reserve is devoted to paying for

the increased benefits attributable to price increases, the total cost of the PIPP given a 30 percent increase in gas prices would be \$6.55 million. This assumes that the increased energy prices will have an incremental cost to PIPP of \$1.35 million. The incremental cost in this case is calculated by taking the total increased benefits attributable to the cold (\$1.73 million) and subtracting the reserve margin of \$385,000.

If, instead, the state decides to maintain a reserve even in the face of substantial energy price increases, the total cost of the PIPP would be \$6.93 million. This cost is calculated simply by adding the cost attributable to the price hikes (\$1.73 million) to the total cost of the program including the reserve (\$5,200,416).

In the event that the reserve is devoted to paying for the increased energy prices, the total cost of the FY 1987 PIPP assuming that FY 1987 would have experienced a statewide 30 percent hike in natural gas prices would have exceeded the traditional LIHEAP program cost by roughly \$920,000; in the event that the state maintains its eight percent reserve, the total cost of PIPP would have exceeded the cost of the traditional program by \$1.3 million.

The sensitivity of Warwick costs to increased energy prices is set out in Table D. The impact of increased energy prices on statewide PIPP program costs is set out in Table E.

PARTICIPATION RATES:

Had Rhode Island experienced a statewide increase in LIHEAP participation rates of 20 percent in FY 1987, PIPP benefits

TABLE D
 COST SENSITIVITY RUNS
 ENERGY PRICE INCREASES

	BASE CASE	+10 PCT	+20 PCT	+30 PCT
GAS:	\$279,994	\$352,717	\$403,592	\$454,904
ELEC. SECOND:#	\$125,914	\$125,914	\$125,914	\$125,914
ELEC. PRIM:#	\$ 45,659	\$ 45,659	\$ 45,659	\$ 45,659
8% RESERVE:##	\$ 36,125	\$ 36,125	\$ 36,125	\$ 36,125
TOTAL:###	\$487,692	\$560,415	\$611,290	\$662,602
PERCENT OF BASE:	100%	115%	125%	136%

NOTES:

- #Unlike gas, electric rates assumed not to be subject to fluctuations at this level not capable of being foreseen.
- ##Reserve held constant at pre-program level.
- ###Non-participants assumed to become participants as bills increase. Non-participant benefits not held constant at \$100.

TABLE E

TOTAL STATEWIDE COST
 RHODE ISLAND PERCENTAGE OF INCOME PAYMENT PLAN^{1/}
 Sensitivity to Energy Price Increases

(Cost Range: 95% Confidence Level)^{2/}

\$4,815,200	PIPP budget without reserve
\$5,200,416	PIPP budget with 8% reserve
\$ 385,216	Amount of 8% reserve standing alone
\$1,733,472	Amount of cost increase due to price increases
\$1,348,256	Amount of cost increase attributable to price increases having used reserve to pay for part of it.
\$6,548,672	Total PIPP program cost having used reserve
\$6,933,888	Total PIPP program cost having maintained reserve

NOTES:

1/ Based on Warwick data. February 1988.

2/ Based on FY 1987 participation rates. 13,792 gas customers. 960 electric customers.

would have increased by \$915,000. The two ways to look at the impact of this increase in the distribution of benefits include: (1) to assume that the "reserve" included in the original program budget will be devoted in its entirety to pay for the increase; or (2) to assume that the increased benefits will be paid while still maintaining the reserve for other contingencies.

Assuming that the entire reserve is devoted to paying for the increased benefits attributable to cold weather, the total cost of the PIPP given a 20 percent increase in participation rates would be \$5.73 million. This assumes that the increased participation rates will have an incremental cost to PIPP of \$530,000. The incremental cost in this case is calculated by taking the total increased benefits attributable to the increased participation rates (\$915,000) and subtracting the reserve margin of \$385,000.

If, instead, the state decides to maintain a reserve even in the face of substantial increases in participation rates, the total cost of the PIPP would be \$6.12 million. This cost is calculated simply by adding the cost attributable to the participation rates (\$915,000) to the total cost of the program including the reserve (\$5,200,416).

In sum, the total cost of the FY 1987 PIPP assuming that FY 1987 would have experienced a 20 percent increase in LIHEAP participation rates would have exceeded the traditional LIHEAP program cost by roughly \$100,000; if the state maintained a reserve, the PIPP costs would have exceeded the cost of a traditional LIHEAP program by roughly \$500,000.

TABLE F
 COST SENSITIVITY RUNS
 INCREASED PARTICIPATION RATES

	BASE CASE	+10 PCT	+20 PCT	+30 PCT
GAS:	\$279,994	\$293,927	\$307,923	\$335,916
ELEC. SECOND:#	\$125,914	\$132,182	\$138,477	\$151,066
ELEC. PRIM:#	\$ 45,659	\$ 49,857	\$ 52,231	\$ 56,980
8% RESERVE:##	\$ 36,125	\$ 36,125	\$ 36,125	\$ 36,125
TOTAL:	\$487,692	\$512,091	\$534,756	\$580,087
PERCENT OF BASE:	100%	105%	110%	119%

NOTES:

#Non-participants assumed to become participants as bills increase. Non-participant benefits not held constant at \$100.

##Reserve held constant at pre-program level.

TABLE G

TOTAL STATEWIDE COST
RHODE ISLAND PERCENTAGE OF INCOME PAYMENT PLAN^{1/}
Sensitivity to Increased Participation Rates
(Cost Range: 95% Confidence Level)^{2/}

\$4,815,200	PIPP budget without reserve
\$5,200,416	PIPP budget with 8% reserve
\$ 385,216	Amount of 8% reserve standing alone
\$ 914,888	Amount of cost increase due to increases in participation
\$ 529,672	Amount of cost increase attributable to increases in participation having used reserve to pay for part of it.
\$5,730,088	Total PIPP program cost having used reserve
\$6,115,304	Total PIPP program cost having maintained reserve

NOTES:

1/ Based on Warwick data. February 1988.

2/ Based on FY 1987 participation rates. 13,792 gas customers. 960 electric customers.

The sensitivity of Warwick costs to increased participation rates is set out in Table F. The impact of increased participation rates on statewide PIPP programs costs is set out in Table G.

SUMMARY

The costs of a statewide PIPP in FY 1987 would have been less than the costs of the traditional LIHEAP program for regulated fuels. In FY 1987, while the cost of the traditional program was roughly \$5.63 million, the costs of a PIPP for the identical client population would have been only \$5.2 million.

Unlike the traditional LIHEAP program, however, the costs of a PIPP are sensitive to a variety of factors that are both unknown at the time the program budget is set and uncontrollable. These factors include, for example, increases in program participation rates, increases in price, and increases in heating degree days (representing colder than normal weather). Assuming worst case scenarios for these various factors for FY 1987, the cost of a PIPP in most instances would have been somewhat more than the traditional LIHEAP program. This conclusion, it should be noted, is based upon an examination of the factors in isolation from each other and does not look at any compounding effect.

In sum, it would appear that the state would need to capitalize a modest reserve fund to protect against the vagaries of the weather, the economy and the program's

participation rate. Despite this need, the costs of a statewide Percentage of Income Payment Plan for Rhode Island appear to be reasonable and will not subject the state to significant financial exposure beyond what the traditional LIHEAP program created.

ACKNOWLEDGEMENT

The contributions of Theta Systems, of Woburn, Massachusetts, toward the production of this evaluation are gratefully acknowledged. Without the ongoing assistance of Theta Systems in general, and senior research analyst Liza Deignan in particular, this evaluation could not have been prepared.