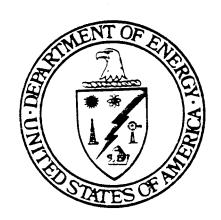
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OAK RIDGE NATIONAL LABORATORY

MARTIN MARIETTA

SCOPE OF THE WEATHERIZATION ASSISTANCE PROGRAM: THE WEATHERIZED POPULATION AND THE RESOURCE BASE

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Weatherization Assistance Program

MANAGED BY
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FOR THE UNITED STATES
DEPARTMENT OF ENERGY

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Energy Division

The Scope of the Weatherization Assistance Program: The Weatherizated Population and the Resource Base

May 1992

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MARTIN MARIETTA ENERGY SYSTEMS, INC.
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The Scope of the Weatherization Assistance Program: The Weatherized Population and The Resource Base, PY 1978-89 At A Glance

Number of State Managers Completing Survey (of 51 surveyed) Number of Utilities Completing Survey (of 443 surveyed)

47 124

Funding for Full-Scale Low-Income Weatherization, PY 1978-89: Funding for Full-Scale Low-Income Weatherization, PY 1989:

\$4.364 billion **\$0.553** billion

Percent Expe	nded, by Progra	am Type*	Percent Contributed, by Funding Source*			
	PY78-89	PY89		<u>PY78-89</u>	<u>PY89</u>	
DOE/WAP	76.5%	68.7%	DOE/WAP	45.1%	26.6%	
HHS/WX ¹	11.9%	11.8%	LIHEAP	27.8%	20.8%	
Utility	9.6%	14.0%	PVE (Oil Overcharge)	14.4%	31.7%	
Other	2.0%	6.2%	Utility	9.6%	14.1%	
			State	2.4%	4.8%	
			Other	.8%	2.1%	
D 45		4. Damina				

Percent Expended, by Climate Region

Cold: 21%

Moderate: 58%

Hot: 13%

Calif:2 8%

No. of Low-Income Units Weatherized PYs 1978-89 (with \$4.3 billion):

3.895 million

Percent Weatherized, by Climate Region*

Percent Weatherized, by Program*

Cold	16%	DOE/WAP	68%
Moderate	50%	HHS/WX	9%
Hot	14%	Utility ³	22%
California ²	21%	Other	.004%

Types of low-income units weatherized (for 2.943 million units with reported characteristics):

Single family owner-occupied: Single family rented:

59% 19% Multifamily: Mobile homes:4 18% 4%

Selected Characteristics of Non-DOE Full-Scale Programs:

HHS/WX1

Utility Weatherization

16 States

49 utilities with programs

Purposes: mechanical measures, repairs, increase DOE cost limits 27 States with utility programs

70% of investments mandated by P.U.C.s

18 programs using DOE subgrantees

Other Wx Programs and Contributions:

17 States

Most Common Measures, 1989: attic insulation, wrap water heater or ducts, weatherstrip/caulk

- 5 State WAP programs 11 repair/rehab programs

 - 6 Landlord and/or utility match
- 24,105 units (8000 mixed with DOE or HHS/WX)

^{1.} HHS/WX means LIHEAP conservation programs with rules different from DOE/WAP. 2. California is treated as a separate region. 3. Utility programs generally include a much smaller number of measures than offered by DOE/WAP. 4. Mobile homes were generally reported as "single-family" and not as separate category. Therefore, this figure is an understatement.

^{*} Figures may not sum to 100 percent due to rounding.

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LIST OF ACRONYMS

AFDC Aid to Families with Dependent Children

AHS American Housing Survey

BPA Bonneville Power Administration

CDBG Community Development Block Grant

DOE U.S. Department of Energy

DOE/WAP U.S. Department of Energy's Weatherization Assistance Program

EORI Economic Opportunity Research Institute

FmHA Farmers Home Administration

HHS U.S. Department of Health and Human Services

HHS/WX Low-income weatherization programs using LIHEAP funds under rules

different from DOE/WAP

LIHEAP U.S. Department of Health and Human Services' Low-Income Home

Energy Assistance Program

NASCSP National Association for State Community Services Programs

OMB Office of Management and Budget

ORNL Oak Ridge National Laboratory

PUC Public Utility Commission

PVE Petroleum Violation Escrow

PY Program Year

TVA Tennessee Valley Authority

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THE SCOPE OF THE WEATHERIZATION ASSISTANCE PROGRAM: THE WEATHERIZED POPULATION AND THE RESOURCE BASE

EXECUTIVE SUMMARY

BACKGROUND

This study is part of the U.S. Department of Energy's national evaluation of its Weatherization Assistance Program (WAP). The Weatherization Assistance Program was established by Title IV of the Energy Conservation and Production Act of 1976 (PL 94-385). It is administered by the U.S. Department of Energy (DOE), and is designed to provide financial assistance to qualifying low-income households for the "weatherization" of their housing units.

The most recent national evaluation of the WAP was completed in 1984, and was based on data for 1981. WAP regulations and operations have changed substantially since then. DOE, with the support of Oak Ridge National Laboratory (ORNL), has initiated an updated and comprehensive national evaluation of the WAP. This study is one part of that evaluation.

OVERVIEW OF THE SCOPE OF WEATHERIZATION STUDY

Objectives

The DOE evaluation has five parts of which three involve analyses of energy savings and two are policy studies. The first policy study, recently completed (Mihlmester, Koehler, Beyer, Brown, and Beschen, 1992), characterizes the capabilities, innovations, and leveraging ability of the WAP network. The second policy study entitled "The Scope of the Weatherization Assistance Program," deals with the weatherized population and the resource base applied to weatherization. It will be conducted in two phases over three years. This report presents the findings of the first phase.

This first phase of the "Scope" study has three major goals: 1) to enumerate the size and sources of investment in low-income weatherization; 2) to provide a tally of the number of low-income units weatherized by all weatherization programs and characterize the type and tenure of these weatherized homes; and 3) to document the extent to which the DOE/WAP funding has been expanded through use of external resources. Opportunities for the future direction of the WAP suggested by the analysis will be explored.

Research Methodology

Data on the cumulative number and characteristics of the units weatherized in five periods from Program Year (PY) 1978 through PY 1989 were collected from surveys of state WAP managers and utility conservation program managers. WAP managers were asked to provide data on all major publicly funded federal, state, or local programs and on any private sector initiatives

about which they had data. In addition, a national sample of 443 utilities representing investorowned and public entities was asked to provide information about the comparable low-income weatherization activities of their organizations over the same study time period.

The subject of this inquiry was narrow. Information was solicited regarding only energy conservation investments which were delivered as a package of measures and/or were comparable to the major measures approved for the DOE/WAP program itself, and contributions that were added to such "full-scale weatherization" efforts. Furthermore, this analysis considers only funding for, and housing units of, low-income households whose incomes did not exceed current federal standards for DOE/WAP or Low-Income Home Energy Assistance Program (LIHEAP) eligibility levels.

Data on programs administered under DOE/WAP rules in all 51 grantee jurisdictions (including Washington, D.C.) are included in this report. Additional information is available for 47 states. Of 443 utilities surveyed, 124 responded and a total of 49 of them in 27 states reported full-scale weatherization programs in one or more of the five periods in the study. Thus, the non-DOE/WAP resources for low-income weatherization are understated.

This report classifies weatherization expenditures in two different ways: by source of funding (i.e., the type of agency or organization that provided the funding for full-scale weatherization) and by type of program (i.e., the type of agency or organizational rules and procedures that governed how the funds were spent). There is substantial overlap between these two categories, but they are nevertheless distinct. By law, all funds appropriated by DOE/WAP are governed by DOE/WAP rules and regulations. However, funds appropriated by the Department of Health and Human Services (HHS) may be spent according to the rules and regulations of either DOE/WAP or HHS/LIHEAP. Similarly, Petroleum Violation Escrow (PVE) funding, utility, and state funding for full-scale weatherization may or may not be spent under the auspices of DOE/WAP rules.

Six funding sources are considered:

- DOE/WAP appropriations;
- HHS/LIHEAP appropriations;
- PVE or oil overcharge funds;
- utility funds;
- · State appropriated contributions; and
- funds from other full-scale weatherization and housing repair programs.

These six funding sources support four types of full-scale weatherization programs:

- DOE/WAP;
- HHS/WX (i.e., LIHEAP appropriated funds spent on full-scale weatherization administered under the state programs funded by HHS);

• other programs (state initiatives, housing repair programs, and various private, non-utility programs).

MAJOR FINDINGS AND CONCLUSIONS

The scope of weatherization programs considerably exceeds the activities performed under the DOE/WAP program, yet DOE/WAP remains the predominant source and form of weatherization expenditures. Of the 3.9 million low-income units weatherized over the program years 1978 - 1989, nearly 77% received weatherization services under DOE/WAP rules.

The 3.9 million units weatherized from PY 1978 through PY 1989 represent completion of a significant, though uncertain, percentage of the contemporary low-income housing stock. According to the American Housing Survey, 21.4 million housing units are occupied by households below 150 percent of the poverty level. However, this does not mean that 18% of eligible households (that is, 3.9 million of 21.4 million) received weatherization services between 1978 and 1989; the percentage may be lower because of the physical and income mobility of the low-income population.

Over 20 percent of the 3.9 million weatherized units were weatherized exclusively by utility-based programs concentrated in a few states. They received notably lower investments than homes weatherized by public sector programs.

Over time, DOE appropriations declined slightly in significance as a funding base, while PVE and LIHEAP Block Grant funding increased. However, DOE's rules determined the way most of those monies were used. The trend at the end of the study period was downward for all funding sources except DOE, so it is unlikely that the PY 1989 levels of \$553 million in funding and 455 thousand weatherized units in all programs have been sustained.

Weatherization programs extended the resource base of federal weatherization funds by 15 percent between 1978 and 1989. However, this resource expansion was limited to state weatherization and utility expenditures concentrated in a few states. This means that there is experience in running large utility and state programs to draw on, but not from a wide variety of locations. However, growing numbers of states instituted programs for housing repair and for collecting private contributions in the last two years of the study, perhaps indicating a new trend. Utility programs tend to be in states where low-income weatherization program scope and goals were mandated by regulatory bodies and, on average, they are not comparable to DOE/WAP.

Comparison between this study and the first policy study of the WAP evaluation (Mihlmester, et al., 1992) shows that the state and utility managers who provided these data are not always aware of local and private programs with initiatives in energy conservation. This means the local non-federal investment in weatherization may well be understated in this review. It also suggests that developing integrated and targeted expansion of weatherization resources will require greater coordination and communication among the various providers in the system.

Finally, the study makes it clear the policies and regulations of DOE's program have directed and shaped much of the low-income weatherization activities that occurred in the United States between 1978 and 1989.

KEY FACTS AND FIGURES

A total of \$4.3 billion was reported spent on full-scale weatherization activities from PY 1978 to PY 1989. At least 3.9 million units were weatherized with these funds. Not all funds could be associated with completion figures. Thus, the count of weatherized units is underestimated.

Programs

Of all weatherization resources, 76.5 percent were found to have been spent in the DOE/WAP program, and 12 percent in programs run by state Low-Income Home Energy Assistance programs (hereafter HHS/WX) under rules different from DOE/WAP programs. Full-scale weatherization programs run by utilities contributed 9.6 percent of resources and the fourth category, "Other" free-standing weatherization programs of significant size in Alaska, Florida, Georgia, Maine, Massachusetts, Minnesota, North Carolina, Ohio, and Wyoming, account for 2 percent of weatherization resources. By PY 1989, the non-federal programs had grown to 20.2% of all program resources.

Of the 3.9 million units weatherized, 68 percent were weatherized by DOE/WAP programs, 9 percent by HHS/WX programs at expenditure levels per dwelling comparable to DOE/WAP, and less than one-half of one percent by "Other" full-scale programs. Twenty-two percent were completed by utility programs, at about one-third the average investment per unit generally provided by the DOE/WAP program.

At least 250,000 units were reported served by a combination of programs. State managers reported that a large but unknown number of additional units received DOE/WAP or HHS/WX investments in addition to utility investments. Therefore, utility unduplicated completions may be overstated in the study. Other weatherization programs were unable to report on units completed; they account for two percent of all funding.

Resource Base

Six funding sources were considered independently from the programs in which funds were spent. The survey showed proportional contributions over twelve years to be: DOE/WAP appropriated funds 45 percent of all funds, LIHEAP block grant 28 percent, Petroleum Violation Escrow Funds (PVE) 14 percent, utilities 10 percent, state appropriations 2 percent and other federal, local and private sources nearly 1 percent. In PY 1989, DOE/WAP provided 26 percent of funds, PVE funding was 32 percent LIHEAP was 21 percent, and utilities provided 14 percent.

Characteristics of the Units Weatherized

Tenure (e.g., owner-occupied or rented) and size characteristics were reported for 74 percent of all units including over 95 percent of all DOE/WAP completions. Fifty-nine percent were single family owner-occupied units and an additional 19 percent were single family rental units. This number included many mobile homes. An additional 4 percent of units were explicitly identified as mobile homes. Multi-family units, those containing two or more living units, were 18 percent of completions.

The allocation of resources and the units weatherized differed by climate region: the moderate climate region, made up of 23 states, had 58 percent of all reported resources and completed 50 percent of all units weatherized; the coldest region had 21 percent of the resources and completed 16 percent of units weatherizated; the hot region had 13 percent of the resources and 14 percent of the completed units. California's aggregate data could not be broken into climate regions and stands alone. It had 8 percent of the funding and 21 percent of weatherized units because its utility full-scale programs weatherized three-quarters of all utility weatherized units. These utility investments were 40 percent of the average investment in DOE/WAP or HHS/WX units.

By PY 1989, most of the full-scale weatherization resources classified as "Other" major programs were in the hot region, as were half the housing repair programs contributing to weatherization efforts. By contrast, no full-scale utility programs existed in the hot region by the end of the study period.

Expansion of Resources

Opportunities for expanding the resource base are of special interest. The trend between 1978 and 1989 was to declining federal funds, including PVE resources. In PY 1989, substantial non-federal funding was available from utilities, but 80 percent of utility investment came from federal power authorities (8 percent) and from programs mandated by utility commissions in 4 states (72 percent). In fact, 61 percent of all utility funding was reported by California companies and some but not all of the Wisconsin utilities operating mandated programs. These investments generally involve a subset of DOE/WAP measures and are not a comparably comprehensive package.

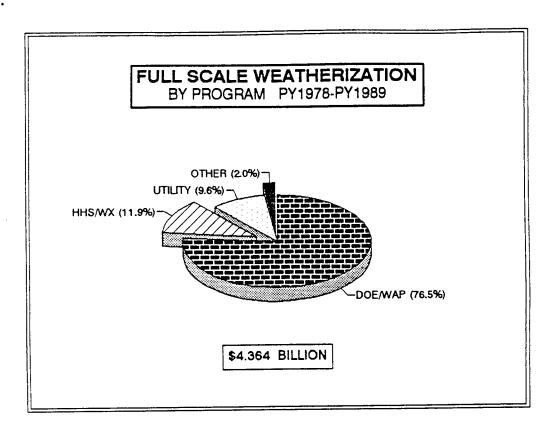
By PY 1989, 13 states had non-federal weatherization programs or contributions totalling \$24.3 million of which nearly 80 percent was a North Carolina program and most of the balance came from landlord contributions in New York. Based on this study's database, most states had not expanded their resources over the study period.

THE SCOPE OF WEATHERIZATION INVESTMENTS, PY 1978-PY 1989

This section first examines the four categories of full-scale weatherization programs, which reflect distinct rules and policies under which funding was spent. Attention then turns to the sources of funds for each category.

A breakdown of the program categories under which funds were spent (as distinct from the origin of the funds) shows that 77 percent of the \$4.364 billion reported in the merged data from the state and utility surveys was spent according to the rules of the DOE program, regardless of the original source of the funds. Figure I represents all four categories of full-scale weatherization programs as a proportion of the twelve-year total. The HHS/WX program represents 12 percent of all funds, utility-based weatherization programs account for nearly 10 percent, and the remaining 2 percent was spent in a miscellany of state initiatives, housing repair programs, and private, non-utility programs.

Fig. I:



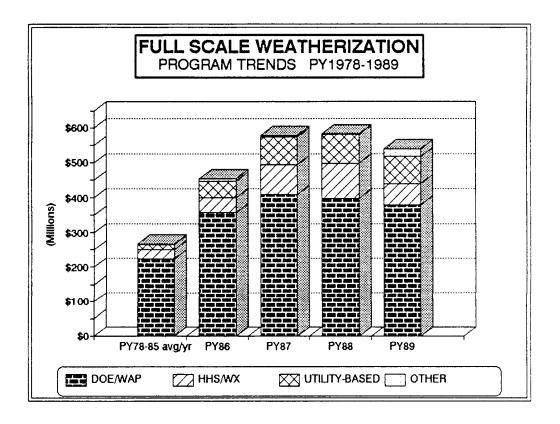
Both the mix of program types and the mix of funding sources change in the later years of the study period, reflecting major changes in the program. Figure II displays the changes in program type, which show growth between 1986 and 1989 was limited to the non-DOE

programs, especially HHS/WX and new full-scale utility based programs. However, the trend by PY 1989 was downward for these two kinds of programs and for all weatherization resources. Further, the nominal dollars shown for PY 1989 would be valued at \$0.88 each in 1986 dollars and therefore the real reduction in resources is greater than shown.

There are differences among the three major program types, as discussed in detail below. As a twelve year average, DOE/WAP invested \$1,057 per unit and HHS/WX invested \$1,095 while utilities invested an average of \$446 in the units they reported. For PY 1989 only, the comparable figures are: DOE \$1,401, HHS/WX \$994, Utilities \$389. This indicates that utility programs offer a lower number and far less expansive range of measures, while HHS/WX spent amounts comparable to DOE/WAP on different priorities.

At least a quarter of a million units had multiple funding sources, and any one of these individual units may have had a combination of these investments.

Fig. II:



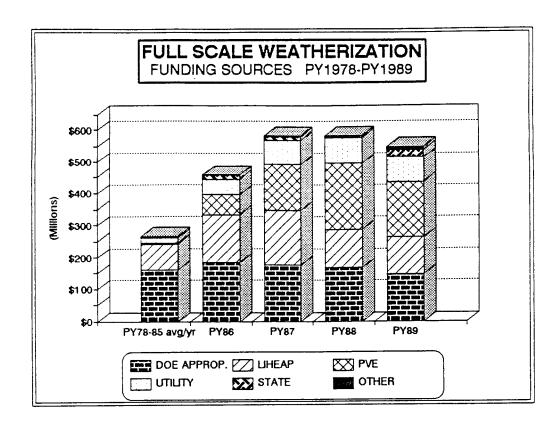
THE SOURCES OF FUNDING

An examination of the sources of funding for full-scale weatherization over the period reveals that funds appropriated to the Department of Energy do not dominate the mix of funds.

Figure III shows the mix of funding sources over the study time period. Twenty-eight percent came from LIHEAP Block Grant funds, 14 percent from PVE and nearly 10 percent from utility sources. States provided 2 percent of funding. Business (other than utility), individuals, and publicly funded housing rehabilitation programs (largely federal housing programs managed by state and local governments) together account for less than 1 percent of the total.

Figure III shows the trends change in funding sources in the period and reflects the large proportion of PVE funding in the programs from PY 1986 on, as well as recent increases in utility and "other" funding initiatives.

Fig. III:



LIHEAP funds made up about 28 percent of all funding. Of this amount 63 percent was reported to have been used according to DOE program regulations, while just 37 percent was expended under HHS/WX program rules as described below.

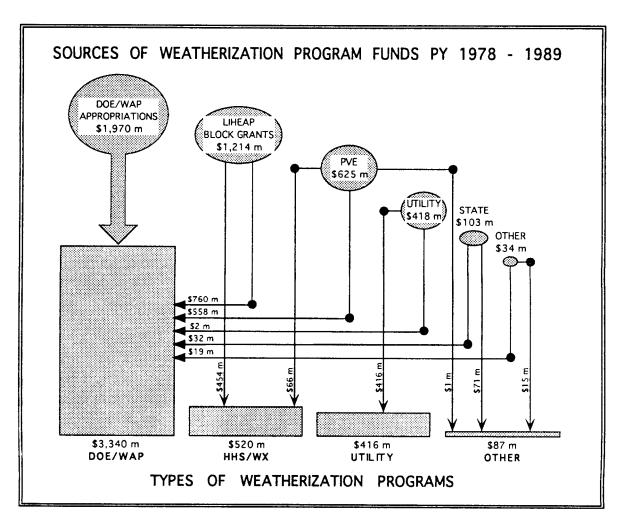
PVE or oil overcharge funds accounted for just under 15 percent of all weatherization resources in the twelve years. Exxon case funding, the source of most PVE weatherization, was released to the States in 1986-87. Nearly 90 percent of all these PVE funds spent on weatherization were used under DOE rules.

State appropriated contributions totalled \$102.7 million of which 31 percent was used to add funding to DOE/WAP, less than 1 percent was used for HHS/WX programs, and the balance was in the full-scale and housing repair programs described in the next section. Fifteen states made contributions during one or more of the time periods studied. By 1989, nine states were investing appropriated funds in weatherization activities. Housing repair not funded by state sources, other public funding and other private funds totalled just \$33.8 million over the study period, or less than 1 percent, and are not shown in Figure III.

THE SCOPE OF THE INDIVIDUAL PROGRAMS AND FUNDING SOURCES

Figure IV portrays the funding sources of each of the four types of weatherization programs. It shows that significant portions of total weatherization resources from each type of non-DOE funding source have been channeled through DOE/WAP, underscoring the central role played by the DOE/WAP program in directing weatherization activities nationwide.

Fig. IV



DOE/WAP

Throughout the twelve-year period, funding appropriated to DOE made up just under 59 percent of the total amount of funding for weatherization that was spent according to DOE/WAP rules (e.g. the DOE/WAP program). LIHEAP Block Grant funds and Petroleum Violation Escrow funds administered under DOE rules accounted for 23 percent and 17 percent of the balance of DOE/WAP respectively. However, by PY 1989, DOE funds accounted for just 39 percent of that year's expenditures and LIHEAP funds for 15 percent. The largest resource in PY 1989 was the PVE monies which constituted 45 percent of that year's DOE/WAP funding. Homes weatherized by DOE/WAP programs during the twelve-year period totalled 2.65 million units, and the total investment in the DOE/WAP program was \$3.84 billion.

HHS/WX

The HHS/WX program category refers to energy conservation activities administered with LIHEAP Block Grant and/or other funds pursuant to rules set up consistent with the LIHEAP regulations but not with the DOE/WAP rules. The LIHEAP statute has (since PY 1982) permitted states to define energy conservation activities for eligible households. As a consequence, a variety of state initiatives have been undertaken, some of which are full-scale weatherization programs reported here and some of which are energy conservation education, low-cost no-cost measures, or self-help home energy improvements.

The sixteen states with HHS/WX programs in PY 1989 reported on the purposes of their HHS/WX programs. They were:

•	Heating system measures not allowed in DOE	12 Programs
•	Higher cost limits than DOE	6 Programs
•	Other mechanical and safety measures	3 Programs
•	Repairs, rehabilitation	2 Programs
•	Training Centers	1 Program

These sixteen states represent a decline from the high of nineteen such programs in PY 1987. The nearly 30 percent drop in LIHEAP block grant funding in that period may account for the change.

From PY 1982 to PY 1989, over \$519.7 million was expended in HHS weatherization programs and at least 427,000 units were weatherized.

Utility Programs

Surveys were sent to 443 utilities serving 75 percent of the residential consumers in the U.S. Surveys were also sent to the largest municipal utilities and rural electric cooperatives in each state as well as any utilities identified in the literature or by State WAP managers as having weatherization programs if not in the original list. There were 124 respondents. This included 30 of the 114 investor-owned gas utilities, 31 of the 118 investor-owned electric utilities, 23 of the 74 rural electric cooperatives, 31 of the 135 municipal utilities and 7 of the combination companies surveyed, Bonneville Power Administration (BPA) and the Tennessee Valley Authority (TVA).

This response rate may have resulted in a significant undercounting of utility weatherization resources. It is clearly a low estimate because a few large utilities in states with mandated programs did not provide data and numerous municipal utilities served by BPA did not respond. It is also possible that non-responses reflect the lack of comprehensive low-income programs. State managers noted few utility initiatives not reported by utilities. Data were available on either the state managers survey or the utility survey for most large programs in the states where commissions mandated programs. Representatives of several national utility associations are not aware of significant programs other than those reported here. Therefore, these utility data, while not precise, are of the correct order of magnitude.

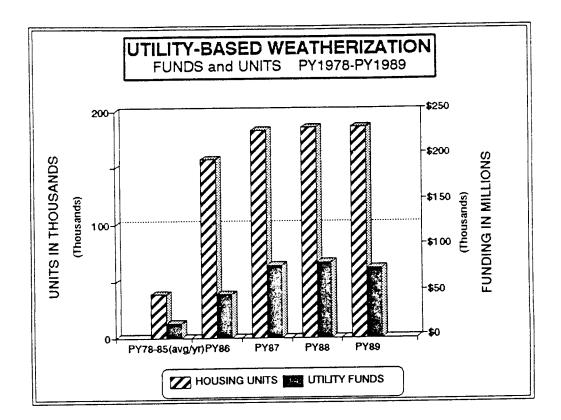
The utility and state manager's reports on utility programs were screened for duplicate counts and merged to provide these data. The full-scale utility-based programs are described in this subsection. Other utility activities are described in the following subsection.

Full-scale programs vary in the level of investment per unit and measures selected, and differ from the comprehensive programs offered under DOE/WAP and HHS/WX. All use at least one measure comparable to those allowed in the DOE/WAP and all involve some form of home energy evaluation though not necessarily of the scope used in DOE/WAP. Selection criteria for utility weatherization (e.g. demand reduction) may prioritize the investments of highest value to the utility systems and therefore may not capture all, or even most, measures with high value to the household.

Forty-nine utilities in 27 states reported some form of full-scale low-income program during one or more periods from PY 1978 to PY 1989. The annual funding and unit completions are dramatically higher in the last three years of the study period as Figure V shows.

Over the twelve-year period, utilities spent \$417 million on energy measures for just over one million low-income units. Respondents estimated that at least 160,000 of these units had more than one weatherization program contributing measures. This means that 17 percent of all the units utilities completed involved work administered in combination with DOE or other programs. However, units in which state programs later performed additional work were not counted; state managers estimate these numbers to be significant in states with utility programs.

Fig. V:



Nearly half of the 49 utilities reported using DOE subgrantees for all or part of their weatherization work.

From PY 1986 to PY 1989, the number of utilities reporting full-scale programs rose from 28 to 36. Sixty-eight percent of all PY 1989 utility funds came from California and Wisconsin; both had mandated programs.

In fact, of all full-scale utility programs reported, the vast majority of the investments came from mandated programs, Bonneville Power Administration (BPA), and the Tennessee Valley Authority (TVA). This pattern was true for all time periods, as Table 1 shows.

The measures most commonly available as part of a utility full-scale program were:

- attic insulation (33 out of 49 programs)
- water heater and/or duct wrap (30 programs)
- weatherstripping and caulking (30 programs).

Table 1
Percent of Utility Investments
By Category of Utility Program

	All Years	1989
MANDATED*	70%	73%
BPA and TVA	8%	6%
OTHER	22%	21%

^{*} See Appendix C 1-7

Miscellaneous Utility Weatherization Resources

Another section of the utility questionnaire asked for reports on other measures or benefits utilities offered low-income households at no cost. Of the sixteen utilities which offered the largest number of such energy measures to low-income households, nine were the same utilities that offered large full-scale programs that year. Definitions of activities and low-income households were not as strict for this section. Utilities could document \$76.6 million expended in the 1986-89 period, 54 percent of it in one utility, Southern California Edison. However, expenditure data was lacking for many of the programs reported.

The measures most commonly provided in this category in 1989 by the 65 utilities reporting were:

- client education at home (24 utilities)
- weatherstrip/caulk (20 utilities)
- client education by mail (18 utilities)
- water system wrap (16 utilities)
- low cost/no cost kits (14 utilities)
- heating system replacement (12 utilities)
- heating system tune-up/repair (12 utilities).

Other Programs

The state managers survey asked for data on any other significant weatherization programs operated during the 1978-89 period -- e.g. those constituting 10 percent or more of all weatherization activity in one time period. Funding for these totalled \$59 million, or just over 1 percent of all resources, of which \$24.3 million was in PY 1989 programs. Of the PY 1989 resources, 82 percent represented a North Carolina housing rehabilitation and weatherization program.

Contributing Resources

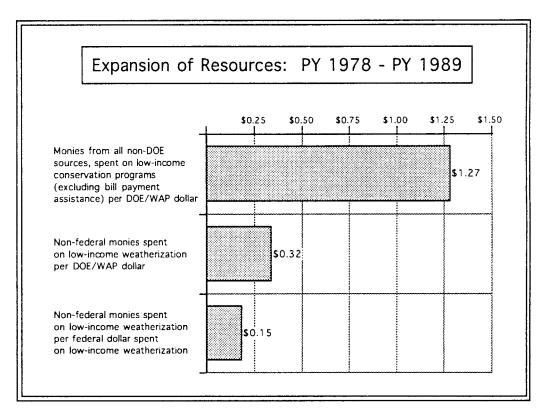
States were also asked to report on housing rehabilitation or repair programs integrated with weatherization and on any resources contributed to one of the four major program categories, operated during the 1978-89 period. The response included substantial estimated data.

For housing rehabilitation/WAP initiatives, \$17 million was spent by 11 states in the twelve years, 67 percent of it in Michigan. For additional contributions, \$11 million was reported. While a variety of labor, materials, and even other federal funding was reported, 57 percent of all contributions of this type were reported in PY 1989 and were predominantly accounted for by landlord contributions in New York.

DOE/WAP Expansion

If every DOE dollar appropriated and spent by responding states over twelve years is compared to all other funds from all other sources including miscellaneous not full-scale weatherization programs, then \$1.27 was available from all other monies for each DOE dollar. Matching all DOE with all non-federal weatherization shows that \$0.32 was expended per DOE dollar (Figure VI). Counting funds only in the 30 states that had expanded weatherization from non-federal funds would show that \$0.52 was generated per DOE dollar expended in those states.

Fig. VI:



The pattern of sources of non-federal funds in PY 1989 was substantially different from the twelve year pattern. Of the PY 1989 total of \$128 million, utilities provided the most significant leveraging or 72 percent of resources, largely in California. Twenty percent of the non-federal funds are state funds which reflect dramatic increases in one state that year.

CHARACTERISTICS OF WEATHERIZED HOMES AND NUMBERS SERVED

Number of Households

The survey respondents reported that a total of 3,895,000 units were weatherized during the 1978-1989 interval. This unduplicated estimate corresponds to \$4.272 billion expended, or 98 percent of all funding, as responses that did not report completions were excluded.

To put these figures in perspective, the Census Bureau reported a total of 90.89 millon occupied housing units nationwide in the 1987 American Housing Survey (AHS). This means that low-income weatherization resources covered in the utility and state surveys have been applied to slightly more than 4.2 percent of the total U.S. occupied housing stock. Of these, 2.65 million, or 2.3 percent of all units, were weatherized under the DOE/WAP rules.

The 1987 American Housing Survey also indicates that 21.345 million units are occupied by households below 150 percent of the poverty level. However, it is not possible to deduce from this housing base the percentage of homes that have received full-scale weatherization. Housing units qualify for DOE/WAP weatherization based on the income of the occupant. The residential mobility of low-income households means the housing stock weatherized and the low-income population do not equilibrate. The 1987 AHS reported that of all households below 150 percent of the poverty level, 4.74 million, or 22 percent, had moved in the past year. Of these, just 10 percent were originally owner-occupants, and the rest were renters.

The income mobility of the low-income population means that households that qualify for and receive low-income weatherization may not remain qualified over a period of years. Indeed, the best available longitudinal statistics indicate that, over time, a large proportion of the population in poverty moves up and out of poverty, often replaced in the poverty statistics by households whose income slid in the other direction.

The relationship between the low-income population's residential mobility and its income mobility is poorly understood. It is therefore difficult, at this stage of the study, to draw any precise conclusions regarding the population that remains to be served. Phase two of this study, which will analyze data from the 1990 Census and the DOE Residential Energy Consumption Survey, can clarify the influence of some, but not all, of these factors.

Types of Homes

The data available from the utility and state surveys regarding the characteristics of weatherized households is limited, consisting largely of the information reported to the Department of Energy regarding housing tenure and characteristics. Information describing 2.94 million weatherized households by tenure (e.g., owners versus renters) was provided, representing 76 percent of all weatherized households reported in the survey.

The data showed that of the 2.94 million households weatherized, 80 percent or 2.27 million were living in single-family dwellings. The majority of the 2.94 million (61.8 percent or 1.86 million) are also owner occupied.

The 21.345 million households living below 150 percent of the OMB poverty level in 1987 roughly match the program's eligibility standards. Owner households comprise 44.9 percent of the eligible low-income occupied units reported in the AHS. This compares to the 61.5 percent of the total of weatherized units reported in the state and utility surveys which were owner-occupied dwellings. Concomitantly, 55.1 percent of the eligible units were rentals compared to 38 percent of weatherized units reported in the surveys.

The major difference among program types was the high rate of utility multi-family weatherization compared to DOE and HHS programs. By PY 1989, all types of programs were weatherizing nearly equal numbers of rental and owner-occupied units, a considerable change from the PY 1978-1985 period when nearly 65 percent of weatherizations were in owner-occupied units.

Statistics that describe the weatherized households in greater detail will be available for phase two of this study.

REGIONAL FACTORS AFFECTING THE SCOPE OF WEATHERIZATION

For purposes of the other four studies that form the DOE/WAP evaluation the U.S. has been divided into three major climate zones: (1) the northern tier, states that are cold with minimal summer cooling load; (2) the middle tier which has both significant heating and cooling energy usage; and (3) the southern tier of generally warm climate states with some heating, and substantial cooling, energy usage. California, in this analytic scheme was divided into two climate zones (Beschen and Brown, 1991).

The analyses below differ from the larger evaluation in that they consider California as a separate region, since all data provided is statewide, and include Alaska in the coldest region and Hawaii in the warmest. Figures VII and VIII show funding and units completed by region.

Fig. VII:

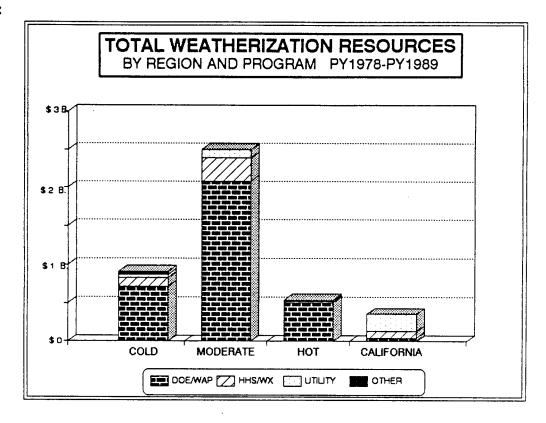
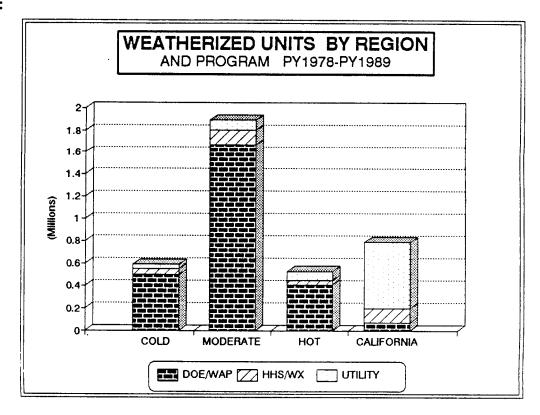


Fig. VIII:



The number of units weatherized varies by region, as do expenditures by program type. Seventy-three percent of all utility-weatherized units are in California and represent 15% of units weatherized in the U.S. in all programs; average investments in these units are considerably lower than in DOE/WAP and HHS/WX programs. The hot region has the same share of utility-weatherized units as the much larger moderate climate region, but all these units are in Tennessee and received an average investment of only \$125.

PHASE II OF THE SCOPE OF WEATHERIZATION STUDY

In the next phase of the Scope of The Weatherization Assistance Program Study a detailed examination will be made of the energy usage and conservation characteristics of low-income households. Data from the 1990 Census, the 1990 Residential Energy Consumption Survey, the American Housing Survey and other sources will be examined and integrated to provide a profile of the households that remain in need of weatherization services. To the extent resources are available, the study will examine the longitudinal impact of population and housing dynamics on both the eligible and recipient populations.

ABSTRACT

This study is one of five parts of the U.S. Department of Energy's national evaluation of its Weatherization Assistance Program (WAP). It has three major goals: 1) to enumerate the size and sources of investment in low-income weatherization; 2) to provide a count of the number of low-income units weatherized by all weatherization programs and characterize the type and tenure of those homes; and 3) to document the extent to which the DOE/WAP funding has been expanded through use of external resources.

Data on the cumulative number and characteristics of the units weatherized in five periods from Program Year (PY) 1978 through PY 1989 were collected from surveys of state WAP managers and utility conservation program managers. WAP managers were asked to provide data on all major publicly funded federal, state, or local programs and on any private sector initiatives about which they had data. In addition, a national sample of 443 utilities was surveyed. Information was solicited regarding energy conservation investments which were delivered as a package of measures and/or were comparable to the major measures approved for the DOE/WAP program itself, and contributions that were added to such efforts. Furthermore, this analysis considered only funding for weatherization programs targeting low-income households whose incomes did not exceed current federal standards for DOE/WAP or Low Income Home Energy Assistance Program (LIHEAP) eligibility.

Cumulative expenditures of \$4.36 billion and weatherization of 3.9 million low-income units were reported cumulatively in the twelve program years PY 1978 - PY 1989. Nearly 77 percent of all reported resources were expended by state DOE/WAP programs pursuant to DOE/WAP program regulations. In addition, utility programs for low-income households, energy conservation initiatives administered by LIHEAP and miscellaneous state and local weatherization initiatives all provided significant resources. However, the nature and comprehensiveness of the non-DOE programs were not in all cases comparable to DOE/WAP.

Significant changes in funding sources and uses over the twelve-year period were identified. Differences in resources and the characteristics of programs were evident among climate regions. Type of dwelling unit (e.g. single-family or multifamily) and occupancy characteristics of weatherized homes also were reported. A second phase of this study will provide more detailed data on the characteristics of the households and housing units occupied than were available from program reports.

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THE SCOPE OF THE WEATHERIZATION ASSISTANCE PROGRAM: THE WEATHERIZED POPULATION AND THE RESOURCE BASE

CHAPTER 1: INTRODUCTION

1.1 Background

This study is part of the U.S. Department of Energy's national evaluation of its Weatherization Assistance Program (WAP). The Weatherization Assistance Program was established by Title IV of the Energy Conservation and Production Act of 1976 (PL 94-385). It is administered by the U.S. Department of Energy (DOE), and is designed to provide financial assistance to qualifying low-income households for the "weatherization" of their housing units in order to reduce energy consumption and corresponding expenditures. DOE provides financial grants to State WAP agencies who in turn administer the program and fund local community WAP agencies or "subgrantees" to perform the actual weatherization work.

The most recent national evaluation of the WAP was completed in 1984, and was based on data for 1981. WAP regulations and operations have changed substantially since then. In addition, new initiatives, incentives, opportunities, methods, and technologies are on the horizon. For these reasons DOE, with the support of Oak Ridge National Laboratory (ORNL), has initiated an updated and comprehensive national evaluation of the WAP to provide policy makers and program implementers with the up-to-date, credible, and reliable information needed for effective decision making and cost-effective program operations. This study is one part of that evaluation.

The national WAP Evaluation is designed to accomplish seven goals:

- 1. Estimate energy savings due to the program one, two, and three years after participation;
- 2. Assess non-energy impacts, e.g., comfort, safety, and housing affordability;
- 3. Assess program cost-effectiveness;
- 4. Analyze factors which influence energy savings, non-energy impacts, and cost-effectiveness;
- 5. Describe the WAP network's characteristics and innovations;
- 6. Characterize the scope of the weatherization resources and population served; and
- 7. Identify promising WAP opportunities for the future.

To meet the above goals, the national WAP Evaluation has been divided into five studies. Three of the studies focus on the impacts of the program as implemented in key WAP markets and will perform energy cost-effectiveness evaluations.

Two supporting studies address additional aspects of the program, but are not designed to provide cost-effectiveness evaluations:

- A characterization of the WAP network, and
- This characterization of the scope of the resources for low-income weatherization and the low-income population served.

This document is the report on the first phase of the last of these supporting studies.

1.2 Purpose of the Study of the Scope of Weatherization Resources and the Weatherized Population

The analysis of the scope of the program will be conducted by the National Association for State Community Services Programs (NASCSP) under contract to ORNL over three years. A variety of tools will be used to characterize and enumerate investment from all sources in full-scale low-income weatherization programs, the number of low-income units weatherized from the inception of the programs in 1978 through 1989, some of the characteristics of the weatherized units and households, and the size and characteristics of the eligible population.

This first portion of the "Scope" study has three major goals: a) to enumerate the size and sources of investment in low-income weatherization; b) to provide a reliable estimate of the number of low-income units weatherized by all weatherization programs and characterize the type and tenure of these weatherized homes; and c) to document the extent to which the DOE/WAP appropriated funding has been expanded through use of external resources and alternative program frameworks. Opportunities for the future direction of the programs suggested by the analysis will be explored.

This report begins in Chapter Two with a summary of investments and completions in all full-scale weatherization programs reported. A discussion of funding sources and types of dwellings completed is included. The data were collected for five time periods, Program Years (PYs) 1978-85 together, and PYs 1986, 1987, 1988 and 1989 individually. A Program Year was the DOE program year April 1 - March 31 fiscal year or the closest approximation non-DOE programs could provide. The findings will be reported cumulatively, in series, or contrasting later and earlier years as may be useful.

In Chapter 3, each of the four major kinds of weatherization programs, that is, DOE/WAP, Low Income Home Energy Assistance Program weatherization not conducted under DOE regulations (HHS/WX), utility, and "other" full-scale, is examined in depth for its funding sources and purposes. In this analysis, weatherization activities are considered in programmatic categories, each program having distinctive characteristics and policies, albeit with considerable inter-state variability.

Chapter 4 examines in detail the sources of funding that made up each kind of program over time. Here, the weatherization programs described in the previous section are considered with regard to the variety of resource types used in each. Special attention will be given to the smaller funding sources -- those other than DOE, Petroleum Violation Escrow (PVE) funds, the Low Income Home Energy Assistance Program (LIHEAP), and utilities -- in search of examples of new resources. Extensive review of the expansion of federal programs with other resources and the "leveraging" effects of DOE/WAP is the focus of Chapter 5.

The fifth chapter examines the available, though limited, data on the number and characteristics of weatherized units. The sixth chapter reviews differences among funding patterns and completions by climate region.

1.3 Methodology

Data on the cumulative number and the type and tenure characteristics of units weatherized from PY 1978 through PY 1989 were collected from surveys of state WAP program managers and utility conservation program managers. These surveys are found in Appendix B of this report. WAP program managers were asked to provide data on all major publicly funded federal, state or local programs and on any private sector initiatives about which they had data. A national sample of 443 utilities representing investor-owned and public entities was asked to provide information about the comparable low-income weatherization activities of their organizations over the study time period. The list of utilities is displayed in Appendix C.

The subject of this inquiry was narrow. Only information regarding comprehensive energy conservation investments which were delivered as a package and/or were comparable to the major measures approved for the DOE/WAP program itself were counted, together with contributions that were added to such efforts. "Full-scale" programs, for the purposes of this survey, were defined as "conservation programs for low-income households that are offered at no charge and include:

- 1) An evaluation of the unit's requirements according to a formal, written energy audit or evaluation procedure; and
- 2) the availability of a comprehensive package of major and minor energy measures from which to choose; and
- installation of at least one or more of the following major measures: attic/ceiling insulation, floor insulation, wall insulation, heating or water heating system maintenance, repair or replacement, window replacement or storm windows."

Furthermore, the study counted only funding for, and housing units of, low-income households whose incomes did not exceed current federal standards for DOE/WAP or LIHEAP eligibility. Those were households not exceeding the maximum eligible household income of 150 percent of the federally-established poverty level (the equivalent of \$15,090 for a family of 3 in

PY 1989) or 60 percent of state median income. Other households receiving Aid to Families with Dependent Children (AFDC), Food Stamps, or Supplemental Security Income were also eligible.

The purpose of narrowly defining the subject of the utility inquiry was to achieve some certainty that the investments considered in national totals both of units weatherized and of dollars spent were roughly comparable to DOE Weatherization activities. However, within these definitions there are vast variations in the extent and nature of weatherization investments, particularly between federally-funded and utility-sponsored weatherization programs. It should not be assumed that the findings of the forthcoming impact and effectiveness studies of the DOE/WAP being conducted as part of the national evaluation of WAP will necessarily apply to all these program types.

1.4 Data Availability and Limitations

Data on all programs administered under DOE rules in all 51 grantee jurisdictions (including Washington, D.C.) are included in this report. Forty-seven of the 51 states surveyed responded to the State Managers' Survey. Data reported annually by the non-responding states to DOE was substituted for the missing survey data. Of the 443 utilities surveyed, 124 responded, and a total of 49 of them in 27 states reported full-scale programs for at least part of the PY 1978 - PY 1989 study period.

Certain limitations on the data reported should be borne in mind while reading the study. Retroactive data collection over more than a decade poses formidable practical problems. Data that were not originally collected and assigned to categories conforming to those of this study are impossible to reconfigure in hindsight. Further, many non-DOE programs do not record data on housing type, and utility programs do not always record household eligibility.

Estimates by respondents were encouraged in the survey. In fact, very little estimated fiscal or completion data was received. Those answering the surveys either provided firm figures collected in accord with DOE, U.S. Department of Health and Human Services (HHS), state reporting requirements, or utility reports, or they had few data at all. The data on units with two or more funding sources and on the type of unit weatherized had a much higher incidence of estimation.

Non-DOE activities do not generally share the DOE program year. Thus, some of the activities defined in each period occurred sometime in a 24 month period in which various 12-month programs fall. Totals for the entire period are relatively accurate.

The figures reported do not reflect all activity in nongovernmental or in decentralized programs at the local or neighborhood level, as such programs typically do not provide reports to state authorities. The first report from this five-part study of DOE weatherization (Mihlmester, et al., 1992) showed considerably more low-income energy conservation activity at the local level

than the state and utility data contain. There was no way, however, to match those local activities with the strictly-defined full-scale weatherization reported on here.

In addition, and as discussed further below, a few utilities known to be conducting comprehensive weatherization programs did not respond. There is reason to believe, however, that most of the full-scale utility activity in the PY 1978 - PY 1989 period is reflected in this report. The ancillary contributions of the utility sector in the form of energy conservation donations or loans offered to a large part of their residential consumer base and used by WAP-eligible households are probably understated. Most do not fit the framework defined for the core of this study. The data in this report are, therefore, an understatement of energy conservation resources for the poor, but they do capture the most significant investments in weatherization services.

Finally, it is difficult to infer trends from the eight program years within PY 1978 - PY 1985, as annualized average figures do not reflect federal or state appropriations trends. Rather, they represent the weatherization expenditures and activities during each Program Year.

Despite these limitations, the data analyzed in this report represent the most comprehensive and complete summary of verifiable public and private sector low-income weatherization activity ever assembled.

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CHAPTER 2: THE SCOPE OF WEATHERIZATION INVESTMENT: TOTAL RESOURCES PY 1978 - PY 1989

The study shows over \$4.364 billion was spent on full-scale low-income weatherization during the twelve program years studied. This statistic results from merging of the data provided on the survey of states and the survey of utilities.

2.1 Total Resources by Type of Program

Figure 2.1 shows the proportion of the twelve-year total expenditure contributed by each of the various program types. Four program categories are used: DOE/WAP -- the structure and rules of the DOE/WAP program pertaining in each time period; HHS/WX -- any programs using LIHEAP Block Grant Funds under rules different from DOE/WAP; utility-based full-scale weatherization programs; and other state or local initiatives which were independent weatherization programs constituting at least 10 percent of their states' total resources. Each type will be examined individually in detail below. Appendix Table A-1 displays detailed annual data. Of course, the data for the first eight years of the study are aggregated, and there is little basis for estimating annual figures to parallel the multi-program totals reported on this survey.

In 1986, NASCSP (E.O.R.I. and the Grier Partnership, 1986) reported on an extensive mail and phone survey of all states to determine the levels, sources and uses of conservation resources for low-income households from PY 1978-85. Cumulative data were collected for the first four years and annual data for PY 1984 and PY 1985.

At that time, 141 utilities and forty-five states, including those with the largest DOE programs, reported spending just under \$2 billion on weatherization-type services. State and utility programs which served moderate-income as well as low-income households were included in the total. On this basis, the report estimated national annual weatherization activity from all sources to be at a level of one-half billion dollars and one-half million units.

It is difficult to estimate annual rates of spending in the pre-1983 period. Unquestionably, the PY 1984 and 1985 weatherization levels represented a significantly higher rate of expenditure than in all previous years, but comparing these levels to 1982 or 1983, when substantial new DOE and utility funds became available, is not possible from existing reports. Compared to the annualized PY 1978 - PY 1983 rate of spending, PY 1984 funding from the LIHEAP Block Grant and from utilities both jumped 40 percent, DOE/WAP monies grew about 30 percent.

The current study provided states with the data from the NASCSP 1986 report and asked each state to verify and change any incorrect numbers. For those states with no data, Department of Energy reports on state WAP expenditures were substituted.

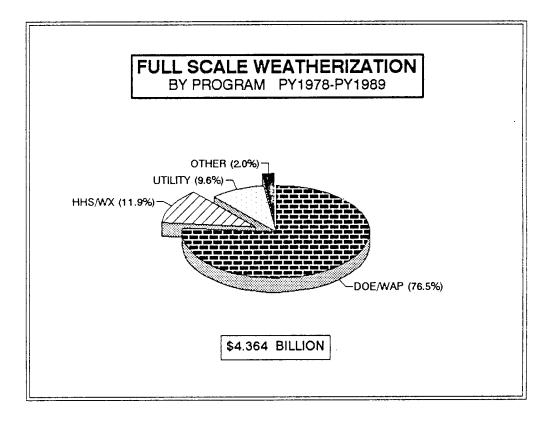
One result of this process was that state managers modified the data and removed virtually all reported utility contributions from the survey. Alternative data sources on utility programs other than the utilities themselves, do not generally exist. The impossibility of validating the

utility contributions reported to be over 10 percent of reported PY 1984 resources and 15 percent of PY 1985 resources, further frustrates any attempt to annualize the PY 1978-85 data. Unquestionably, the spending curve rose from PY 1978 through PY 1985.

Not surprisingly, this study's finding that \$2.17 billion was spent by 51 states in the same period is consistent with the 1986 study from which data are borrowed. The 1986 prediction that weatherization resources had reached a new plateau was relatively accurate as measured by the present study's results. From PY 1986 to PY 1989, annual funding ranged from \$460 million to \$590 million, but completions remained below one-half million, varying from 440,000 to 445,000 per year.

During the entire twelve-year study period, the DOE/WAP program rules and regulations directed nearly 77 percent of all reported low-income weatherization investments; HHS/WX programs contributed 12 percent; utility full-scale programs contributed nearly 10 percent; and all other programs in the states accounted for 2 percent of weatherization funding. The relative percentage of DOE/WAP may be overstated because it is the only program for which complete fiscal records were available for all states for all twelve years. Many, but not all, other programs were reported by states or utilities for most years. Nevertheless, the DOE/WAP clearly shapes the structure of weatherization activity because its rules are used for determining most investments.

Fig. 2.1:

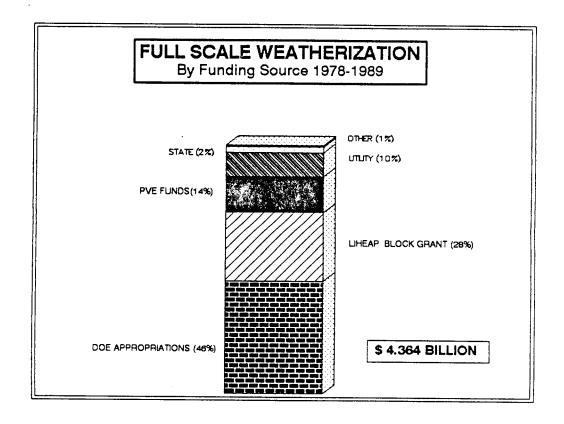


2.2 Total Resources by Type of Funding Source

When the sources of funding instead of the categories of program for full-scale weatherization are examined over the full study period, a different picture emerges. Funds appropriated to the Department of Energy do not dominate the mix of funds. State and local policy makers have used many funding sources, as shown below, and have combined most, but not all, of them under the roof and rules of their DOE programs.

Figure 2.2 shows the mix of funding sources over the time period in question. Less than half of the resources, 45 percent, are DOE funds. Over the decade, 28 percent came from the LIHEAP Block Grant, 14 percent from Petroleum Violation Escrow (PVE) funds (which are also called "oil overcharge" funds and were distributed by formula by federal court order), and nearly 10 percent from utility sources. States provided 2 percent of funding. Businesses (other than energy utilities), individuals, and publicly-funded housing rehabilitation programs (largely funding distributed to states or localities by federal housing programs) together accounted for just one-half of one percent of the total and are not visible on the graph.

Fig. 2.2:

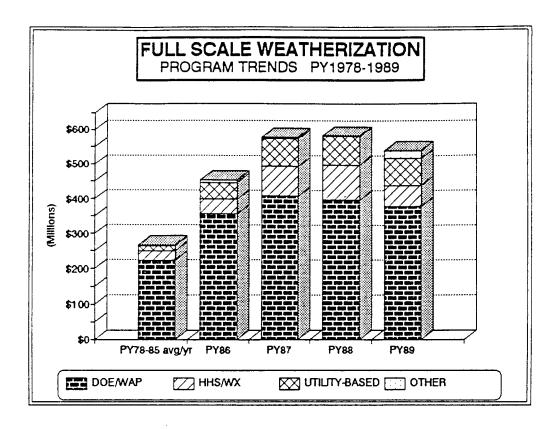


2.3 Funding Trends: Program Types

Both the mix of program types and the mix of funding sources change in the later years of the study period, reflecting major changes in weatherization activities. In the first eight years of the programs, DOE represented 83 percent of all weatherization, and utility programs just 6 percent. Figure 2.3 displays the changes in program type, which show growth between 1986 and 1989 was limited to the non-DOE programs, especially HHS/WX initiatives with different purposes than DOE/WAP, and new full-scale utility-based programs. However, the trend for these larger non-DOE resources was downward by PY 1989, as was total funding for all weatherization.

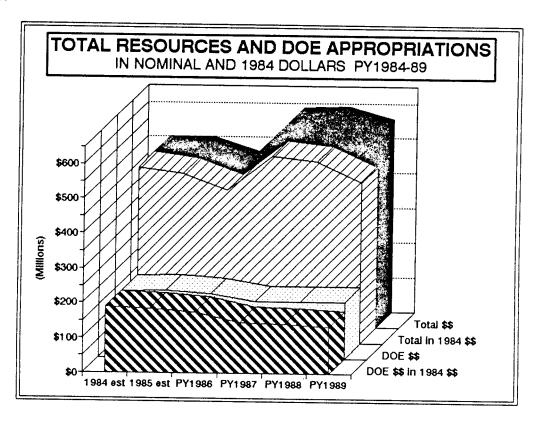
By PY 1989, the DOE/WAP program accounted for 69 percent of all weatherization resources and utility programs were 14 percent. HHS/WX remained constant around 11 percent through the period studied. Only the small sector designated as Other Programs, largely state and local initiatives, showed growth in PY 1989.

Fig. 2.3:



The PY 1989 level would be 12 percent lower than the graph now shows if real 1986 dollars, rather than nominal dollars, were used. Figure 2.4 displays a comparison of real and nominal dollars in the PY 1984 - PY 1989 using data from the 1986 NASCSP study for the first two years which are generally, but not in all categories, parallel to these collected in 1991.

Fig. 2.4:

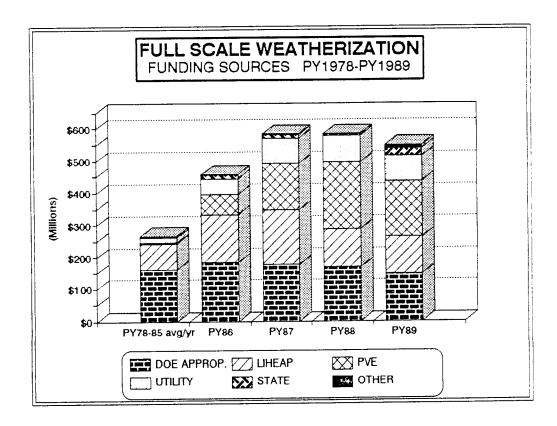


2.4 Funding Trends: Sources of Funds

Figure 2.5 shows the change in funding sources, rather than programs. This graph uses the annual average for the PY 1978 - PY 1985 period because in spite of its imprecision, dramatic changes in the twelve years are evident. It reflects the large proportion of PVE funding in the programs in the PY 1986 - PY 1989 period, as well as moderate increases in utility and "other" funding initiatives discussed below. The LIHEAP block grant contributions declined in real and proportional terms. DOE contributions dropped slightly.

Contrasting the early years with PY 1989 shows that DOE-appropriated funds provided 59 percent of funding in the early period and just 27 percent in PY 1989. Both state and utility contributions more than doubled as a proportion of all funding.

Fig. 2.5:



Chapter 3 discusses each of the programs and sources in greater detail to clarify the mix of programmatic approaches and monies.

CHAPTER 3:

THE SCOPE OF THE FOUR PROGRAM

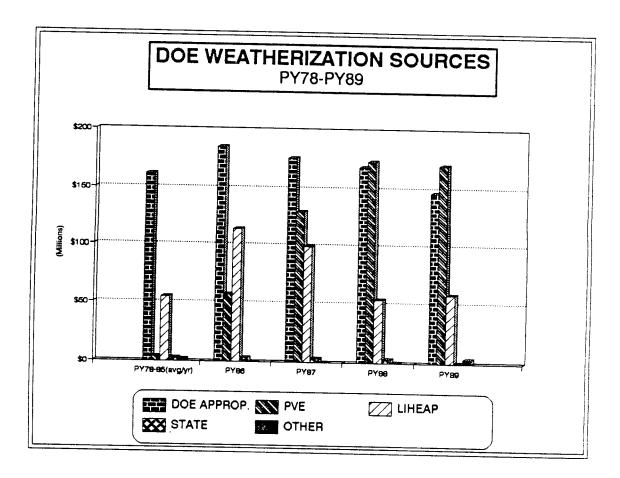
TYPES: A CLOSER LOOK

3.1 The DOE/WAP

While the proportion of funding devoted to weatherization from the state and local Department of Energy Weatherization Assistance Programs may be overstated, approximately 77 percent of weatherization funds was invested according to DOE regulations in 68 percent of the completions reported. Other activities and programs apparently constitute important additions to the energy initiatives of the federal program, and run in parallel, or as contributing elements, to the DOE program.

Figure 3.1 shows the kinds of resources devoted by the states to the DOE/WAP program. Throughout the study period, funding appropriated to DOE made up just under 59 percent of the total amount of funding for weatherization that was spent according to DOE/WAP rules. LIHEAP Block Grant funds and PVE funds administered under DOE rules accounted for 23 percent and 17 percent of the balance of DOE programs respectively. The makeup of funding

Fig. 3.1:



for DOE programs shifted over the study period. By PY 1989, DOE appropriations accounted for just 39 percent of DOE/WAP expenditures and LIHEAP funds for 15 percent. The largest PY 1989 resource was the PVE monies which were 45 percent of DOE/WAP funding.

Total funding reported in PY 1989 was nearly \$380 million, representing a decline in nominal, as well as real, dollars from the previous two years. This total figure is less than the total expenditure reported in the evaluation's study of 1989 state programs (Mihlmester, et al., 1992) largely because our figure excludes energy and housing programs not meeting the strict threshold definitions for full-scale weatherization. Also, we do not count all other (non-weatherization) energy programs administered by WAP managers as did the previous survey. More local initiatives in weatherization and other energy efforts were reported on in the Mihlmester study of 1989 state programs. Some of these may have been programs conforming to the strict definitions in this survey. The contrast indicates that qualifying local initiatives are probably understated in this report.

LIHEAP funds committed to DOE/WAP programs dropped precipitously from PY 1986 to PY 1989. The pattern of use of LIHEAP funds is discussed below, and the drop parallels a decline in LIHEAP block grant appropriations.

Negligible amounts of funding from other sources were devoted to the DOE/WAP program under the DOE rules, and most of these limited contributions were made in the PY 1978-85 period. Those contributions that were identified came primarily from funds from the Community Services Administration's Winterization Program.

The purposes of the DOE program changed over the years. The original "winterization" purpose permitted small-scale investment in insulation and infiltration reduction. By PY 1986, many different home energy evaluations were in use and investments began to shift to a mix of insulation techniques and mechanical measures at substantially higher return and higher cost per unit. Eligibility standards for multifamily units were broadened. Eligibility was also broadened to permit states to use the same eligibility standards for DOE/WAP and LIHEAP payment programs. Following new legislation allowing average expenditure of \$1,600 per unit, average DOE/WAP expenditures per unit (not including administrative and training expenses) rose to \$1,400 in PY 1989, compared to a twelve-year average of \$1,057. This new flexibility opened opportunities for coordination both among state low-income programs and with private initiatives, using a broader range of investments.

3.2 HHS/WX

The HHS/WX program category refers to energy conservation activities administered with LIHEAP Block Grant and other funds pursuant to rules set up consistent with the LIHEAP regulations but not the DOE/WAP rules. The LIHEAP statute since PY 1982 has permitted states wide latitude in defining energy conservation activities for eligible households. As a

consequence, while substantial LIHEAP funds have gone directly to DOE/WAP, in addition, a variety of state initiatives have been implemented with these funds.

Some of these state initiatives provide full-scale weatherization services and are programs that fall within the subjects of this study. Others involve conservation education, self-help minor home improvements, or low-cost no-cost measures. Therefore, HHS/WX expenditures reported for purposes of this study, even when totalled with the LIHEAP resources devoted to DOE/WAP, are less than the cumulative LIHEAP amounts reported by states to the Department of Health and Human Services (DHHS) to have been expended on conservation activities in the same period.¹

A total of \$519.7 million was reported in full-scale HHS/WX programs, and 427,000 units were weatherized, including nearly 65,000 which also received some DOE/WAP investments. By PY 1989 the average investment was just under \$1,000 per unit, though units with both DOE and HHS/WX funding averaged \$3,200.

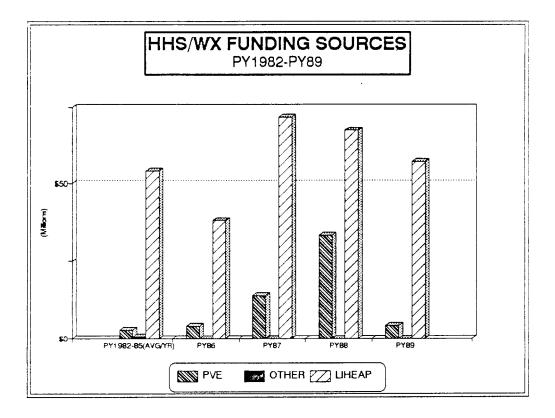
Sixteen states reporting had HHS/WX programs in PY 1989, down from a high of nineteen in PY 1987. The nearly 30 percent drop in LIHEAP Block Grant funding in that period may largely account for the change. The purposes of the programs are shown on Table 3.1. These same purposes were reported in equivalent proportions for programs through the eight year period.

Table 3.1 Purposes of HHS/WX Programs PY 1989 16 States

Purpose	No. of Program
Higher cost limits than DOE/WAP	6
Heating system work not permitted in DOE/WAP	12
Other mechanical or safety measures	3
Repairs, rehabilitation	2
Training Centers	1

Figure 3.2 shows the sources of HHS/WX funds. Less than 1 percent of HHS/WX funding came from state and other sources. LIHEAP Block Grant and PVE funding were combined in these initiatives, although PVE funds never amounted to more than 33 percent of the total (in PY 1988). Nevertheless, one half billion dollars, or 12 percent of all weatherization resources, were committed to HHS/WX programs in the minority of states which created these programs.

Fig. 3.2:



3.3. Utility Programs

Extensive attention is devoted here to the data states and utilities provided on utility effort both because it has not been reported in any comparable report and because it is of enormous interest to policy-makers.

3.3.1 Methodology

Previous studies (EORI, et al., 1986, and Mihlmester, et al., 1992) have found that utility-based programs provided the largest source of non-federal funding for low-income weatherization but have not been able to collect valid standard data. The present study sought to identify and quantify the scope and nature of utility-based initiatives by several methods. Because anecdotal evidence and the first report of the National WAP Evaluation (Mihlmester, et al., 1992) suggested that most utility programs were not reported to state WAP managers, a separate national utility survey was conducted. It was designed to capture data from PYs 1978-89 and count exclusively the low-income units served by comprehensive utility-based programs and the expenditures associated with those units.

Data were solicited on three kinds of utility programs:

- 1) Full-scale weatherization programs as defined above (p. 3);
- 2) Contributions by utilities directly to state- or locally-run weatherization programs which were made in addition to any full-scale programs reported; and
- 3) Any energy-savings contributions made directly to low-income households in addition to any full-scale or state and local programs with which they were involved.

The detailed annual utility-by-utility results, and notes on the sample and methodology are attached in Appendix C.

The sample of utilities was designed to capture as many weatherization activities as possible by surveying all utilities with significant residential customer loads and adding to that group any large municipal or rural electric cooperative utilities missed in the original sample. The Tennessee Valley Authority (TVA) and Bonneville Power Administration (BPA), and other utilities with large well-known conservation programs, were also surveyed. National utility associations assisted in the sampling and follow-up to maximize utility participation.² Public Utility Commissions (PUCs) were interviewed to determine the existence of any qualifying programs and to obtain data on them.³ Few such reports were available at all, and most that were did not conform to the framework of this survey.

3.3.2 Response Rate

Of 443 utilities surveyed as a result of this method, 124 (or 28%) responded. Respondents included 30 of the 114 investor owned gas utilities surveyed, 31 of the 118 investor owned electric utilities surveyed, 23 of 74 rural electric coop counties, 31 of 135 municipal utilities, and 7 of 10 combination companies. BPA and TVA also responded. Utilities responded in all but one state (Connecticut) which had PUC-mandated or PUC-approved low-income programs, although not all utilities did respond. Both federal authorities with extensive residential programs, the Bonneville Power Administration and the Tennessee Valley Authority, provided full responses.

This response rate may have resulted in a significant undercounting of utility weatherization resources. The finding is clearly somewhat low because a few large utilities in states with mandated programs, e.g., Wisconsin and Connecticut, did not provide data, and numerous municipal utilities in the Bonneville Power Administration area did not respond. However, it is more likely that non-responses reflect the lack of comprehensive low-income programs. The state managers noted few utility initiatives not reported by utilities themselves. Data were available on either the State Managers' Survey or the utility survey for most large programs in the states where PUCs mandated programs. Representatives of several national utility associations and utility commissions interviewed are not aware of significant programs

other than those reported here. Therefore, these utility data, while not precise, are of the correct order of magnitude.

3.3.3 Data Integration and Validity

State managers also provided reports on all utility activity known to them.⁴ Integrating the utility data with the information provided by states to arrive at an unduplicated national total of funding and weatherized units posed some formidable problems, including:

- Non-uniform definitions of low-income: While many PUC-mandated programs use the DOE or LIHEAP eligibility criteria, many other programs are not strict in defining the households they accept, thus inflating the count of weatherized low-income units.
- Non-uniform definitions of conservation measures: Terminology on such items as "energy audits," "low-cost," and "repairs" is inexact.
- Non-uniform program years: The survey designated years often do not reflect common time periods. Utilities were typically reporting calendar years, which coincide with only 9 months of the DOE program year. Therefore, the annual breakdowns of PYs 1986 through 1989 are only an approximation of the actual breakdown of completions and expenditures in any 12-month (April-March) period.
- Overlapping boundaries. All multi-state utilities and the BPA could not provide state-by-state breakdowns. The resources of the former were assigned to their home state. The BPA figures were unduplicated from Washington State's programs and most of Oregon's programs but Montana and Idaho units are reported with other BPA monies and not in their states.
- Duplicated completions. Only utility programs that work under contractual agreement with DOE or HHS/WX, such as the TVA programs of the mid-1980's, could report with certainty whether or not utility and DOE, HHS/WX or other state program funds were also being used. Thus, unduplicated completions may well be overstated by the merged state and utility surveys.

3.3.4 The Characteristics of the Full-Scale Utility Programs

The full-scale utility-based programs are described in this subsection. Other utility activities are described in the following subsection, "Additional Utility Weatherization Resources."

The full-scale utility-based programs vary considerably but all use one or more measures comparable to those in DOE/WAP and involve some form of energy evaluation, though not

necessarily of the scope of DOE/WAP audits. Unlike DOE/WAP there are no uniform policies or regulations even within most states. Among the differences, both among utility programs and between those programs and DOE/WAP, are investment levels per unit and the number and type of measures offered.

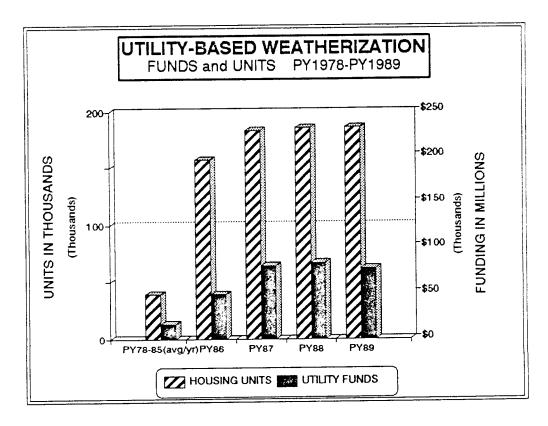
Many utility programs may consider maximizing payback to their own utility system as the key criterion for the selection of measures. Some of the largest place a premium on serving the maximum number of households. For example, interviews with DOE and utility subgrantees in California indicate utility programs in the period studied, which produced three-quarters of all U.S. utility weatherizations, used caulk, low-flow shower heads, water heater wrap and weatherstrip considerably more often than insulation. BPA programs, on the other hand, were reported to be comparable to DOE/WAP. The selection of measures by criteria other than targeted cost-effective reductions in consumption of energy by low-income households may neither reduce their household energy bill nor reduce total consumption significantly. It should therefore not be assumed that all or most utility full-scale weatherization is necessarily comparable to that conducted by DOE/WAP.

The findings presented in detail below show significant differences between utility and public sector programs in per-unit expenditure levels and characteristics of the completed units. The threshold definitions of comprehensive full-scale weatherization did not exclude a wide range of program types. The forthcoming effectiveness studies that make up the balance of the ORNL evaluation can offer valuable insights into how programs comparable to the utility initiatives outlined here compare to the larger-scale DOE/WAP and HHS/WX investments in low-income homes.

Forty-nine utilities in 27 states reported some form of full-scale low-income program during some period between PY 1978 and PY 1989. They are shown in Appendix Table A-3. The annual funding and unit completions are considerably higher in the last three years of the study period, as Figure 3.3 shows.

Over the twelve-year period, utilities reported weatherizing just over one million units. Of these, they estimated at least 160,000 had more than one funding source. This means 17 percent of the units they completed involved work in combination with DOE/WAP or other programs, to the best of their knowledge. In PY 1989, utilities reported combining their investments with other programs for 2 percent of their completed units. Ten utilities reported combining their investments with DOE/WAP investments, and twelve utilities combined their investments with "other" state or local programs. A reading of the local names of the programs designated as joint state/utility efforts and comparisons to the state surveys suggest that virtually all 22 of them were, in fact, the DOE/WAP or HHS/WX program. Interviews with state managers suggest these data understate the combination of utility and DOE resources. State managers believe subgrantees frequently perform energy audits on homes in which utilities have installed measures and find that additional major resources are required. The utility reports reflect only those programs with formal coordination agreements.

Fig. 3.3:



In addition, utilities were asked to report whether their low-income programs were delivered in whole or in part by DOE subgrantees. In PY 1989, this was reported to be the case for 18 of the 38 full-scale utility programs, including many of the largest, whose programs totalled 45 percent of all utility funds and 26 percent of utility units. However, state managers interviewed report Pacific Gas & Electric and Bonneville programs, which did not list themselves as using DOE subgrantees, did, in fact, use these agencies for significant levels of work. If these two utilities' funds are considered, programs providing 89 percent of PY 1989 utility full-scale weatherization funds and 94 percent of PY 1989 utility weatherized units used DOE local agencies for at least some of their weatherization work.

From PY 1986 to PY 1989, the number of utilities reporting full-scale programs rose from 28 to 36. However, of the 36 reported programs in PY 1989, 23 had programs under \$100,000. Sixty-eight percent of all PY 1989 utility funds came from California and Wisconsin; both states had mandated programs, and not all utilities in these states provided data, so the 68 percent may understate their contributions to the national total.

In fact, of all full-scale utility programs reported, the vast majority of the investment came from mandated programs and the two federal authorities. Of the balance, most was accounted for by Ohio's gas utility programs which were, in fact, mandated for a two-year period. This pattern was true for all time periods as Table 2 shows.

Table 3.2
Percent of Utility Investments
By Category of Utility Program

	All Years	1989
MANDATED*	70%	73%
BPA and TVA	8%	6%
OTHER	22%	21%

^{*} Appendix C 1-7

The fact that investor-owned gas and combination utilities made up 88 percent of full-scale programs' funding in PY 1989 follows from this pattern of PUC mandates which affect only investor-owned utilities. Of the 21 publicly-owned or rural electric utilities responding in PY 1989, just 4 had full-scale programs.

The utilities responding and their contributions to full-scale programs are shown by type of utility in Table 3.3. There is substantial room for growth in most sectors of the industry. The low contributions by investor-owned electric utilities reflects the fact that programs not targeted at heating-energy conservation may not meet the definition of full scale weatherization. Over half of the non-full-scale utility contributions reported in section 3.3.5 below are from one electric utility.

Table 3.3
Percentage of Utility Resources
By Type of Utility

	PY 1978-85		PY 1989	
Туре	% of Responses	% of Resources	% of Responses	% of Resources
Gas Investor-Owned	24%	15%	29%	42%
Electric Investor-Owned	13%	6%	16%	3%
Combination Investor-Owned	10%	62%	24%	48%
Public-Owned Gas	2%	2%	2%	0%
Public-Owned Electric	22%	11%	11%	3%
Public-owned Combination	6%	6%	5%	<.005
Rural Electric Coop	21%	<.005	16%	<.001

Table 3.4 shows the states with PUC-mandated or approved utility programs to date.⁶ Approved programs are utility proposals permitted as part of an approved rate schedule. State managers reported some of the "approved" programs as mandates, indicating, perhaps, a stable long-term commitment by regulators to the plans.

Table 3.4 Mandated or Approved Utility Weatherization

Mandated States	Start Dates	Federal Authorities	Start Dates
CA	1982-4	BPA	1983
СТ	1980	TVA	1983 to 1988(end)
MA	1990		
ОН	1986 to 1987 (end)	PUC Approved States:	Start Dates
NJ	N/A	MN	N/A
NY	1991	IA	N/A
PA	1988	MI	N/A
WI	1982-3	ОН	1978-86

The measures offered as part of a full-scale program varied. Utilities were given a checklist and the 36 responding in PY 1989 identified the measures available from their programs as those shown in Table 3.5. There are no data on the frequency of use of these measures.

Table 3.5
Utility Investments
in Full-Scale Weatherization Measures
used by 36 Companies PY 1989

<u>Measures</u>	Number of <u>Utilities</u>
Attic insulation Wrap water heater or ducts Weatherstrip/caulk Storm windows or doors Wall insulation Basement insulation Window replacement Home repairs Heating system replacement Heating system replacement	(33) (30) (30) (21) (20) (19) (18) (17) (15)

This list shows that some of the cost-effective measures identified as a growing part of DOE/WAP programs by the first portion of the DOE evaluation (Mihlmester, et al., 1992) were not common in utility programs. Wall insulation is used by just over half; heating system work by less than half. Conventional measures are most popular, including low-cost items such as wrap and infiltration measures. This priority listing would be virtually identical in any of the preceding time periods studied, when even fewer utilities had such programs. The full results appear as Appendix Tables C-1 through C-6.

Utilities were asked to report on any resources they donated directly to any of the three other types of full-scale weatherization programs in their area. However, over 80 percent of monies they reported in each year were duplications of funds reported above, and the balance was also not identified sufficiently so it could be determined to be additional resources. Most utilities were unable to assign a dollar value to the contributions. However, non-fiscal data provided are a useful representation of the role that utilities played when they combined their resources with the DOE or similar programs. For example, it appears that, in PY 1989, at least two utilities donated materials, personnel or training to both DOE/WAP subgrantees and local volunteer groups, although no total value was assigned to the donations.

3.3.5 Additional Utility Weatherization Resources

Another section of the utility questionnaire asked for reports on other programs utilities offered to low-income households at no cost. This was designed to ensure that neither utilities without full-scale programs, nor separate resources offered by utilities which did have full-scale

programs, would be excluded from the final enumeration of available weatherization dollars. It also provides a description of utility activities that may be a productive contribution to future public-private programs. These 'miscellaneous' utility contributions are not counted in the totals discussed above. The resources are, however, included in the leveraging discussion below. The data were not clearly differentiated from those reported above and, more important, these resources do not meet the full scale weatherization threshold definitions. An extensive checklist of measures was offered and the results are displayed in Appendix Table C-7.

Many more utilities reported providing low-income energy resources on this portion of the study; sixty-six utilities reported one or more measures in PY 1989, when 36 were offering full-scale programs. PY 1989 expenditures for these 66 totalled \$18.9 million, of which \$11 million was spent by twelve utilities on replacing heating equipment in 9000 homes. This represents a dramatic escalation in reported heating systems programs. Of the sixteen utilities which offered the largest number of energy measures to low-income households at greatest expense, nine were the same utilities that offered large full-scale programs that year.

In most cases and years, utilities did not have full data on the number and cost of the services or measures they reported. The checklist provides a descriptive sketch of the range of services available to some low-income households at each time period; the fact that few of the two data items requested about each service (e.g., no. of households served and cost per household) are available for the earlier time periods indicates that all of the PY 1989 data shown below are significantly more reliable than that for previous years. Therefore, these twelve-year figures represent an underestimate of measures offered to households at or near the program eligibility levels and may not be fully unduplicated from those reported above.

Table 3.6 shows the resources that utilities reported devoting to the low-income conservation measures that are not within the definition of low-income weatherization, and for which they maintained records.

Table 3.6
Other Utility Weatherization Initiatives
PY 1986 - PY 1989

Year	1986	1987	1988	1989
Number of Utilities	46	43	55	66
Expenditures (\$000s)	2,127	2,947	\$8,717	\$18,893

The high figures in PY 1988 and PY 1989 are due, partly, to the fact that utilities could report expenditures for recent years whereas in the earlier years many just acknowledged having provided resources without providing further information and cost figures. The heating system replacement programs which began in PY 1988 in 10 utilities, and continued in PY 1989 in 12 utilities, account for the majority of the increase.

The measures and other resources offered in PY 1989 by the 66 utilities reporting are shown in Table 3.7. These numbers indicate an emphasis on client education and low cost measures.

Table 3.7
Utility Investments
in Miscellaneous Measures
66 Utilities PY 1989

<u>Measures</u>	Number of <u>Utilities</u>
Client education at home Weatherstrip, caulk Client education by mail Water heater wrap Low cost/no cost kits Heating system replacement Heating system tune-up/repair	(24) (20) (18) (16) (14) (12) (12)

3.4 Other Weatherization Programs

In the State Managers' Survey, a fourth program category was designed to capture any significant freestanding programs not administered as DOE/WAP, HHS/WX, nor utility-based. The survey asked for data on any other weatherization programs or contributions to any of the full-scale programs defined as: programs providing weatherization services that meet the full-scale test and that provided at least 10 percent of the total weatherization resources in the state, in each time period reported. Detailed data on the purposes of these other weatherization programs were not collected. Such programs were reported in nine states. Three of them began programs in PY 1989, and four of them began in PY 1988.

Funding for all nine programs totalled \$59 million for all years and \$24.3 million in PY 1989. The overwhelming majority of the funds are state-appropriated in each period. The unduplicated count of nearly 16,000 units is greatly understated because over one-third of the funds reported as Other Weatherization were not associated with data or units.

Three types of programs provided most of the funding:

- 1. programs offering comprehensive home repair, including weatherization (Florida, Maine, North Carolina);
- 2. general purpose state weatherization programs (Alaska, Massachusetts, Minnesota, Georgia, Wyoming) which accounted for most Other Weatherization expenditures in the twelve years;
- 3. state programs designated exclusively for heating system retrofits (Ohio, Maine).

In PY 1988 only two small general-purpose state programs were reported. Housing/weatherization programs accounted for half of the PY 1988 "other" programs and nearly ninety percent of such resources were committed in PY 1989 in North Carolina.

Most of the nine programs listed were not designed as an adjunct to DOE/WAP. Only three states used any funds together with DOE/WAP or HHS/WX funds in any units. The 7900 "mixed" units in these states, however, were nearly half of all completions reported. Therefore, there was significant coordination with the federally-funded programs in key states.

3.5 Contributing Resources

States were also surveyed regarding two categories of contributions that could expand activities and resources in one of the four major categories of programs. These were:

- a) programs for low-income housing repair or major rehabilitation that were run jointly with a full-scale program; and
- b) contributions from non-federal sources directly to one of the four full-scale program categories.

3.5.1 Housing Repair Contributions

The housing repair and/or rehabilitation contributions to WAP or HHS/WX varied over time. In the early half of the decade less than one percent of resources came from this category and most of the figures are estimates, but the majority of funding was State-appropriated. Eight states maintained programs through the entire period, three others reported programs in some years. The majority used their housing monies in conjunction with DOE/WAP. Of the \$17 million reported for all years, \$11.4 million came from state funds in one state, Michigan. However, by PY 1989 there was no single large program. Table 3.8 shows the sources of these repair funds.

Of the 8 states with rehabilitation/repair programs in all years, 4 were in the hot region. Seven of the eleven which existed at one or more periods in the twelve years were in heavily

rural states. The availability of Farmers Home Administration (FmHA) and small cities Community Development Block Grant (CDBG) funds in rural areas may account for this pattern.

Table 3.8
Number of States Using
Housing Repair/Weatherization Funds
by Funding Source PY 1986 - PY 1989

Source	PY 1986	PY 1987	PY 1988	PY 1989
CDBG	3	3	3	5
FmHA	3	4	4	5
State	4	4	4	2
Local		1	1	

The only clear distinction between the programs reported by the states to be in this category and the three freestanding home repair/weatherization programs reported in section 3.4 above seem to be the relatively small size of most of these "contributing" additions to the DOE/WAP or HHS/WX effort. The three rehabilitation programs reported as "other" repair and weatherization programs also mixed repair and energy conservation, but in addition, they exceeded ten percent of total weatherization resources in the state.

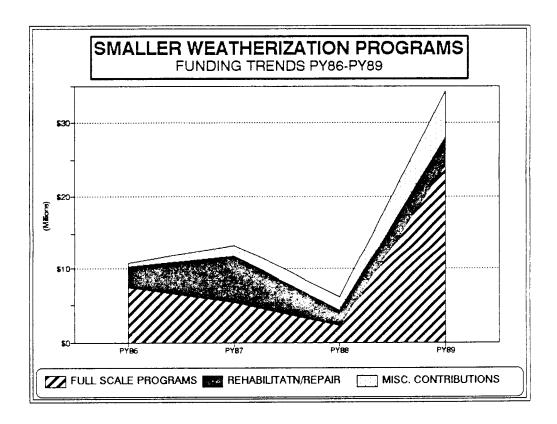
3.5.2 Other Public or Private Contributions

For the category of direct public or private contributions to the four major kinds of programs, states provided only few data and all are estimated. Just under \$11 million was reported for the twelve years. Labor and materials were the most commonly contributed. In the PY 1978-1985 period, most contributions were from federally-funded programs that flowed through state or local government. Five states from PYs 1986-1988 and 6 in PY 1989 reported having such contributing sources. The major funding sources in PY 1988 and PY 1989 were utility and landlord contributions. The latter increased exponentially from PY 1987 through PY 1989, with 88 percent of the large total increase in PY 1989 due to the growth of New York's program of landlord contributions. As a result, PY 1989 funding represented nearly 57 percent of all contributions ever reported in this category and one percent of all PY 1989 weatherization resources. All contributions were in the two colder regions and all states that reported them were combining these resources with the DOE/WAP or HHS/WX programs.

Figure 3.4 shows other full-scale programs, together with housing repair programs and miscellaneous contributions in the later part of the period. Taken together, 17 states had reported having one or more such programs in the twelve year period. Fifteen of them had full-scale and/or repair programs. By PY 1989, 13 had one or more initiatives underway. The sharp

upswing in resources in PY 1989 is due to just two state programs' growth; the North Carolina Housing Partnership program reported as a full-scale "other" weatherization initiative and New York's landloid contributions to DOE and HHS units.

Fig. 3.4:



Appendix D contains an annotated list of PY 1989 non-federal initiatives for those wishing to obtain further information on their operations and applicability in other states. Appendix Table A-1 shows the annual funding and unit totals for three kinds of these non-federal initiatives described in this chapter.

CHAPTER 4: THE SCOPE OF THE SOURCES OF FUNDING: A CLOSER LOOK

As the preceding chapter examined the nature and scope of weatherization programs, this one reviews, in detail, the trends in sources of funding that were used, generally in combination, for those four major program categories. Appendix Table A-2 displays the detailed data.

4.1 DOE-Appropriated Funding

DOE-appropriated funding was, by law, used only in the category of program designated Weatherization under DOE/WAP rules. DOE appropriations over the entire period ranged from \$66 million in PY 1978 to \$161 million in PY 1989, with a high of \$245 million in PY 1983. From PY 1984 to 1986, funding remained near \$190 million in nominal dollars and then dropped to \$162 million for the last three years of the study period. Figure 2.4 above showed these trends.

4.2 LIHEAP Block Grant Funding

LIHEAP funding, or monies appropriated to states by formula grant from the LIHEAP Block Grant, could be used for a broader range of conservation activities for the same eligible clients, with considerable latitude to the states to design these programs. Funds reported in this category are 18 percent less than HHS reports show for the same period. However, LIHEAP permits use of such funds for conservation measures not included in the full-scale programs, which doubtless accounts for the discrepancy. Less than 15 percent of the shortfall is accounted for by the non-responding states' share.

These LIHEAP funds made up about 28 percent of all funding and 63 percent of this amount was reported to have been used according to DOE program regulations while just 37 percent was expended under the HHS/WX programs described above.

4.3 **PVE Funding**

PVE or oil overcharge funds amounted to \$627 million and accounted for just under 15 percent of all Weatherization resources in the twelve years, but for a much greater proportion in the later years. Funding pursuant to the *Exxon* decision, the source of most PVE Weatherization, was only released to states in 1986-87. Nearly 90 percent of these funds were used under DOE rules.

While LIHEAP statutory restrictions on using no more than 15 percent of funds for weatherization limit the amount of PVE that could be put into the HHS/WX programs, \$960 million from PY 1986 - PY 1989 could, theoretically, have been used under the more flexible HHS/WX rules, while only \$66 million was. Of course, many LIHEAP programs combined PVE and LIHEAP funds and spent them according to DOE regulations. These PVE weatherization figures are lower than previous estimates for the period (National Consumer Law Center, Washington, D.C., 1990). There has been no previous full report on the actual expenditure of

PVE dollars committed to both DOE/WAP and HHS/WX uses; previous reports reflected commitments of funds which may have extended beyond PY 1989.9

A very small portion of the PVE funds were committed to the other full-scale programs reported by states or categorized as "contributions" to the DOE/WAP.

4.4 Utilities Funding

Utility programs provided \$416 million in the full-scale utility-based programs and an additional \$2 million in contributions reported to DOE/WAP or HHS/WX programs. Miscellaneous contributions totalling \$76.6 million were reported not to be a part of full-scale programs. They are factored into the analysis of expanded resources in Chapter 5 below.

4.5 State Funding

State contributions to the programs, other than the PVE funding states chose to allot, fluctuated through the decade. Of the \$102.7 million total, 31 percent was used to add funding to DOE/WAP, less than 1 percent was used for HHS/WX programs and the balance was in the full-scale Other Weatherization and housing repair programs described above.

Fifteen states made contributions at one or more of the time periods studied. By PY 1989, just 9 states were investing appropriated funds in weatherization. It is important to note that of the \$102.7 million reported in twelve years from State sources, 53 percent came from just two states (Michigan and North Carolina) and another 37 percent came from four other states (Massachusetts, Minnesota, Alaska and Ohio). Of these six, only two still had state programs in PY 1989.

4.6 Other Funding

Together, housing repair programs not funded by state sources, other public funding and other private funds totalled just \$33.8 million over the study period, or less than 1 percent. The "other public" monies were primarily expended in PY 1978-85 period out of carryover from the Community Services Administration funds and 1983 "Jobs Bill" programs. The housing repair and rehabilitation funds which are not state-appropriated are largely CDBG and FmHA monies. The other private funding came from a small range of sources such as landlord contributions. These were discussed above in subsection 3.5.2 on contributing programs.

CHAPTER 5: DOE/WAP EXPANSION

This section explores the proportion of resources other than DOE/WAP appropriated monies used to expand the scope of the weatherization activities. The terms "leveraging" or "leveraged resources" have no single or clear meaning as commonly used in connection with federal programs. They imply a certain causality. This section refers to the availability of non-DOE funds as "expansion" instead.

A loose definition of expanded resources is the amount of additional funding devoted to an activity beyond the core funding. By that standard, the 51 state DOE programs appropriated funding of \$1.97 billion spent through PY 1989 has been expanded by more than \$2.5 billion. This takes into account funding from all sources spent on the households eligible for DOE/WAP programs for purposes similar to DOE/WAP's. This funding includes the \$76.6 million from miscellaneous low-income household benefits reported by utilities, primarily in California, 10 the majority of which were not broken down by program year. However, we know that 23 percent of all full-scale resources and all miscellaneous utility contributions have little or no administrative connection to DOE/WAP state or local programs.

A stricter definition would consider expanded resources to be only those which the program actively caused through its influence, or "leverage," to be added to its own resources. Theoretically, the existence and nature of the DOE program may have inspired either the genesis or the form of the three other kinds of programs. Few states, however, responded to the section of the survey asking if they attributed non-WAP resources in that state to the existence of DOE/WAP. Thus, with the exception of housing rehabilitation programs and smaller contributions that are directly coordinated with DOE/WAP local programs, it is impossible to determine what resources DOE "caused" to be leveraged.

However, states did report that at least 272,000 units of housing completed with resources of "other" HHS/WX or state programs were also simultaneously recipients of DOE/WAP weatherization. Utility programs also had some of these combination units. Some proportion of weatherization completions and resources in each program category were clearly related to DOE/WAP investments. However, amounts spent on these units cannot be determined. Two alternative definitions of expanded or leveraged resources are explored below.

The definition of leveraged funds used in the DOE/WAP authorization legislation of 1990, e.g., non-federal funds used for weatherization, suggests an alternate guideline for enumerating expanded resources. If non-federal weatherization resources are considered, the DOE funds associated with them can alternatively be counted a) as all states' DOE-appropriated expenditures, or b) as just the expenditures in the states which could also report on the expanded resources. None is identical to the statutory definition which counts only the resources which expand DOE/WAP itself.

In all these examples, PVE funds are treated as federal funds because of the limited federal purpose for which these monies were available. Arguably, PVE had state funds'

character because states made final disposition of their uses, but the stricter test is shown below. Figures 5.1.a, b and c display all three ways of considering the data.

In Figure 5.1.a for every DOE dollar, \$1.27 was available from all other monies, in 5.1.b, matching all DOE with all non-federal Weatherization, \$0.32 was raised per DOE dollar and in 5.1.c, counting DOE funds only in the states that did use non-federal funds, \$0.52 was generated per DOE dollar.

Fig. 5.1.a

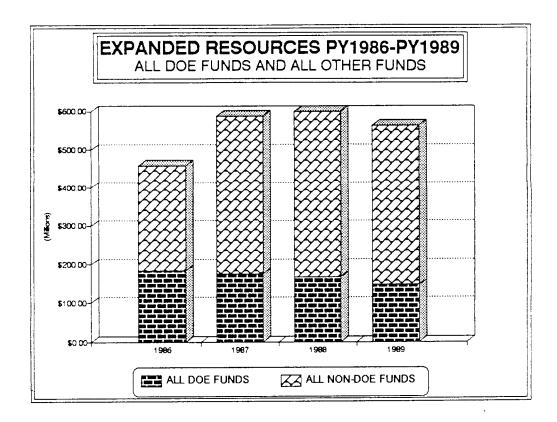


Fig. 5.1.b

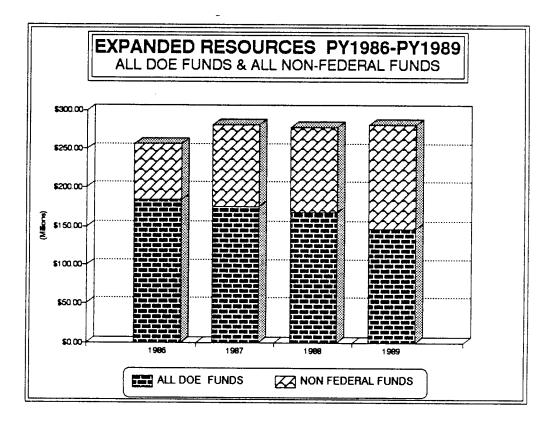
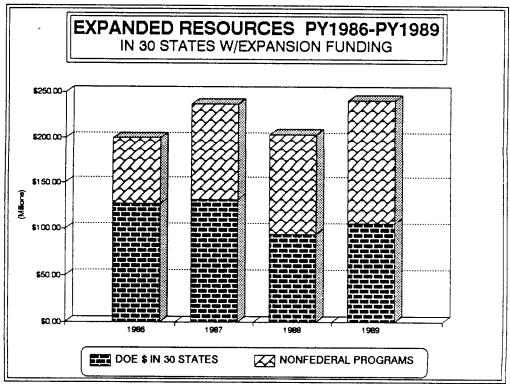


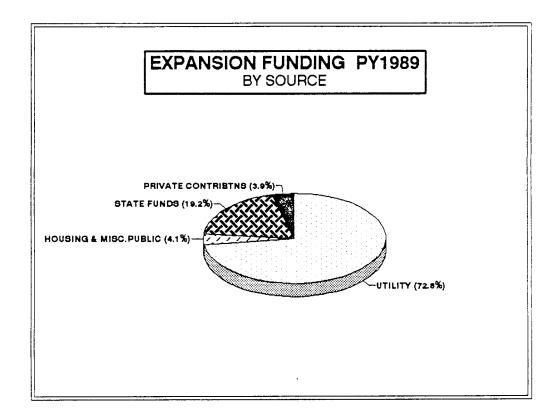
Fig. 5.1.c



The pattern of sources of expansion funding in PY 1989 is substantially different from the 12 year pattern and the pattern in the earliest period. Figure 5.2 shows a detailed breakdown of non-federal resources in PY 1989, totalling \$128 million. Utilities, largely those in California, provided the most significant resource or 72 percent of non-federal funds. The sharp increase in state and private contributions over the long-term average is due to the dramatic increases in two states' programs.

From PY 1978 - PY 1985, all non-federal funding was just over 8 percent of all resources, compared to 21 percent in PY 1989.

Fig. 5.2:



CHAPTER 6: THE CHARACTERISTICS OF WEATHERIZED HOUSEHOLDS AND THE NUMBERS SERVED

6.1 Number of Households

The survey respondents reported that 3,895,000 units were weatherized during the PY 1978 - PY 1989 interval. This unduplicated count corresponds to \$4.272 billion expended. Responses that did not report both data items were excluded; of the \$90 million for which no unit completion figures were available, \$27 million was in HHS/WX programs, \$15 million in utility programs and over half was from the smaller programs of "other" weatherization housing repair and contributions.

The process used to arrive at an unduplicated count of units completed involved asking respondents to identify the number of units completed by the program on which they were currently reporting in which funding from programs previously reported was used. Units each program reported as having two or more funding sources, were removed from the second program reporting such duplication. This results in undercounting units completed by the HHS/WX and utility programs. Utility units probably received investments as high or higher from DOE resources as from the utility. The HHS/WX may instead have contributed as much as or more than DOE/WAP, as the average costs were similar for both programs. While HHS/WX may have been denied some credit due in the analysis below that assigns units to programs, the result is a more accurate total of all weatherized units.

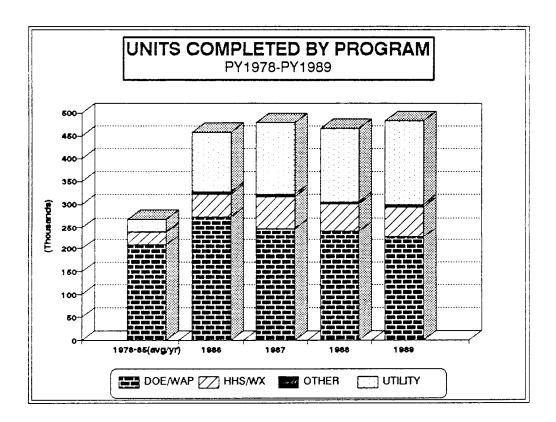
The reported completions are an approximation, but it is not possible to estimate whether the total is high or low because some data sets were biased to undercounting and others to overcounting. Utility unduplicated completions reported were, as noted above, felt to be too high by some state managers. Some large utility programs could not provide any completion totals for the PY 1978 - PY 1985 period, which would lead to an undercount. Most of the funding reported for "other" state and local programs of weatherization could not be associated with completion totals. Some states and utilities did not respond at all and the DOE/WAP completion data available for these states may be an incomplete count of all weatherization. As estimates from respondents were not forthcoming, it is not possible to produce valid alternative estimates of unreported or over-reported completions.

To put these figures in perspective, the statistics published by the American Housing Survey (AHS) reported a total of 90.89 millon housing units were occupied nationwide in 1987. This means that low-income weatherization resources covered in the utility and state surveys have been applied to slightly more than 4.2 percent of the total U.S. occupied housing stock. Of these weatherized units, 2.65 million, representing 2.3 percent, are units completed under the DOE/WAP rules. The figures on completed units are far less reliable than the reported funding totals. More than 20 percent of the units, or 862,648, were reported by utilities as "unduplicated" units -- e.g., those not counted by other programs as a completed unit; interviews found that most utility programs could not verify such conclusions. For both funding and unit completions, only 7 percent of the data were reported to be estimates. However, the level of uncertainty rose to

close to 20 percent as utility respondents sought to estimate how many units of housing might have received resources financed by more than one federal program.

Figure 6.1 shows the units for the entire PY 1978 - PY 1989 time period arranged by the principal program which funded their weatherization services.

Fig. 6.1:



Clearly the state programs administered under DOE/WAP rules dominate the production of units. This dominance is a result of DOE/WAP being both the largest program and the only program which had consistent, nationally-uniform reporting requirements for the entire twelve-year period. However, the utility full-scale programs account for 22 percent of the units reported even though utility expenditures are just 9 percent of the cumulative total. This reflects the considerably lower average utility investment per unit compared to other programs' expenditures.

The total of weatherized units, as reported, should not be compared to the total of 21.35 million units occupied by households below 150 percent of the poverty level to reach the simple conclusion that 18 percent of the eligible households had been recipients of weatherization services by PY 1989. There are two major variables which would invalidate such a calculation.

First, the physical mobility of the poor means the housing stock weatherized and the low-income population may not always match. The AHS reports that of all households below 150 percent of the poverty level, 4.741 million, or 22 percent, moved in the past year. For households below the poverty level itself "movers" represented over 25 percent of all households. Of these "movers", just 10 percent were originally owner-occupants and the rest were renters. Thus, a bias to owner-occupied households may be a bias to units with low turnover.

Without knowing the rate at which weatherized low-income households are moving, what kind of units they are moving into, and whether they are being replaced by other low-income households in the weatherized housing stock, it is impossible to know what proportion of the low-income housing stock remains to be weatherized.

Second, the income mobility of the low-income population means households that qualify for, and receive, low-income weatherization services may not remain qualified over many years. Indeed, the best available longitudinal statistics indicate that, over time, a large proportion of the poverty population moves up and out of poverty, often replaced in the poverty statistics by households whose income slid in the other direction.

The Michigan Panel Studies, (Duncan, 1984), a major longitudinal study of income and poverty, indicated that, over a six-year period, only one in four low-income families remained poor for the entire period. Over 25 percent of the population was below the poverty level for at least one year out of six. Thus, a household that received weatherization assistance may remain in its weatherized dwelling, experience an increase in income, and fall out of the qualified population. We do not know the proportion of the 3.9 million weatherized households for which this has been the outcome. Therefore, no meaningful conclusions can be drawn from available published data about the pool of households still in need of weatherization services.

6.2 Types of Homes

The data available from the utility and state surveys regarding the characteristics of weatherized households is extremely limited and consists largely of the information reported to the Department of Energy, regarding housing tenure, or type of occupancy, and size. Limited information describing 2.84 million weatherized households by tenure was provided, representing 74 percent of all weatherized households reported in the survey.¹¹

Only DOE, HHS/WX, and utilities were able to report on the number and type of weatherized units. Other types of programs, whose units represent less than 1 percent of all reported completions, were not asked for such data. The tenure and square footage of the units could only be reported fully for 95 percent of DOE/WAP and just over 60 percent of HHS/WX and 15 percent of utility programs. Even these reports represent estimates in about 20 percent of the units in HHS/WX and 51 percent of the units in utility-reported programs. Therefore, in this section tenure and size data is merely suggestive, especially in the utility sector, and would not be an appropriate basis for policy decisions.

Within the total of 2.84 million households with identified characteristics, 2.27 million, or 80 percent, were living in single-family dwellings. Of this group, approximately 77 percent, or 62 percent of all weatherized households, were living in houses that they owned and 23 percent were renters at the time that weatherization occurred.

Among the population of all renters, 567,000 households or 20 percent of weatherized households, were living in multifamily dwellings. The combined total of renting households, in both single and multifamily dwellings, was 1.08 million, or 38.2 percent of the total weatherized.

The scarcity of descriptive data from the surveys is matched by limited statistics published regarding the population eligible under current eligibility standards for DOE or HHS weatherization. The 21.35 million households living below 150 percent of the OMB poverty level in 1987, though not a precise match, roughly match the DOE/HHS eligibility standards. It provides the basis upon which to draw some "rule-of-thumb" conclusions about the households weatherized as compared to the eligible low-income population at large.

The AHS reported that 11.759 million units, or 55.1 percent of those occupied by households below 150 percent of the poverty level, were rental units. This compares to 38 percent of the weatherized households for which rental tenure was reported in the state and utility surveys.

Owner households comprise 44.9 percent of the units occupied by households below 150 percent of the poverty level in the AHS. The 1.75 million single-family owner households weatherized represent 61.5 percent of the total reported completions over the twelve-year study period. Clearly, the data lead to the conclusion that owner households are somewhat over-represented in the pool of weatherized households as compared to their share of the population as a whole. Concomitantly, 55.1 percent of the units eligible were rentals compared to 38 percent of weatherized units reported.

The major difference among program types was the higher rate of utility multifamily weatherization compared to DOE and HHS programs. By PY 1989, all types of programs were weatherizing nearly equal numbers of rental and owner-occupied units, a considerable change from the PY 1978 - PY 1985 period when nearly 65 percent of weatherizations were in owner-occupied units.

The AHS does shed some additional light on the characteristics of the eligible population. Approximately 3.19 million households report moderate to severe physical problems with their dwellings. Furthermore, of the households below the 150 percent-of-poverty threshold, some 7.33 million or 34 percent, include an elderly person. This compares to 21 percent of households for the population as a whole who are elderly. In a similar vein, 21.6 percent of the low-income households are African-American, though African-Americans represent only 11.3 percent of the total population.

Statistics that describe the weatherized households in a similar way will only be available for Phase II of this study.

Figure 6.2 shows the types of units weatherized in the major programs in the most recent years, PY 1986 - PY 1989. As noted above, DOE/WAP units are overstated because HHS/WX and utilities collected data on smaller proportions of their completions. Only a minority of DOE/WAP programs collected mobile home data. DOE units represent 64 percent of all units shown here.

Figure 6.2 shows that 64.3 percent of completions were single-family homes (including mobile homes), of which over three quarters were owner-occupied. Rental units comprise nearly 43 percent of all completions.

Fig. 6.2:

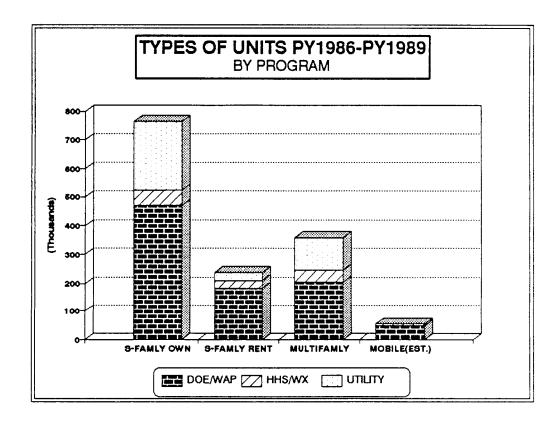


Figure 6.2 illustrates that there are differences between utility reported weatherization and the large federal/state programs. Nearly 30 percent of utility completions were in units utilities designated multifamily units, while 23 percent of DOE units fell in that category.

Table 6.1 shows the detail for the peak production year PY 1989, when these patterns were changing. Clearly DOE/WAP and HHS/WX were increasingly serving rental units.

Table 6.1
Types of Housing Units Completed
By Program PY 1989

Program	S. Family Owned	S. Family Rented	Multifamily	Mobile
DOE	52 %	20 %	21 %	6%
HHS/WX	30 %	19 %	46 %	4%
UTILITY	66 % *	12 %	29 %	

* This figure includes all BPA single-family homes as those were not broken down by rent/own, but unquestionably many of those were rentals and should be in the center column. The single-family category for utilities includes homes in California with up to four units each. These would be called multifamily in the DOE program.

6.3 Average Expenditures

While this report deals with a narrow range of full-scale Weatherization activities, it is clear that all the completions and programs are not the same. A crude measure of similarities is the average expenditures, although national averages over a decade do not reflect the real expenditures of individual state programs.

As an eleven year average, DOE/WAP invested \$1,057 per unit and HHS/WX invested \$1,095 while utilities invested \$446 in the units they reported. In 1989, the comparable figures were: DOE \$1,401, HHS/WX \$994, Utilities \$389. As a quarter of a million units could, at a minimum be verified as having multiple funding sources, it is helpful to realize that individual units may have had a combination of these investment levels. Table 6.2 shows the average amounts of funding for units weatherized by multiple funding sources over all years and in 1989. Expenditures were weighted averages that reflect the number of completions in each program reporting average costs for combination units.

Table 6.2
Weighted Average Expenditures: Units With Multiple Funding Sources

	1978-1989	1989
HHS/WX and DOE	\$2696	\$3214
UTILITY and WAP	\$2066	a
OTHER and WAP	\$2327	\$2716

^aNo data available for this combination.

This indicates that the use of national totals and averages masks a wide variety of investments and levels of weatherization. The utility/WAP combination, for example, underscores the relatively lower investment by utility programs. Expectations of energy savings should vary as program inputs are more closely defined.

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CHAPTER 7: REGIONAL FACTORS AFFECTING THE SCOPE OF WEATHERIZATION

7.1 The Climate Regions

For purposes of the other four studies that form the DOE/WAP evaluations the U.S. was divided into three major climate zones: (1) the northern tier, cold states that are cold with minimal summer cooling load; (2) the middle tier moderate climate zone which has both significant heating and cooling energy usage; and (3) the southern tier of generally warm climate states with some heating, and substantial cooling. California, in the analytic scheme for the WAP evaluation, was divided into two climate zones (Beschen and Brown, 1991). The analyses below differ in that they consider California as a separate region, since all California data provided are statewide. This chapter's analysis also includes Alaska in the coldest region and Hawaii in the warmest.

For this portion of the study, several factors are examined to see if these climate regions coincide with clear programmatic differences. The subsequent portions will examine census regions and more detailed demographic, energy consumption and housing characteristics.

No data are yet available on the WAP-eligible population by these regions, but state-by-state analysis (Economic Opportunity Research Institute and the Grier Partnership, Villers Advocacy, Washington, D.C., 1988) of the population at 125 percent of OMB poverty suggests the following distribution of low-income households among them:

Table 7.1
1986 Households at 125% Poverty Level
Percent by Climate Region

Cold	10%	
Moderate	46%	
Hot	34%	
California	10%	

From <u>Double Jeopardy</u>, Villers Advocacy, Washington, D.C., 1988

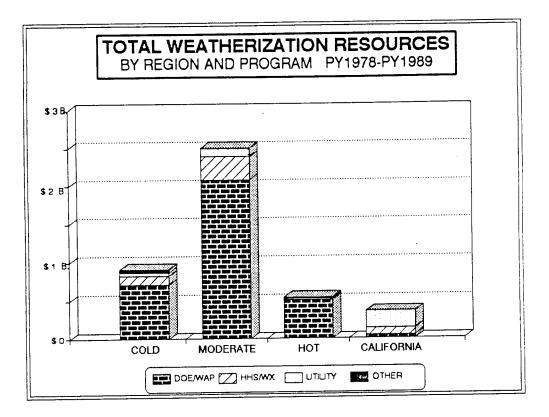
These figures in Table 7.1 are the same as the DOE/WAP eligible population through 1986, when potential eligibility was expanded to the current criterion of 150 percent of poverty. The population in question is smaller than the LIHEAP-eligible population, whose distribution among regions may be different.¹³

Appendix Table A-5 shows the summary results on expenditures and unit types arranged by region. A map of the regions is attached to Table A-5.

7.2 Funding

Clearly there are regional differences, although the causes cannot be inferred from the available data. Figure 7.1 shows total expenditures for PY 1978 to PY 1989 by region as a percentage of the national twelve year totals. The moderate region contains nearly half the states including the populous Northeast and Midwest states. It also had 58 percent of all funding. The cold region raised over 33 percent of the amount of funding that was in the moderate climate region; the moderate region, however, has over four times the low-income population of the coldest region. The hot region had a third of all estimated eligible households, but just 13 percent of all funding.

Fig. 7.1:



A good deal can be explained by examining the regional pattern of sources of funding in the later period PY 1986 - PY 1989.

The hot region lost all significant utility investment with the end of the Tennessee Valley Authority Program in 1988. Since utility-based programs vary with PUCs mandates, the absence of hot region states from the list of states with mandates is consistent with the figures on

programs. On the other hand, this region had disproportionately large investments of another kind by PY 1989: 90 percent of all full-scale weatherization programs that were not DOE, HHS/WX, or utility-based were in the hot region. As discussed in section 3.5 on Contributing Resources above, all private contributions to programs were made in the two colder regions. State-funded weatherization and housing rehabilitation/weatherization programs were located in a few southern states in PY 1989.

California's "regional" results are dominated by the 63 percent of its funds that came from utility-based programs. California was also unique in that 25 percent of all its resources were spent through HHS/WX.

7.3 Units Weatherized

Figure 7.2 shows the weatherized units by region. The distribution of completions varies considerably from the funding distribution. This reflects the lower levels of investment per dwelling in both federal and utility programs in the hot region and California.

Fig. 7.2:

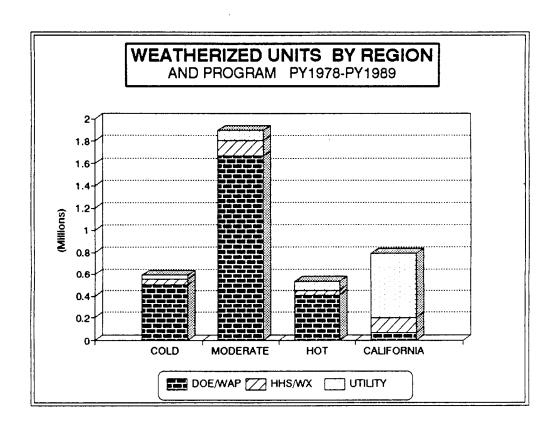


Table 7.2 shows each region's contribution to the national programs. The moderate region had the majority of units weatherized in the DOE/WAP, and therefore half of all reported completions. Seventy-three percent of all utility-weatherized units in the U.S. are in California

and represent 15 percent of all units weatherized; as shown above, average investments in these units are considerably lower than in DOE/WAP and HHS/WX programs. The hot region has the same share of utility-weatherized units as the much larger moderate climate region, but virtually all of them are in one state, Tennessee, and these were weatherized at an average cost of \$125.

Table 7.2
Units Completed As A Percentage of Program
By Region PY 1978 - PY 1989

Unduplicated Units by Region	All Regions	Coldest	Moderate	Hot	California
Total Units	100%	16%	50%	14%	21%
DOE Units	100%	19%	63%	16%	3%
HHS/WX Units	100%	15%	38%	11%	36%
Utility Units	100%	5%	11%	10%	73%
Other	100%	43%	47%	11%	0%

The figures for weatherization completions in "other", predominantly state-funded, full-scale programs are skewed by the inability of the more recent hot-region programs to report any completions to match their proportionately high expenditures.

Variables like the funding formulas of DOE and LIHEAP, the rules governing utility investments, and the lack of data on the number of eligible units make it difficult to draw any policy conclusions or determine where opportunity exists on a regional basis. Phase II will refine and explain these phenomena, based on smaller geographic divisions.

CHAPTER 8: CONCLUSIONS

The DOE/WAP program is the largest single source of low-income weatherization expenditures in the United States. In addition, its policies and regulations are even more dominant in shaping the nation's low-income weatherization activities. As a result, the scope of low-income weatherization programs considerably exceeds the range of activities of the state programs administered as the DOE/WAP.

The 3.9 million low-income units weatherized over the program years 1978 - 1989 represent completion of a significant, though uncertain, percentage of the contemporary low-income housing stock, including an especially large portion of the single-family units in low-income occupancy. However, over 20 percent of these 3.9 million completions represent units weatherized exclusively by utility-based programs in a few states at significantly lower expenditure levels and fewer improvements than the public sector programs provide.

Over the twelve-year period, DOE/WAP appropriations decreased, while PVE, utility, and LIHEAP funding increased. However, DOE's rules determined the way most of those monies were used. The trend at the end of the study period was downward for total funding (particularly after correcting for inflation). Thus, it is unlikely that the PY 1989 levels of \$553 million and 455 thousand weatherized units in all programs will be sustained.

For every <u>DOE/WAP</u> dollar spent over the twelve-year period, an additional \$0.32 was spent on low-income weatherization by non-federal sources. For every <u>federal</u> dollar (DOE/WAP + LIHEAP + PVE) spent on low-income weatherization, an additional \$0.15 was spent on low-income weatherization by non-federal sources. Although the magnitude of this resource leveraging is significant, it represents state and utility expenditures concentrated in a few states. Any expectations of a nationwide flow of utility weatherization contributions to, or similar to, DOE/WAP are not based on historical experience.

There is experience in running large utility and state programs for new initiatives to draw on, but not from a wide variety of locations. Utility programs are in states where low-income weatherization program scope and goals are mandated by regulatory bodies based on energy demand factors in their respective states. Therefore, they may not be comparable to DOE/WAP. In contrast, growing numbers of states instituted programs for housing repair and for collecting private contributions in the last two years of the study, perhaps indicating a new trend.

Comparison between this study and the first portion of the WAP evaluation (Mihlmester, et al., 1992) shows that the state and utility managers who provided these data have not always been informed about local and private programs with initiatives in energy conservation. This means the local non-federal investment in weatherization may well be understated in this review. It also suggests that developing integrated and targeted expansion of weatherization resources will require greater coordination and communication among all providers in the system.

Finally, the study documents that the policies and regulations of DOE's program have been the filter through which funding and public policies for low-income energy conservation have flowed. The design of the DOE program federally and in the states will significantly influence how any expanded resource base will be targeted to eligible households. DOE/WAP rules are likely to be adopted for most public sector weatherization resources: thus, they will likely affect the extent to which utility and housing programs can be integrated with WAP activities.

ENDNOTES

- 1. Low Income Home Energy Assistance Program Report to Congress, U.S. Dept. of Health & Human Services, Washington, D.C. See Reports for FY 1982 through FY 1989 inclusive.
- 2. The Department of Energy's Energy Information Administration (EIA) data included all of the utilities whether invest-owned, cooperative or municipal on a state by state basis. Using these data bases NASCSP added the number of residents served in each state by the investor-owned electric and gas companies and then multiplied the resulting number by 75 percent. Surveys were sent to the largest utilities in that state whose residential customers totaled that 75 percent or above of all electric or gas residential customers.

The lists provided by DOE were checked against lists provided by Edison Electric Institute and American Gas Association to insure that utilities serving large residential populations were not overlooked. Names of contacts in the utilities were generated through EEI, AGA and the National Rural Electric Cooperative Association. Where a contact was not provided by AGA, EEI or NRECA, Electrical World Director of Utilities: 1991 and Brown's Directory of North American and International Gas Companies were used.

Municipal gas and electric utilities surveyed were the largest in the state. The same applies to electrical co-ops. The Tennessee Valley Authority and Bonneville Power Authority were also surveyed.

Efforts were made to include all utilities under state PUC mandate. Extensive NASCSP interviewing produced a list of PUC-mandated programs. This included all electric utilities plus the National Fuel Gas and Brooklyn Union Gas Companies of New York, gas and electric utilities in New Jersey, California, Massachusetts, Wisconsin, and Pennsylvania. Additional utilities were surveyed in Michigan and Ohio. Conservation programs were not mandated in these last two states but the PUC had approved conservation programs in a number of the utilities.

Utilities that had been mentioned in national and utility reports as having low-income weatherization programs were also surveyed. This resulted in many co-ops and municipalities in Georgia being surveyed.

Additionally, any utility mentioned in NASCSP's survey of the State WAP Managers was sent a follow-up survey and follow-up calls were made to elicit a response.

3. NASCSP interviewed PUC staff in the following states based on a review of the literature on utility weatherization and the advice from experts serving on ORNL's working groups:

California, Wisconsin, Pennsylvania, Minnesota, Ohio, New York, Iowa, Massachusetts, Illinois and Michigan. In addition, TVA and BPA staff were interviewed extensively.

4. The utility sections of the State Managers Survey were merged with the Utility Survey results for the corresponding time period. If state managers reported data for a utility which had responded to the full-scale program section of the utility survey, the response with the most complete data set was selected and the other report dropped. If responses conflicted, both respondents were interviewed, but this occurred in only two cases in all years, one of which involved less than 500 units. Both were resolved.

State managers generally did not have access to full utility program data, so most data on utility programs originates with utilities. State managers' assistance was solicited in unduplicating utility reports in overlapping service territories. This task was especially complex in the BPA service area.

- 5. At meetings of state WAP managers in Little Rock, Arkansas, October 2, 1991, those issues were listed and explored in detail. NASCSP has conducted follow-up interviews to clarify points raised. Among those participating were WAP directors from Washington, New York, Ohio, Arkansas and North Carolina. Follow-up interviews were conducted with directors from Washington, Colorado and Ohio.
- 6. State mangers reported more mandated programs in the PY 1978 PY 1985 period than did PUCs and utilities. This probably reflects the existence of approved programs which came into being as part of rate cases. These discrepant reports were in Massachusetts, Illinois, Minnesota, Michigan and Washington.
- 7. One additional utility (Southern Cal. Edison) was reported to have expended a total of over \$41 million in programs for low-income people which it identified by letter as belonging in the category of miscellaneous additional resources. Because the utility and California PUC reports vary widely on the size and timing of these expenditures the total is included in the expanded resources described in Chapter 5 below but not in the fiscal information in this section. The total of these reports from all utilities equalled \$76.6 million over the twelve years. There was no way to determine an unduplicated number of households served.
- 8. These were Maine, Georgia and Ohio. Florida, Washington and Wyoming reported small numbers of mixed units in a few program years.
- 9. Status Report #7: State Uses of Oil Overcharge Funds, National Consumer Law Center, Washington, D.C., July 1990.
- 10. Irreconcilable discrepancies regarding California utility programs persisted after over a dozen interviews with the state WAP manager, the PUC staff and the three largest utilities involved. Seven utilities reported \$260 million in expenditures on the NASCSP survey. (One (So. Cal. Edison) used a letter format.) Those seven and one additional small utility

reported \$241 million to the California PUC for the same period. These reports included \$17 million more in low-income weatherization expenditures by So. Cal. Edison than were reported to NASCSP. A letter to NASCSP from Mr. Long, California PUC (11/19/90) suggested these may have been low cost no-cost or education investments.

While all So. Cal. Edison investments were categorized as "other" or not full-scale variety at the company's suggestion, there remains a discrepancy in other utility reports. When six utilities are considered, their investments were slightly lower in PUC reports than in the NASCSP reports.

11. The following definitions of household tenure and unit type were used for the survey.

"Single-family" -- a structure that provides living space for one household or family. The structure may be detached, attached on one side (semidetached), or attached on two sides. Attached houses are considered single-family houses as long as the house itself is not divided into more than one housing unit and has an independent outside entrance. A single-family house is contained within walls that go from the basement (or the ground floor, if there is no basement) to the roof. (A mobile home with one or more rooms added is classified as a single-family home.)

"Multi-family" -- means one or more units in a building of two or more units -- a house or building with two to four units i.e. a structure that is divided into living quarters for two, three, or four families or households. This category includes houses originally intended for occupancy by one family (or for some other use) that have since been converted to separate dwellings for two or more families. Typical arrangements in these types of living quarters are separate apartments downstairs and upstairs, or one apartment on each floor. It also includes a building with five or more housing units i.e. a structure that contains living quarters for five or more households.

"Mobile Home" -- a structure that has all the facilities of a dwelling unit but is built on a movable chassis. It may be placed on a permanent or temporary foundation and may contain one room or more. If rooms are added to the structure, it is considered a single-family housing unit.

"Owned/Rented: -- the relationship of the occupants of a housing unit to the structure itself, not to the land on which the structure is located. "Owned" means the owner or co-owner is a member of the household. The housing unit is considered owned if it is mortgaged and not fully paid for. A household is classified "rented" even if the rent is paid by someone not living in the unit.

12. In California, the largest program, Pacific Gas and Electric, counts all buildings of four units or less as "single-family."

13. In its Report to Congress FY 1989, op. cit., the HHS estimated 17.4 million households to be at 125 percent of poverty level and 25.2 million households at the higher income ceiling for LIHEAP eligibility.

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APPENDIX A NATIONAL TOTALS, COMBINED SURVEYS

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A-1 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM

TOTAL FUNDING BY PROGRAMS						
	1978 - 1989	1978-1985	1986	1987	1988	1989
	ALL-YEAR SUM	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
IOIAL FUNDING	\$4,364,252,972	\$2,174,602,211	\$460,150,577	\$587,352,318	\$589,176,623	\$552,971,243
DOE/WAP (under DOE rules)	\$3,340,393,515	\$1,795,024,856	\$358 107 619	€408 384 ED7		
HHS/WX (not under DOE rules)	\$519,727,026	\$229.819.672	\$42 150 560	406,304,324	\$390,920,636 \$100,004,500	\$3/8/835/664
Utility Full-Scale Weatherization	\$416,887,719	\$127,421,750	\$49,046,134	\$79.823.158	\$100,824,583	\$61,305,823 \$77,421,574
						+ 10'1 NF'1 A
Other Full-Scale Weatherization	\$59,158,047	\$19,733,387	\$7,448,654	\$5,345,473	\$2,324,512	\$24.306.021
Housing Repair/Rehab Programs	\$17,118,957	\$1,869,666	\$2,855,239	\$6,517,532	\$2,066,014	£3,810,506
Other Hesources w/ Weatherization	\$10,967,708	\$732,880	\$522,378	\$1,655,240	\$1,865,555	\$6,191,655
PROGRAM TOTALS AS PERCENTAGES OF TOTAL	S OF TOTAL					
	1978 - 1989	1978-1985	1986	1987	1988	1989
CHICATOR	% ALL-YR SUM	% TOTAL	% TOTAL	% TOTAL	% TOTAL	% TOTAL
IOIAL FUNDING	\$4,364,252,972	\$2,174,602,211	\$460,150,577	\$587,352,318	\$589,176,623	\$552,971,243
DOE/WAP (under DOE rules)	76.54%	82.54%	77.83%	69 53%	E7 710/) O 7 10/
HHS/WX (not under DOE rules)	11.91%	10.57%	2000	44 5000	01.7.1%	00.71%
Utility Full-Scale Weatherization	0 55%) (S) (S)	0.10%	14.38%	17.11%	11.09%
	9.00%	%08°C	10.66%	13.59%	14.12%	14.00%
Other Full-Scale Weatherization	1.36%	0.91%	1.62%	0.91%	0.39%	4 40%
nousing Repair/Henab Programs	0.39%	%60 :0	0.62%	1.11%	0.35%	%69.0
Other Resources w/ Weatherization	0.25%	0.03%	0.11%	0.28%	0.32%	1.12%
UNDUPLICATED TOTAL UNITS REPORTED	RTED					
	1978 - 1989	1978-1985	1986	1987	1988	1989
	ALL-YEAR SUM	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
IOIAL UNDUPLICATED	3,895,131	2,109,812	437,217	453,258	439,688	455,156
DOEWAP	2,653,997	1,664,369	272,383	247,652	241.921	227.672
XW/SHH	362,643	206,961	20,667	45,725	36.397	42 893
Utility Full-Scale Weatherization	862,648	232,134	131,096	157,242	159,903	182 273
Other Full-Scale Weatherization	15,843	6,348	3,071	2,639	1,467	2.318

A-2 FUNDING BY SOURCE

FUNDING SOURCES	1978 - 1989 ALL-YEAR SUM	1978-1985 TOTAL	1986 TOTAL	1987 TOTAL	1988 TOTAL	1989 TOTAL	
TOTAL EXPENDITURES	\$4,364,252,262	\$2,174,602,211	\$460,150,577	\$587,349,018	\$589,176,282	\$552,974,174	
DOE LIHEAP PVE Utility State	\$1,967,223,194 \$1,215,130,254 \$627,365,333 \$418,067,133 \$102,675,685	\$1,291,405,239 \$656,243,496 \$37,651,698 \$127,421,750 \$42,523,317	\$184,399,032 \$151,345,009 \$61,851,931 \$49,046,134 \$13,040,392	\$175,809,431 \$170,916,520 \$145,100,440 \$80,270,158 \$13,362,957	\$168,349,813 \$121,381,282 \$207,643,736 \$83,615,103 \$7,147,509	\$147,259,679 \$115,243,947 \$175,117,528 \$77,713,988 \$26,601,510	
Housing Repair/Rehabilitation	\$6,424,649	\$1,869,666	\$445,701	\$1,700,048	\$443,017	\$1,966,217	
Other - Private Other - Public	\$6,659,454 \$20,706,560	\$732,880 \$16,754,165	\$22,378 \$0	\$189,464 \$0	\$352,822 \$243,000	\$5,361,910 \$3,709,395	
FUNDING SOURCES AS PERCENTAGES OF TOTAL 1978 - 1988 AS % TOTAI TOTAL EXPENDITURES \$4,364,252,263	3ES OF TOTAL 1978 - 1989 AS % TOTAL \$4,364,252,262	1978-1985 AS % TOTAL \$2,174,602,211	1986 AS % TOTAL \$460,150,577	1987 AS % TOTAL \$587,349,018	1988 AS % TOTAL \$589,176,282	1989 AS % TOTAL \$552,974,174	
DOE LIHEAP PVE	45.1% 27.8% 14.4%	59.4% 30.2% 1.7%	40.1% 32.9% 13.4%	29.9% 29.1% 24.7%	28.6% 20.6% 35.2%	26.6% 20.8% 31.7%	
Utility State	9.6%	5.9% 2.0%	10.7% 2.8%	13.7% 2.3%	14.2% 1.2%	14.1% 4.8%	
Housing Repair/Rehabilitation	0.1%	0.1%	0.1%	0.3%	0.1%	0.4%	
Other - Private Other - Public	0.2%	0.0% 0.0%	%0.0 %0.0	%0.0 %0.0	0.1%	1.0%	
							7

A-3 TYPES AND NUMBERS OF UNITS

TOTAL UNITS REPORTED						
	1978 - 1989	78-85	1986	1987	1988	1989
14104	ALL-Y	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
OALONIS	4, 127, 794	2,209,762	473,749	492,203	479,035	473,045
DOEWAP	2,653,997	1,664,369	272 383	247 652	241 001	2.00
XWSHH	427,015	225,244	40 536	57 470	126,142	2/9,122
Ctility	_	311 474	156 757	074,70	46,233	205,502
Other		8.675	75,75	182,300	185,703	185,777
		o o o	4,0,4	4,10/	3,156	4,094
UNDUPLICATED TOTAL UNITS REPORTED	VITS REPORTED					
	1978 - 1989	78-85	1986	1987	1988	1989
	ALL-Y	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
OIAL UNDUPLICATED	3,895,131	2,109,812	437,217	453,258	439,688	455,156
DOEWAP	2.653.997	1 664 369	070 989	010		
XWXHH	362 643	500'too'i	27.2,383	247,652	241,921	227,672
4111		196,902	30,667	45,725	36,397	42,893
Oding	ນ	232,134	131,096	157,242	159,903	182.273
Ghe	15,843	6,348	3,071	2,639	1,467	2,318
RESIDENCE TYPES REPORT	red					
	1978 - 1989	78-85	1986	1987	1988	1080
	ALL-YEAR SUM	TOTAL	TOTAL	TOTAL	TOTAL	TOTA
ALL RESIDENCE TYPES	2,942,918	1,522,750	317,135	332,510	322,478	448,045
Single-Fam Owner-Occ	1,756,267	990,345	191,313	169.806	159 005	245 708
Single-Fam Rental	517,090	279,193	54.132	60 728	50,003	243,730
Multi-Fam Rental	567,486	207,246	60,295	88 123	90,738	104 806
Mobile Homes	102,075	45,966	11,395	13,854	13,719	17.141
					•	

A-3 TYPES AND NUMBERS OF UNITS (continued)

		50 227,672	48 113,676	48 45,438	46 46,815	13,861	1	219,790	51.72%	20.67%	21.30%	340	5.31%				14 . 55,502	42,893	10 16,176	9 10,151		110,42	6 2,740	53,878	30.05%	18 84%	40.0E%	46.03%	5.U8%
1988 1989	# stal	241,921 5	116,884 4	47,014 4				231,225	50.55%	20.33%	24.13%	, 000	4.99%		1988 1989	TOTAL # states	48,255	36,397	14,482	5 173	6 597	100,0	1,985	28,227	51.31%	10 23%	0.00%	23.34%	7.03%
1988		51 241	49 116	49 47		17 11		231	മ്	7	5		•		. 1988	states TC	15 48	36	10 14					32	5	•	- (.V	
1987	TOTAL # sta	247,652	123,609	45,757	53,175	11,887		234,428	52.73%	19.52%	22 68%		5.07%		1987	*	57,478	45,725	15.858	6 558	0,000	4,021	1,234	27,671	57.31%	3000	23.70%	14.53%	4.46%
S) 1987	# states	51	49	49	47	17									1987	# states	17		Ŧ	. 5			9			•	.0	۰,۰	9
AP PROGRAM UNDER DOE RULES 5 78-85 1986 1986	TOTAL	272,383	116.391	45,343	49,012	10,068		220,814	52.71%	20.53%	20000	200	4.56%	(5	1986	TOTAL	40 536	30,667	9 535	0,000	4,00,1	5,716	1,157	21.345	AA 67%	X 10:44	23.13%	26.78%	5.42%
M UNDER 1986	# states	51	48	48	44				~	, ,	2 %	0	%	OE RULES	1986	*	;		α		0				. ``	,	%	%	%
• PROGR 41	TOTAL	1,664,369	864 823	247 879	187 440	42,670		1,342,812	64.40%	18 46%	10.10%	9	3.18%	UNDERD	78-85	TOTAL	205 244	206,961				13,592	2,993	126 245	10.00	73.01%	13.85%	10.77%	2.37%
DOE/WAF 78-85	# states	51	48	40	4	5 7				.	o 、	,o	, 0	ISTERED	78.85	*		•	ţ		_	_	4		_ 7	%	%	%	%
TERED BY 1978 - 1989	ALL-YEAR S	2,653,997	1 335 383	1,000,000	151,154	90,014		2,249,068	59.37%	8, 10,00	13.107	% 44%/	4.00%	OT ADMIN	1979 1989	S EARLY INC.	407.045	362,643		148,223	44,305	54,727	10,108	257 365	Ú		17.21%	21.26%	3.93%
DOE/WAP UNITS (ADMINISTERED BY DOE/W		TOTAL UNITS		Single-rail Owiel-Occ	Single-rail nelia	Mobile Homes		SHAY BESIDENCE TYPES		% JOSEPHANN CWIT-OCC	Sing-ram Hental %	Mult-ram Hental %	Mobile Homes %	HHS/WX UNITS (LIHEAP NOT ADMINISTERED UNDER DOE RULES)			OTIMIT INTO	TOTAL INDIBLICATED		Single-Fam Owner-Occ	Single-Fam Rental	Multi-Fam Bental	Mobile Homes		SOM RESIDENCE LIFES	Sing-Fam Own-Occ %	Sing-Fam Rental %	Mult-Fam Rental %	Wobile Homes %

A-3 TYPES AND NUMBERS OF UNITS (continued)

	1989 TOTALS 185,777 182,273	115,946 7,712 50,179 541	174,378 66.49% 4.42% 28.78% 0.31%	4	1989 TOTAL 4,094 2,318
					1989 # states 6
	1988 TOTALS 185,703 159,903	27,639 7,549 27,633 205	63,026 43.85% 11.98% 43.84% 0.33%	22	1988 TOTAL 3,156 1,467
					1988 # states 3
	1987 TOTALS 182,966 157,242	30,339 8,413 30,926 734	70,412 43.09% 11.95% 43.92%	88	1987 TOTAL 4,107 2,639
					1987 # states 3
	1986 TOTALS 156,757 131,096	65,387 3,852 5,567 170	74,976 87.21% 5.14% 7.43% 0.23%	28	7 1986 TOTAL 4,073 3,071
					OME WEATHERIZATION 35 78-85 1986 55 TOTAL # states 4 8.675 3 6,348
	78-85 TOTALS 311,474 232,134	33,348 13,828 6,214 303	53,693 62.11% 25.75% 11.57% 0.56%	86	E WEATHI 78-85 TOTAL 8,675 6,348
NO	W				W INCOMI 78-85 # states 4
THERIZATI	1978 - 1989 ALL-YEAR SUM 1,022,677 862,648	272,659 41,354 120,519 1,953	436,485 62.47% 9.47% 27.61% 0.45%		. SCALE LOI 1978 - 1989 ALL-YEAR S 24,105 15,843
UTILITY FULL SCALE WEATHERIZATION	TOTAL UNDUPLICATED	Single-Fam Owner-Occ Single-Fam Rental Multi-Fam Rental Mobile Homes	SUM RESIDENCE TYPES Sing-Fam Own-Occ % Sing-Fam Rental % Mult-Fam Rental % Mobile Homes %	UTILITIES	OTHER SIGNIFICANT FULL SCALE LOW INC 1978 - 1989 78-8 ALL-YEARS # state TOTAL UNITS 24,105 TOTAL UNDUPLICATED 15,843
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A-4 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM, IN REGIONS

		01.10	(0	o ∢	4 W	%(4% 5% 5%	£ ₹ 4	17 31 32 74	
1978-1989 CALIFORNIA	REGION 4 \$362,174,733	\$43,349,082 \$90,155,485	\$228,670,166	1978-1989 CALIFORNIA	REGION 4 \$362,174,733	11.97% 24.89%	63.14% 0.00% 0.00% 0.00%	1978-1989 CALIFORNIA REGION 4	798,517 74,681 129,662 594,174	
1978-1989 WARM	REGION 3 \$549,272,349	\$505,310,262 \$2,836,954	\$16,610,489 \$22,774,942 \$1,739,702	1978-1989 WARM	REGION 3 \$549,272,349	92.00% 0.52%	3.02% 4.15% 0.32% 0.00%	1978-1989 WARM	538,456 413,940 38,136 84,679	1,701
1978-1989 MODERATE	REGION 2 REGION 2 \$2,526,896,813	\$2,082,003,205 \$314,459,548	\$111,204,606 \$9,678,401 \$2,377,789 \$7,173,264	1978-1989 MODERATE	REGION 2 \$2,526,896,813	82.39% 12.44%	4.40% 0.38% 0.09% 0.28%	1978-1989 MODERATE	HEGION Z 1,905,900 1,666,395 138,998 03.136	7,371
1978-1989 COLDEST	REGION 1 \$913,537,453	\$709,730,966 \$112,275,039	\$48,030,834 \$26,704,704 \$13,001,466 \$3,794,444	1978-1989	\$913,537,453	77.69% 12.29%	5.26% 2.92% 1.42% 0.42%	1978-1989 COLDEST	REGION 1 601,873 498,981 55,847	40,274
1978-1989	ALL REGIONS \$4,351,881,348	\$3,340,393,515 \$519,727,026	\$404,516,095 \$59,158,047 \$17,118,957 \$10,967,708	<i>OF TOTAL</i> 1978-1989	ALL REGIONS \$4,351,881,348	76.76% 11.94%	9.30% 1.36% 0.39% 0.25%		ALL REGIONS 3,844,746 2,653,997 362,643	812,263 15,843
TOTAL FUNDING BY PROGRAMS	TOTAL FUNDING	DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	PROGRAM TOTALS AS PERCENTAGES OF TOTAL	TOTAL FUNDING	DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	UNDUPLICATED TOTAL UNITS REPORTED	TOTAL UNDUPLICATED DOE/WAP HHS/WX	Utility Full-Scale Weatherization Other Full-Scale Weatherization

A-4 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM, IN REGIONS (continued)

1978-85	1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 COLDEST MODERATE PAGION 2 REGION 3 REGION 2 REGION 3 R	TOTAL FUNDING BY PROGRAMS					
LL REGIONS COLDEST MODERATE WARM CALIF 1,74,125,069 \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,61 1,74,125,069 \$494,827,262 \$1,312,871,160 \$256,011,764 \$116,437 1,795,024,886 \$41,651,768 \$1,118,530,033 \$239,454,973 \$26,33 \$129,819,672 \$5,892,067 \$162,203,997 \$165,630 \$60,0 \$11,000,000 \$1973,337 \$195,73,367 \$1978,85 \$1978,85 \$10,00 \$11,000,000 \$1978,85 \$1,000,000 \$683,993 \$10,78,85 \$10,78,85 \$10,78,85 \$10,78,85 \$10,78,85 \$10,00 <td>LL REGIONS COLDEST MODERATE WARM CALIF LL REGIONS REGION 1 REGION 2 REGION 3 REGION 3 REGION 3 2,174,125,069 \$494,827,262 \$1,118,50,033 \$250,011,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$16,61,624 \$16,62,607 \$16,624 \$16,624,907 \$16,624,907 \$16,624,907 \$16,624,907 \$16,624,907 \$16,624,907 <t< td=""><td></td><td>1978-85</td><td>1978-85</td><td>1978-85</td><td>1978-85</td><td>1978-85</td></t<></td>	LL REGIONS COLDEST MODERATE WARM CALIF LL REGIONS REGION 1 REGION 2 REGION 3 REGION 3 REGION 3 2,174,125,069 \$494,827,262 \$1,118,50,033 \$250,011,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$116,61,764 \$16,61,624 \$16,62,607 \$16,624 \$16,624,907 \$16,624,907 \$16,624,907 \$16,624,907 \$16,624,907 \$16,624,907 <t< td=""><td></td><td>1978-85</td><td>1978-85</td><td>1978-85</td><td>1978-85</td><td>1978-85</td></t<>		1978-85	1978-85	1978-85	1978-85	1978-85
LL REGIONS REGION 1 REGION 2 \$1.312.871.160 \$250,011.764 \$116.4 \$1174.125,069 \$494,827,262 \$1.312.871.160 \$250,011.764 \$116.4 \$174.125,069 \$491,827,262 \$11.18,530,033 \$250,011.764 \$116.4 \$125.9819,672 \$582,067 \$15.203,997 \$162,203,997 \$16.696,807 \$20,0 \$125.9819,672,389 \$26,560,571 \$30,621,037 \$10,696,807 \$50,0 \$16.00 \$10,00 <td< td=""><td>### HEGION 2 HEGION 3 HEGION 3 HEGION 3 HEGION 3 HEGION 3 HEGION 3 # \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,4165,069 \$174,125,069 \$19,672,967 \$105,620,974 \$105,629,872,880 \$19,573,987 \$1,000,000 \$196,203,997 \$1,000,000 \$196,304,608 \$19,573,989 \$10,000 \$19,000,000,000,000,000,000,000,000,000,0</td><td></td><td></td><td>COLDEST</td><td>MODERATE</td><td>WARM</td><td>CALIFORNIA</td></td<>	### HEGION 2 HEGION 3 HEGION 3 HEGION 3 HEGION 3 HEGION 3 HEGION 3 # \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,4165,069 \$174,125,069 \$19,672,967 \$105,620,974 \$105,629,872,880 \$19,573,987 \$1,000,000 \$196,203,997 \$1,000,000 \$196,304,608 \$19,573,989 \$10,000 \$19,000,000,000,000,000,000,000,000,000,0			COLDEST	MODERATE	WARM	CALIFORNIA
\$174,125,069 \$494,827,262 \$1,118,590,033 \$250,011,764 \$116,4 \$1795,024,856 \$411,651,768 \$1,118,590,033 \$238,454,973 \$26,3 \$126,944,608 \$26,560,571 \$30,621,037 \$1,696,807 \$30,0 \$136,944,608 \$26,560,571 \$30,621,037 \$1,696,807 \$30,0 \$136,944,608 \$26,560,571 \$30,621,037 \$1,696,807 \$30,0 \$136,944,608 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,573,989 \$19,78-85 \$19,79-85 \$	1.174,125,069 \$494,827,282 \$1,312,871,160 \$250,011,764 \$116,41 1.795,024,856 \$411,651,768 \$1,118,530,033 \$239,454,973 \$26,33 \$126,944,603 \$26,560,571 \$30,621,037 \$1,696,807 \$20,33 \$11,651,768 \$1,100,000 \$768,666 \$43,904 \$20,60,507 \$50,001 \$126,944,603 \$26,560,571 \$30,621,037 \$1,696,807 \$50,00 \$50,00 \$11,651,733,377 \$19,78,436 \$50,00 \$768,90 \$60,00 \$760,904 \$50,00 \$1,78,69 \$48,887 \$683,993 \$20,01 \$78,00 \$60,00	CIAICIAI	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4
\$229,819,672 \$411,651,768 \$1,118,530,033 \$238,454,973 \$265,822,815,826,807 \$1696,807 \$30,08196,822,816,82,826,810,872 \$30,621,037 \$1696,807 \$30,081,826,810,822,8393 \$3.94,827,8369 \$44,887 \$30,621,037 \$9,763,000 \$19,733,387 \$1,00,000 \$19,78-85 \$1,100,000 \$19,78-85 \$1,100,000 \$19,78-85 \$1,100,000 \$19,78-85 \$1,100,000 \$19,78-85 \$1,100,000 \$19,78-85 \$1,100,000 \$19,78-85 \$1,100,000 \$2,38% \$1,100,000 \$1,174,125,069 \$2,100,000 \$1,174,125,069 \$2,100,000 \$1,174,125,069 \$1,176,176 \$1,176,1	1795,024,856 \$411,651,768 \$1,118,530,033 \$238,454,973 \$26,587 \$30,651,037 \$1,056,024,973 \$26,580,571 \$30,621,037 \$1,056,024 \$30,621,037 \$1,056,024 \$30,621,037 \$1,056,034 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,621,037 \$30,631,037 \$30,631,037 \$30,631,037 \$30,631,037 \$30,631,037 \$30,631,037 \$30,631,037 \$30,632,037 \$30,632,037 \$30,632,037 \$30,632,037 \$30,632,037 \$30,632,037 \$30,632,037 \$30,632,037 \$30,632,032	I O I AL FUNDING	\$2,174,125,069	\$494,827,262	\$1,312,871,160	\$250,011,764	\$116,414,883
\$229,819,672 \$35,892,067 \$162,203,997 \$1,696,807 \$50,000 \$19,673,387 \$19,573,969 \$48,887 \$62,434 \$96,984 \$50,671,3378,689,666 \$48,887 \$683,993 \$1,100,000 \$769,666 \$732,880 \$1,100,000 \$769,666 \$48,887 \$683,993 \$1,978,885 \$1,100,000 \$769,666 \$48,887 \$683,993 \$1978,885 \$1,100,000 \$7,25% \$1,312,871,160 \$2,33% \$1,167,4125,069 \$13,35% \$1,312,871,160 \$2,33% \$1,167,885 \$1,312,871,160 \$2,33% \$1,167,885 \$1,312,871,160 \$2,33% \$1,167,885 \$1,312,871,160 \$1,174,125,069 \$1,174,125,	\$229,819,672 \$35,892,067 \$162,203,997 \$1,696,807 \$50.00 \$126,944,608 \$26,560,571 \$50,621,037 \$49,763,000 \$19,733,387 \$19,573,969 \$622,434 \$596,984 \$50.000 \$1,100,000 \$769,666 \$48,897 \$683,993 \$1978-85	DOE/WAP (under DOE rules)	\$1,795,024,856	\$411,651,768	\$1,118,530,033	\$238,454,973	\$26,388,082
\$196.944.608 \$26.560.571 \$30,621,037 \$9,763,000 \$60,000 \$19,733,387 \$19,733,387 \$19,573,989 \$4.44 \$56,444 \$596,984 \$19,733,387 \$19,573,989 \$4.100,000 \$769,666 \$48,887 \$62,444 \$563,993 \$19,572,880 \$48,887 \$41,100,000 \$769,665 \$1,104,1100 \$1978-85 \$1978-85 \$1978-85 \$1978-85 \$1978-85 \$137,247,155,069 \$494,827,262 \$1,312,877,160 \$250,011,764 \$116,49 \$116,49 \$10,000 \$1	\$19,733,987 \$19,573,989 \$19,573,989 \$1,100,000 \$769,666 \$772,880 \$1,100,000 \$769,666 \$772,880 \$1,100,000 \$769,666 \$772,880 \$1,100,000 \$769,666 \$772,880 \$1,100,000 \$769,666 \$772,880 \$1,100,000 \$769,683,993 \$769,666 \$772,880 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$772,882 \$773,	HHS/WX (not under DOE rules)	\$229,819,672	\$35,892,067	\$162,203,997	\$1,696,807	\$30,026,801
\$19,733,387 \$19,573,969 \$62,434 \$586,984 \$1,100,000 \$769,666 \$48,887 \$683,993 \$732,880 \$48,887 \$683,993 \$722,880 \$1978-85 \$1978-8	\$19,733,387 \$19,573,969 \$62,434 \$96,984 \$1,000,000 \$769,666 \$48,897 \$683,993 \$1,000,000 \$769,666 \$488,393 \$1,000,000 \$769,666 \$48,897 \$683,993 \$1,000,000 \$769,666 \$48,897 \$683,993 \$1978-85 \$1978-85 \$1978-85 \$1978-85 \$1978-85 \$1978-85 \$1312,877,160 \$250,011,764 \$116,4	Utility Full-Scale Weatherization	\$126,944,608	\$26,560,571	\$30,621,037	\$9,763,000	\$60,000,000
\$1,869,666 \$732,880 \$48,887 \$48,887 \$683,993 \$077.4L 1978-85 COLDEST MODERATE MARM CALIF REGIONS REGION 1 REGION 2 REGION 3 REGION 4 REGION 4 REGION 4 REGION 5 REGION 1 REGION 3 REGION 3 REGION 3 REGION 1 REGION 3 REGION 3 REGION 3 REGION 4 REGION 4 REGION 4 REGION 1 REGION 6 REGION 1 REGION 7 REGION 1 REGION 3 REGION 3 REGION 3 REGION 1 REGION 3 REGION 1 REGION 1 REGION 3 REGION 4 REGION 4 REGION 5 REGION 5 REGION 5 REGION 6 REGION 6 REGION 6 REGION 6 REGION 6 REGION 7 REGION 6 REGION 7 REGION 6 REG	\$1,000,000 \$769,666 \$7732,880 \$1,000,000 \$48.87 \$683,933 OTAL 1978-85	Other Full-Scale Weatherization	\$19,733,387	\$19,573,969	\$62,434	\$96,984	
OT AL. \$083,393 OT AL. \$083,393 1978-85 1978-85 11978-85 1978-85 1978-85 1978-85 1978-85 1164 LL REGIONS REGION 1 REGION 2 REGION 3 REGION 3 REGION 3 REGIONS \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,44 RE256% 83.19% 85.20% 95.38% 116,48 10.57% 7.25% 12.35% 0.68% 95.38% 0.91% 3.96% 0.00% 0.00% 0.00% 0.09% 0.22% 0.06% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00% 0.03% 0.05% 0.00% 0.00% 0.00% 0.03% 0.05% 0.05% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00%	OT AL 1978-85 1978-85 1978-85 1978-85 1977-85 1978-85 1977-85 1978-85 1977-85 1978-85 1977-85 1978-85 1977-85 1978-85 1977-85 1978-85 1977-16 1978-85 1977-16 1978-85 1977-16 1978-85 1977-16 1978-85 1977-16 1978-85 1977-16 1978-85 1977	Other Resources w/ Weatherization	99,869,14	\$1,100,000	\$769,666		
OT AL. 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 116,4	OT AL. 1978-85 1978-85 1978-85 1978-85 15 LL REGIONS REGION 1 REGION 2 REGION 3 REGION 3 <td></td> <td>080,25,19</td> <td>446,887</td> <td>\$683,993</td> <td></td> <td></td>		080,25,19	446,887	\$683,993		
1978-85 1978-8	1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1974,125,069 \$494,827,262 \$1,312,871,160 \$2.33% 10.68% 10.57% 10.57% 7.25% 12.35% 0.06% 0.06% 0.00% 0.09% 0.02% 0.00%	PROGRAM TOTALS AS PERCENTAGE	SS OF TOTAL				
COLDEST MODERATE WARM CALIFIED REGION 3 REGION 3 REGION 1 REGION 2 REGION 3	COLDEST MODERATE WARM CALIFE GIONS REGION 2 REGION 3 REGION 3 REGION 3 REGION 4 REGION 2 REGION 3 REGION 3 REGION 4 REGION 3 REGION 4 REGION 3 REGION 4 REGION 3 REGION 5 REGION 3 REGION 5 REGION 3 REGION 5 REGION 5 REGION 3 REGION 1,764 \$116,4 \$116,4 \$10.57%		1978-85	1978-85	1978-85	1978-85	1978-85
LL REGIONS REGION 1 REGION 2 REGION 3 REGIONS (\$174,125,069) \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,4 \$1174,125,069 \$5.38% \$1.312,871,160 \$2.56% \$95.38% \$1.312,871,160 \$2.33% \$195,8 \$10.57% \$12.35% \$12.35% \$1.391% \$10.57% \$1.391% \$10.57% \$1.396% \$10.00% \$10.00% \$10.00% \$1.00	LL REGIONS REGION 1 REGION 2 REGION 3 REGIONS \$494,827,262 \$1,312,871,160 \$250,011,764 \$1116,4-10.57% 83.19% 85.20% 95.38% 0.68% 0.09% 0.09% 0.00% 0.0			COLDEST	MODERATE	WARM	CALIFORNIA
17.4,125,069 \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,4- 82.56% 83.19% 85.20% 95.38% 10.57% 7.25% 12.35% 0.68% 0.09% 0.02% 0.00	10.57% \$494,827,262 \$1,312,871,160 \$250,011,764 \$116,4- 82.56% 83.19% 85.20% 95.38% 0.68% 0.08% 0.02% 0.00% 0.00% 0.00% 0.00% 0.03% 0.01% 0.01% 0.05% 0.06% 0.00% 0.00% 0.03% 0.01% 0.01% 0.05% 0.06% 0.00% 0.00% 0.05% 0.00% 0.05% 0.00% 0.00% 0.05% 0.00% 0.00% 0.01% 0.05% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.01% 0.05% 0.00%	CHICATOR	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4
82.56% 83.19% 85.20% 95.38% 10.57% 7.25% 12.35% 0.68% 5.84% 5.37% 2.33% 3.91% 0.91% 3.96% 0.00% 0.04% 0.09% 0.22% 0.06% 0.00% 0.03% 0.01% 0.05% 0.00% 1978-85 1978-85 1978-85 1978-85 COLDEST MODERATE WARIM CALIFO REGION 1 REGION 2 REGION 3 REG 2,093,454 386,103 1,164,973 331,282 21 1,664,369 318,989 1,069,567 236,649 3 2,05,776 12,802 16,258 57,716 12	82.56% 83.19% 85.20% 95.38% 10.57% 7.25% 12.35% 0.68% 5.84% 5.37% 2.33% 3.91% 0.91% 3.96% 0.00% 0.04% 0.09% 0.22% 0.06% 0.00% 0.03% 0.01% 0.05% 0.00% 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 1978-85 186100 1 664,369 331,282 236,649 331,282 1 664,369 39,131 78,981 36,917 55,716 2 215,776 21,802 16,258 57,716 12 6,348 6,348 16,258 57,716 12	IOIAL FONDING	\$2,174,125,069	\$494,827,262	\$1,312,871,160	\$250,011,764	\$116,414,883
10.57% 7.25% 12.35% 0.68% 5.84% 5.37% 2.33% 3.91% 0.09% 0.02% 0.00% 0.00% 0.00% 0.00% 0.03% 0.01% 0.01% 0.05% 0.00% 0.00% 0.00% 0.03% 0.01% 0.01% 0.05% 0.00% 0.00% 0.03% 0.01% 0.01% 0.05% 0.00% 0.00% 0.01% 0.01% 0.05% 0.00% 0.00% 0.01% 0.01% 0.05% 0.00% 0.00% 0.01% 0.01% 0.00	10.57% 7.25% 12.35% 0.68% 5.84% 5.37% 2.33% 3.91% 0.09% 0.00	DOE/WAP (under DOE rules)	82.56%	83.19%	85.20%	95.38%	22 67%
5.84% 5.37% 2.33% 3.91% 0.09% 0.09% 0.00%	5.84% 5.37% 2.33% 3.91% 0.09% 0.00%	HHS/WX (not under DOE rules)	10.57%	7.25%	12.35%	0.68%	25 79%
5.84% 5.37% 2.33% 3.91% 5 0.91% 3.96% 0.00% 0.04% 0.04% 0.09% 0.22% 0.06% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00% 1978-85 1978-85 1978-85 1978-85 1978-85 1L REGIONS REGION 1 REGION 2 REGION 3 REGION 3 2,093,454 386,103 1,164,973 331,282 211 1,664,369 318,989 1,069,567 236,649 36 206,961 39,131 78,981 36,917 51 21,776 21,802 16,258 57,716 12C	5.84% 5.37% 2.33% 3.91% 5 0.91% 3.96% 0.00% 0.04% 0.00% 0.09% 0.02% 0.06% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00% 1978-85 1978-85 1978-85 1978-85 1978-85 1 EGIONS REGION 1 REGION 2 REGION 3 REGION 3 2,093,454 386,103 1,164,973 331,282 21,164,973 1,664,369 318,989 1,069,567 236,649 36,217 2,06,961 39,131 78,981 36,917 51 2,15,776 21,802 16,258 57,716 12C 6,348 6,348 1,67 57,716 12C						
0.99% 0.00%	0.91% 0.00%	Utility Full-Scale Weatherization	5.84%	5.37%	2.33%	3.91%	51.54%
0.09% 0.22% 0.06% 0.00% 0.03% 0.01% 0.05% 0.00% 0.03% 0.01% 0.05% 0.00% 0.00% 0.03% 0.01% 0.05% 0.00%	0.09% 0.22% 0.06% 0.00% 0.03% 0.01% 0.05% 0.00% 0.01% 0.05% 0.00% 0.05% 0.00% 0.05% 0.00% 0.05% 0.00% 0.05% 0.00% 0.05% 0.00%	Other Full-Scale Weatherization	0.91%	3.96%	0.00%	0.04%	0.00%
1978-85 1978-8	1978-85 1978-8	Housing Hepair/Hehab Programs	%60 [.] 0	0.22%	%90:0	%00'0	0:00%
1978-85 1978-85 1978-85 1978-85 COLDEST MODERATE WARM CALIF 2,093,454 386,103 1,164,973 331,282 2,065,561 39,131 78,981 36,917 215,776 21,802 16,258 57,716 11	1978-85 1978-85 1978-85 1978-85 COLDEST MODERATE WARM CALIF COLDEST NACION 2 REGION 3 REGION 2 REGION 3 11,664,369 1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716 16,258	Orner Hesources w/ Weatherization	0.03%	0.01%	0.05%	0:00%	0.00%
1978-85 1978-85 1978-85 1978-85 1978-85 COLDEST MODERATE WARM CALIF MODERATE WARM CALIF MARM CALIF	1978-85 1978-8	UNDUPLICATED TOTAL UNITS REPC	ORTED				
COLDEST MODERATE WARM CALIF ALL REGIONS REGION 1 REGION 2 REGION 3 RE 2,093,454 386,103 1,164,973 331,282 2 1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716	COLDEST MODERATE WARM CALIF 2,093,454 386,103 1,164,973 331,282 2 1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716 16,258		1978-85	1978-85	1978-85	1978-85	1978-85
ALL HEGIONS REGION 1 REGION 2 REGION 3 RE 2,093,454 386,103 1,164,973 331,282 2 1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716	ALL HEGIONS REGION 1 REGION 2 REGION 3 RE 2,093,454 386,103 1,164,973 331,282 2 1,664,369 318,989 1,069,567 236,649 2 206,961 39,131 78,981 36,917 36,917 215,776 57,716 1			COLDEST	MODERATE	WARM	CALIFORNIA
2,093,454 386,103 1,164,973 331,282 2 1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716	2,083,454 386,103 1,164,973 331,282 2 1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716 1 6,348 6,181 167		ALL HEGIONS	REGION 1	REGION 2	REGION 3	REGION 4
1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716	1,664,369 318,989 1,069,567 236,649 206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716 6,348 6,181 167	IOTAL UNDUPLICATED	2,093,454	386,103	1,164,973	331,282	211,096
206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716	206,961 39,131 78,981 36,917 215,776 21,802 16,258 57,716 6,348 6,181 167	DOE/WAP	1,664,369	318,989	1,069,567	236,649	39,164
215,776 21,802 16,258 57,716	215,776 21,802 16,258 57,716 6,348 6,181 167	XWSHH	206,961	39,131	78,981	36,917	51,932
	6,348 6,181 167	Utility Full-Scale Weatherization	215,776	21,802	16,258	57,716	120,000
6,348 6,181		Other Full-Scale Weatherization	6,348	6,181	167		

A-4 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM, IN REGIONS (continued)

TOTAL FUNDING BY PROGRAMS	1986	1986 COLDECT	1986 MODERATE	1986 WARM	1986 CALIFORNIA
TOTAL FUNDING	ALL REGIONS \$456,584,614	COLDES 1 REGION 1 \$94,697,302	REGION 2 \$268,776,963	REGION 3 \$62,171,613	\$30,938,736
DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	\$358,127,612 \$42,150,560	\$75,021,205 \$7,391,285	\$219,010,649 \$25,288,539	\$59,627,758	\$4,468,000 \$9,470,736
Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	\$45,480,171 \$7,448,654 \$2,855,239 \$522,378	\$5,863,101 \$3,309,578 \$2,612,133 \$500,000	\$20,103,215 \$4,139,076 \$213,106 \$22,378	\$2,513,855	\$17,000,000
PROGRAM TOTALS AS PERCENTAG	ENTAGES OF TOTAL 1986	1986	1986	1986 WADM	1986 CALIFORNIA
TOTAL FUNDING	ALL REGIONS \$456,584,614	COLDES I REGION 1 \$94,697,302	**************************************	REGION 3 \$62,171,613	REGION 4 \$30,938,736
DOEWAP (under DOE rules) HHS/WX (not under DOE rules)	78.44% 9.23%	79.22% 7.81%	81.48% 9.41%	95.91% 0.00%	14.44% 30.61%
Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	9.96% 1.63% 0.63% 0.11%	6.19% 3.49% 2.76% 0.53%	7.48% 1.54% 0.08% 0.01%	4.04% 0.00% 0.05% 0.00%	54.95% 0.00% 0.00% 0.00%
UNDUPLICATED TOTAL UNITS REPORTED	PORTED 1986	1986	1986	1986	1986
TOTAL UNDUPLICATED DOE/WAP	ALL REGIONS 380,223 272,383	COLDEST REGION 1 53,763 46,942	MODERA 1 E REGION 2 205,358 173,805	WAHM REGION 3 46,422 42,719	CALIFORNIA REGION 4 74,680 8,917
HHS/WX Utility Full-Scale Weatherization Other Full-Scale Weatherization	30,667 74,102 3,071	2,345 4,288 188	13,899 14,771 2,883	3,703	14,423 51,340

A-4 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM, IN REGIONS (continued)

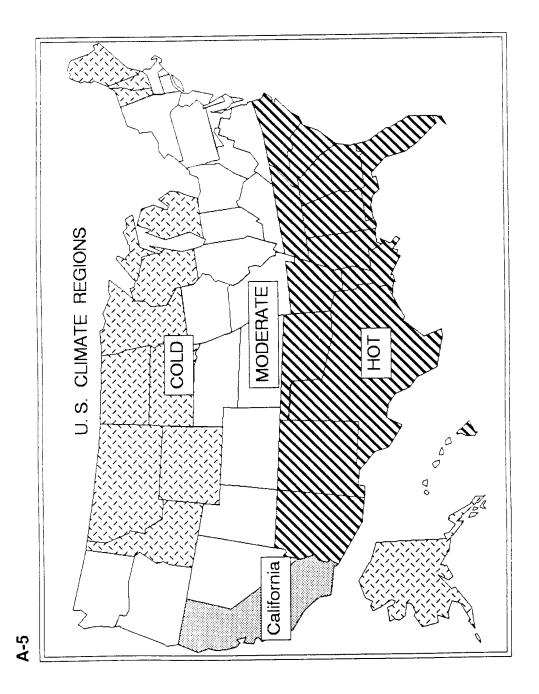
						<u> </u>		····
1987 CALIFORNIA REGION 4 \$81,865,853	\$4,120,000 \$23,540,853 \$54,205,000		1987 CALIFORNIA REGION 4 \$81,865,853	5.03% 28.76%	66.21% 0.00% 0.00% 0.00%	1987 CALIFORNIA	REGION 4 158,956 5,411	22,845 130,700
1987 WAFIM FEGION 3 \$79,461,006	\$76,042,117 \$86,618 \$2,065,692	\$1,266,579	1987 WARM REGION 3 \$79,461,006	95.70% 0.11%	2.60% 0.00% 1.59% 0.00%	1987 WARM	REGION 3 61,893 53,281	98 8,514
1987 MODERATE REGION 2 \$307,295,717	\$250,874,850 \$36,336,532 \$15,005,800 \$4,376,271	\$225,500	1987 MODERATE REGION 2 \$307,295,717	81.64% 11.82%	4.88% 1.42% 0.07% 0.16%	1987 MODERATE	REGION 2 187,089 144,703	. 18,391 21,356 2,639
1987 COLDEST REGION 1 \$115,237,031	\$77,347,560 \$25,662,385 \$5,053,955 \$969,202	\$5,025,453 \$1,178,476	1987 COLDEST REGION 1 \$115,237,031	67.12% 22.27%	4.39% 0.84% 4.36% 1.02%	1987 COLDEST	REGION 1 52,918 44,257	4,391
1987 ALL REGIONS \$583,859,607	\$408,384,527 \$85,626,388 \$76,330,447 \$5,345,473	nerization \$1,655,240 **CENTAGES OF TOTAL	1987 ALL REGIONS \$583,859,607	69.95% 14.67%	13.07% 0.92% 1.12% 0.28%	ORTED 1987	ALL REGIONS 460,856 247,652	45,725 164,840 2,639
TOTAL FUNDING BY PROGRAMS TOTAL FUNDING	DOE/WAP (under DOE rules) HHS/WX (not under DOE rules) Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Banair/Baha Brogger		TOTAL FUNDING	DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	UNDUPLICATED TOTAL UNITS REPORTED	TOTAL UNDUPLICATED DOE/WAP	Utility Full-Scale Weatherization Other Full-Scale Weatherization

A-4 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM, IN REGIONS (continued)

TOTAL FUNDING BY PROGRAMS	1988	1988 Ford 100	1988 MODEDATE	1988 WARM	1988 CALIFORNIA
TOTAL FUNDING	ALL REGIONS \$585,762,639	REGION 1 \$105,765,904	######################################	REGION 3 \$66,105,293	REGION 4 \$69,917,319
DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	\$398,920,856 \$100,824,583	\$73,538,960 \$23,195,426	\$257,397,395 \$63,106,162	\$63,820,501	\$4,164,000 \$14,522,995
Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	\$79,761,119 \$2,324,512 \$2,066,014 \$1,865,555	\$4,721,652 \$1,242,139 \$1,834,391 \$1,233,336	\$22,124,554 \$487,293 \$226,500 \$632,219	\$1,684,589 \$595,080 \$5,123	\$51,230,324
PROGRAM TOTALS AS PERCENTAGES OF TOTAL 196	ES OF TOTAL 1988	1988 1987	1988 MODERATE	1988 MARM	1988 CALIFORNIA
TOTAL FUNDING	ALL REGIONS \$585,762,639	REGION 1 \$105,765,904	######################################	REGION 3 \$66,105,293	REGION 4 \$69,917,319
DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	68.10% 17.21%	69.53% 21.93%	74.83% 18.35%	96.54% 0.00%	5.96% 20.77%
Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	13.62% 0.40% 0.35% 0.32%	4.46% 1.17% 1.73% 1.17%	6.43% 0.14% 0.07% 0.18%	2.55% 0.90% 0.01% 0.00%	73.27% 0.00% 0.00% 0.00%
UNDUPLICATED TOTAL UNITS REPORTED	ORTED 1988	1988	1988	1988	1988
TOTAL UNDUPLICATED	ALL REGIONS 450,711	COLDESI REGION 1 53,311	MODERATE REGION 2 173,250	WAHIM REGION 3 51,845	CALIF CHAIA REGION 4 172,305 14,690
HHS/WKI THIRV Full-Scale Weatherization	36,397 36,397 170,926	5,697 3,515	14,011	12,708	16,689 140,926
Other Full-Scale Weatherization	1,467	•	762	705	

A-4 FUNDING AND UNDUPLICATED HOUSING UNITS BY PROGRAM, IN REGIONS (continued)

	1989	CALIFORNIA REGION 4 \$63,037,942	\$4,209,000 \$12,594,100	\$46,234,842		1989	CALIFORNIA REGION 4 \$63,037,942	6.68%	73.34% 0.00% 0.00% 0.00%		1989	CALIFORNIA REGION 4	181,480	6,499 23,773	151,208
	1989	WARM REGION 3 \$91,522,673	\$67,364,913 \$1,053,529	\$583,353 \$22,082,878 \$438,000		1989	WAFIM REGION 3 \$91,522,673	73.60% 1.15%	0.64% 24.13% 0.48% 0.00%		1989	WARM REGION 3	47,014	1,121	2,038 996 996
	1989	MODERATE REGION 2 \$293,978,850	\$236,190,278 \$27,524,318	\$23,350,000 \$613,327 \$943,017 \$5,357,910		1989	MODERATE REGION 2 \$293,978,850	80.34% 9.36%	7.94% 0.21% 0.32% 1.82%		1989	REGION 2	175,230	13,716	26,974 920
	1989 1989	REGION 1 \$103,009,954	\$72,171,473 \$20,133,876	\$5,831,555 \$1,609,816 \$2,429,489 \$833,745		1989	COLDES! REGION 1 \$103,009,954	70.06% 19.55%	5.66% 1.56% 2.36% 0.81%		1989 COLDECT	REGION 1	55,778 44,694	4,283	402
	1989	ALL REGIONS \$551,549,419	\$379,935,664 \$61,305,823	\$75,999,750 \$24,306,021 \$3,810,506 \$6,191,655	ENTAGES OF TOTAL	1989	ALL REGIONS \$551,549,419	68.89% 11.12%	13.78% 4.41% 0.69% 1.12%	ORTED	1989	ALL REGIONS	435,302	42,893 186,619	2,318
TOTAL FUNDING BY PROGRAMS		TOTAL FUNDING	DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	PROGRAM TOTALS AS PERCENTAG.		TOTAL FUNDING	DOE/WAP (under DOE rules) HHS/WX (not under DOE rules)	Utility Full-Scale Weatherization Other Full-Scale Weatherization Housing Repair/Rehab Programs Other Resources w/ Weatherization	UNDUPLICATED TOTAL UNITS REPORTED		TOTAL INITIALISM	DOE/WAP	HHS/WX Utility Full-Scale Weatherization	Other Full-Scale Weatherization



A-14

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS

TOTAL UNITS REPORTED TOTAL UNITS DOE/WAP HHS/WX UTILITY OTHER UNDUPLICATED TOTAL UNITS REPORTED TOTAL UNDUPLICATED DOE/WAP HHS/WX Utility Other	1978-1989 ALL REGIONS 4,006,482 2,653,997 427,015 901,365 24,105 1978-1989 ALL REGIONS 3,844,746 2,653,997 362,643 812,263 15,843	1978-1989 COLDEST REGION 1 631,152 498,981 67,687 50,086 14,398 1978-1989 COLDEST REGION 1 601,873 498,981 55,847 6,274	1978-1989 MODERATE REGION 2 1,981,249 1,666,395 124,652 8,006 124,652 8,006 1978-1989 MODERATE REGION 2 1,666,395 138,998 93,136 7,371	. 1978-1989 WARM REGION 3 595,564 413,940 47,470 132,453 1,701 1978-1989 WARM REGION 3 538,456 413,940 38,136 84,679	1978-1989 CALIFORNIA REGION 4 798,517 74,681 1978-1989 CALIFORNIA REGION 4 798,517 74,681 129,662 594,174
TOTAL DOLLARS WITH UNITS TOTAL \$ w/ UNITS	1978-1989 ALL REGIONS \$4,272,558,174	1978-1989 COLDEST REGION 1 \$862,962,018	1978-1989 MODERATE REGION 2 \$2,519,985,760	1978-1989 WARM REGION 3 \$527,435,663	1978-1989 CALIFORNIA REGION 4 \$362,174,733
DOE/WAP HHS/WX Utility Other	\$3,340,393,515 \$493,198,501 \$402,305,095 \$36,661,063	\$709,730,966 \$87,596,514 \$41,329,834 \$24,304,704	\$2,082,003,205 \$312,609,548 \$115,694,606 \$9,678,401	\$505,310,262 \$2,836,954 \$16,610,489 \$2,677,958	\$43,349,082 \$90,155,485 \$228,670,166
RESIDENCE TYPES REPORTED ALL RESIDENCE TYPES	1978-1989 ALL REGIONS 2,644,888	1978-1989 COLDEST REGION 1 567,400	1978-1989 MODERATE REGION 2 1,541,330	1978-1989 WARM REGION 3 436,567	1978-1989 CALIFORNIA REGION 4 99,591
Single-Family Owner-Occ Single-Family Rental Multi-Family Rental Mobile Homes	1,566,556 501,973 471,348 105,011	365,808 114,827 66,288 20,477	808,262 308,541 351,516 73,011	356,672 57,690 10,682 11,523	35,814 20,915 42,862

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

1978-1989
\$709,730,966

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

			
1978-1989 CALIFORNIA REGION 4 129,662 129,662 \$90,155,485	3,545 4,347 15,881	23,773 9.25%	2.39% 9.81% 29.02%
1978-1989 WARM REGION 3 47,470 38,136 \$2,836,954	33,999 3,580 155 1,028	38,762 15.08%	22.94% 8.08% 0.28% 10.47%
1978-1989 MODERATE REGION 2 182, 196 138,998 \$312,609,548	71,726 23,443 32,926 4,918	133,013 51.74%	48.39% 52.91% 60.16% 50.09%
DE RULES) 1978-1989 COLDEST REGION 1 67,687 55,847 \$87,596,514	38,955 12,935 5,765 3,871	61,526 23.93%	26.28% 29.20% 10.53% 39.43%
1STERED UNDER DOE RULES) 1978-1989 1978- COLE ALL REGIONS REGIONS 427,015 67 362,643 55 \$493,198,501 \$87,596	148,225 44,305 54,727 9,817	257,074	
TOTAL UNITS TOTAL UNITS TOTAL \$w' UNITS TOTAL \$ * v' UNITS	Sum Single-Family Owner-Occ Sum Single-Family Rental Sum Multi-Family Rental Sum Mobile Homes	SUM RESIDENCE TYPES % ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ % All Regions Sum S-F Rental % All Regions Sum M-F Rental % All Regions Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

1978-1989 CALIFORNIA	REGION 4 594,174	594,174	\$228,670,166											1978-1989	CALIFORNIA	REGION 4			
1978-1989 WARM	REGION 3 132,453	84,679	\$16,610,489											1978-1989	WARM	REGION 3	1,701	1,701	\$2,677,958
1978-1989 MODERATE	REGION 2 124.652	93,136	\$115,694,606	64,995	13,054	20,078	3,896	102,023	73.53%	78.36%	49.75%	82.35%	75.23%	1978-1989	MODERATE	REGION 2	900'8	7,371	\$9,678,401
1978-1989 COLDEST	REGION 1 50.086	40,274	\$41,329,834	17,953	13,183	4,303	1,283	36,722	26.47%	21.64%	50.25%	17.65%	24.77%	ERIZATION 1978-1989	COLDEST	REGION 1	14,398	6,771	\$24,304,704
<i>ON</i> 1978-1989	ALL REGIONS	812,263	\$402,305,095	82,948	26,237	24,381	5,179	138,745						W INCOME WEATHERIZATION		ALL REGIONS	24,105	15,843	\$36,661,063
UTILITY FULL SCALE WEATHERIZATIO!	STIMIL INTOT	TOTAL UNDUPLICATED	TOTAL \$ W/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes	OTHER SIGNIFICANT FULL SCALE LOW			TOTAL UNITS	TOTAL UNDUPLICATED	TOTAL \$ w/ UNITS

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

						г
TOTAL UNITS REPORTED						
	1978-85	1978-85	1978-85	1978-85	1978-85	
		COLDEST	MODERATE	WARM	CALIFORNIA	
(t :	ALL REGIONS	REGION 1	REGION 2	REGION 3	BEGION 4	
CIALUNIS	2,143,412	394,128	1,179,958	358,230	211,096	
DOEAWAB	400					
XWSHH	1,004,409	318,989	1,069,567	236,649	39,164	
An Collins	255,244	41,619	85,442	46,251	51,932	
	245,124	25,012	24,782	75,330	120,000	
	8,675	8,508	167			
UNDUPLICATED TOTAL UNITS REPORTED						_
	1978-85	1978-85	1978-85	1978-85	1978.85	
		COLDEST	MODERATE	WARM	CALIFORNIA	_
GUTACI IGLICINI LIATOT	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
OTAL ONDOPLICATED	2,093,454	386,103	1,164,973	331,282	211,096	
DOE/WAP	1,664,369	318,989	1.069.567	236 649	00	
XWSHH	206,961	39,131	78.981	36 917	53,104	
עדונודע	215,776	21,802	16.258	57.716	31,932	
OTHER	6,348	6,181	167	2	120,000	
TOTAL DOLLARS WITH UNITS						
	1978-85	1978-85	1978-85	1978-85	1978-85	_
		COLDEST	MODERATE	WARM	CALIFORNIA	_
	ALL REGIONS	REGION 1	REGIONS	BEGION 3	ALITORIA	
IOTAL \$ w/ UNITS	\$2,164,524,539	\$486,977,375	\$1,311,217,501	\$249,914,780	\$116,414,883	
DOEWAP	\$1,795,024,856	\$411 651 769	64 440 FOO OOO			
XWSHH	\$229 R19 672	#3E BOO DE3	#1,116,330,033	\$238,454,973	\$26,388,082	_
≥ <u>115</u>	\$120.043.608	\$19 859 571	\$ 162,203,997	\$1,696,807	\$30,026,801	
Other	\$19,636,403	\$19,573,969	\$62,434	\$9,763,000	\$60,000,000	
RESIDENCE TYPES REPORTED						
	1978-85	1978-85	1978-85	1978-85	1979.95	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
ALL RESIDENCE LYPES	1,511,329	349,697	857,532	264,936	39,164	
Single-Family Owner-Occ	981,164	243,463	490,636	222 434	24 631	
Single-Family Rental	279,053	71,974	167 404	31 505	0,43	
Multi-Family Rental	205,146	25,018	169 250	4545	0/1/0	
Mobile Homes	45,966	9.242	30.242	0.00	205,0	
		1	30,242	6,482		

39,164 CALIFORNIA **REGION 4** \$26,388,082 24,631 11.27% 16.84% 21.79% 2.33% 12.78% 226,174 236,649 27,925 4,360 188,435 5,454 WARM \$238,454,973 REGION 3 1978-85 83.24% 70.33% 58.78% 51.40% 64.05% 789,330 444,514 158,775 156,030 30,011 1978-85 MODERATE **REGION 2** \$1,118,530,033 1,069,567 DOE/WAP UNITS (ADMINISTERED BY DOE/WAP PROGRAM UNDER DOE RULES) A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued) 21.39% 11.04% 16.89% 21.46% 23.96% 207,243 53,009 20,687 288,144 7,205 318,989 COLDEST REGION 1 \$411,651,768 864,823 247,879 187,440 42,670 1,342,812 1978-85 ALL REGIONS 1,664,369 \$1,795,024,856 % All Regions Sum Mobile Homes Sum Mobile Homes SUM RESIDENCE TYPES % ALL REGIONS SUM TYPES % All Regions Sum S-F Own-Occ % All Regions Sum S-F Rental % All Regions Sum M-F Rental TOTAL \$ w/ UNITS Sum Single-Family Rental Sum Multi-Family Rental TOTAL UNITS Sum Single-Family Owner-Occ

2.92%

39,164

8,170 6,363

2.85% 3.30% 3.39%

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1978-85	CALIFORNIA REGION 4	51 932	51 932	\$30,026,801										
	1978-85	WARM REGION 3	46.251	36,917	\$1,696,807	33,999	3 580	155	1,028	38,762	30.70%	36.89%	20.47%	1.14%	34.35%
	1978-85	MODERA IE REGION 2	85,442	78,981	\$162,203,997	696'08	4.485	10.385	158	45,997	36.43%	33.60%	25.65%	76.41%	5.28%
E RULES)	1978-85	REGION 1	41,619	39,131	\$35,892,067	27,206	9,421	3,052	1,807	41,486	32.86%	29.52%	53.88%	22.45%	60.37%
ISTERED UNDER DO	1978-85	ALL REGIONS	225,244	206,961	\$229,819,672	92,174	17,486	13,592	2,993	126,245					
HHS/W X UNITS (LIHEAP NOT ADMINISTERED UNDER DOE RULES)			TOTAL UNITS	IOIAL UNDUPLICATED	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL HEGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes

REGION 4 1978-85 CALIFORNIA 1978-85 REGION 4 120,000 120,000 \$60,000,000 CALIFORNIA REGION 3 75,330 57,716 1978-85 WARM REGION 3 1978-85 WARM \$9,763,000 52.53% 62.70% 30.27% 68.91% 24.09% 2,835 73 22,205 REGION 2 167 24,782 16,258 15,153 4,144 1978-85 MODERATE MODERATE **REGION 2** \$30,421,037 \$62,434 1978-85 37.30% 69.73% 31.09% 75.91% 47.47% 8,508 6,181 1,279 230 REGION 1 \$19,573,969 9,014 9,544 20,067 1978-85 21,802 COLDEST 1978-85 COLDEST REGION 1 25,012 \$19,859,571 OTHER SIGNIFICANT FULL SCALE LOW INCOME WEATHERIZATION 8,675 6,348 245,124 24,167 13,688 4,114 303 42,272 1978-85 ALL REGIONS \$19,636,403 1978-85 ALL REGIONS 215,776 \$120,043,608 UTILITY FULL SCALE WEATHERIZATION % All Regions Sum S-F Rental % All Regions Sum M-F Rental **TOTAL UNITS** TOTAL UNDUPLICATED UNITS TOTAL \$ w/ UNITS Sum Multi-Family Rental SUM RESIDENCE TYPES % ALL REGIONS SUM TYPES % All Regions Sum S-F Own-Occ % All Regions Sum Mobile Homes **TOTAL UNITS** TOTAL UNDUPLICATED TOTAL \$ w/ UNITS Sum Single-Family Owner-Occ Sum Single-Family Rental Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

TOTAL UNITS REPORTED						
	1986	1986	1986	1986	1986	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
TOTAL UNITS	414,227	28,500	216,055	64,992	74,680	
d A MARIO CO	00000	;				
SW/JOD SWOLL	2/2,383	46,942	173,805	42,719	8,917	
YM/SULL	40,536	3,939	22,174	0	14,423	
	97,235	6,429	17,193	22,273	51,340	_
OINE	4,073	1,190	2,883			
UNDUPLICATED TOTAL UNITS REPORTED						
	1986	1986	1986	1986	1986	
		COLDEST	MODERATE	WARM	CALIFORNIA	_
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
IOTAL UNDUPLICATED	380,223	53,763	205,358	46,422	74,680	
DOE/WAP	272.383	46 942	173 BOE	40.740		
XWSHH	30,667	2 345	13,880	E1 1,24	716'0	
UTILITY	74.102	4 288	13,033	202	14,423	
OTHER	3,071	188	2,883	507,6	51,340	_
		}	3			
COLAL DOLLARS WITH UNITS						
	1986	1986	1986	1986	1986	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	PEGION 4	
IOIAL \$ W/ UNITS	\$450,806,997	\$89,185,169	\$268,541,479	\$62,141,613	\$30,938,736	
DOE/WAY	\$127,612	\$75,021,205	\$219,010,649	\$59,627,758	\$4,468,000	
YM/SUL	\$42,150,560	\$7,391,285	\$25,288,539		\$9,470,736	
Aumo	\$45,480,171	\$5,863,101	\$20,103,215	\$2,513,855	\$17,000,000	
	\$5,048,654	\$309,578	\$4,139,076			
RESIDENCE TYPES REPORTED						
	1986	1986	1986	1986	1986	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	RFGION 4	
ALL RESIDENCE TYPES	266,442	54,779	163,525	39,274	8,864	
Single-Family Owner-Occ	139,616	31,159	74.547	31 554	9356	
Single-Family Rental	54.132	10.575	35 56		201	
Multi-Family Rental	78 850	10,0; 10,65E	20,000	3,822	0¢1,2	
Mobile Lance	42,004	550,01	42,364	8/3	4,358	
	13,844	2,390	10,429	1,025		_

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1986	CALIFORNIA	REGION 4	8,917	\$4,468,000	2,356	2,150	4,358		8,864	4.01%	2.05%	4.74%	8.89%	
	1986	WARM	REGION 3	42,719	\$59,627,758	31,554	5,822	873	1,025	39,274	17.79%	27.11%	12.84%	1.78%	10.18%
RULES)	1986	MODERATE	REGION 2	173,805	\$219,010,649	55,588	28,393	34,191	7,255	125,427	56.80%	47.76%	62.62%	%97.69	72.06%
RAM UNDER DOE!	1986	COLDEST	REGION 1	46,942	\$75,021,205	26,893	8'6'8	9,590	1,788	47,249	21.40%	23.11%	19.80%	19.57%	17.76%
' DOE/WAP PROGR	1986		ALL REGIONS	272,383	\$358,127,612	116,391	45,343	49,012	10,068	220,814					
DOE/WAP UNITS (ADMINISTERED BY DOE/WAP PROGRAM UNDER DOE RULES)				TOTAL UNITS	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

HILDER CONTISTENCIAL WOLLDWINDSIERED UNDER DUE KULES	THE COURT OF THE C					_
	1986	1986	1986	1986	1986	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
TOTAL UNITS	40,536	3,939	22.174		14 423	
TOTAL UNDUPLICATED	30,667	2,345	13,899		14.423	
TOTAL \$ w/ UNITS	\$42,150,560	\$7,391,285	\$25,288,539		\$9,470,736	
Sum Single-Family Owner-Occ	9,535	1,705	7.830			
Sum Single-Family Rental	4,937	336	4,601			
Sum Multi-Family Rental	5,716	138	5,578			
Sum Mobile Homes	1,157	405	752			
SUM RESIDENCE TYPES	21,345	2,584	18.761			
% ALL REGIONS SUM TYPES		12.11%	87.89%			
% All Regions Sum S-F Own-Occ		17.88%	82.12%			
% All Regions Sum S-F Rental		6.81%	93.19%			
% All Regions Sum M-F Rental		2.41%	97.59%			
% All Regions Sum Mobile Homes		35.00%	65 00%			

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1986	CALIFORNIA	REGION 4	51,340	51,340	\$17,000,000												1986	CALIFORNIA	REGION 4				
	1986	WARM	REGION 3	22,273	3,703	\$2,513,855												1986	WARM	REGION 3				
	1986	MODERATE	REGION 2	17,193	14,771	\$20,103,215	11,129	2,591	3,195	2,422	19,337	%59.62	81.29%	67.26%	77.51%	92.48%		1986	MODERATE	REGION 2	2,883	2,883	\$4,139,076	
	1986	COLDEST	REGION 1	6,429	4,288	\$5,863,101	2,561	1,261	927	197	4,946	20.37%	18.71%	32.74%	22.49%	7.52%	THERIZATION	1986	COLDEST	REGION 1	1,190	188	\$309,578	
TION	1986		ALL REGIONS	97,235	74,102	\$45,480,171	13,690	3,852	4,122	2,619	24,283						SCALE LOW INCOME WEATHERIZATION	1986		ALL REGIONS	4,073	3,071	\$5,048,654	
UTILITY FULL SCALE WEATHERIZATION				TOTAL UNITS	TOTAL UNDUPLICATED	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental		Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes	OTHER SIGNIFICANT FULL SCALE L		•		TOTAL UNITS	TOTAL UNDUPLICATED UNITS	TOTAL \$ w/ UNITS	

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

ALL REGIONS REGION TOTAL UNITS 492,110 59,812 DOE/MAP 247,652 44,257 HHS/MX 57,478 8,176 UTILITY 182,873 6,136 UNDUPLICATED TOTAL UNITS REPORTED 1987
.,
COLDEST ALL REGIONS REGION 1 FED 460,856 52,918
DOEWAP 247,652 HHSWX 45,725 UTILITY 164,840 OTHER 2,639
1987 1987 COLDEST COLDEST ALL REGIONS REGION 1 ITS \$570,554,442 \$99,510,709
DOE/WAP \$408,384,527 \$77,347,560 HHS/WX \$75,553,995 \$16,139,992 Utility \$81,270,447 \$5,053,955 Other \$5,345,473 \$969,202
S REPORTED 1987 COLDEST ALL RESIDENCE TYPES 289,425 53,231
Single-Family Owner-Occ 157,481 Single-Family Rental 53,056 Multi-Family Rental 63,056 Mobile Homes 13,532

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

1987 RNIA	サ・	- 8	928	1,533	272		6,181	2.64%	11%	3.35%	6 15%	
1987 CALIFORNIA	REGION 4	3,411 \$4,120,000	6,	9,1	3,8		6,1	Ö	-	e,	9	
1987 WARM	REGION 3	33,281 \$76,042,117	38,053	7,406	1,953	1,204	48,616	20.74%	30.78%	16,19%	3.67%	10.13%
VOLES) 1987 MODERATE	REGION 2	144,703 \$250,874,850	58,836	27,651	39,494	9,054	135,035	%09'.25	47.60%	60.43%	74.27%	76.17%
COLDEST	REGION 1	44,237 \$77,347,560	25,344	9,167	8,456	1,629	44,596	19.02%	20.50%	20.03%	15.90%	13.70%
1987 1987	ALL REGIONS	247,652 \$408,384,527	123,609	45,757	53,175	11,887	234,428					
DOE/WAF UNITS (ADMINISTERED BLOCKWAF TROORAM UNDER DOE NOLES) 1987 1987 COLDEST N	CHISTORY	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

1987 CALIFORNIA REGION 4 22,845 22,845 \$23,540,853			
1987 WARIM REGION 3 98 98 98 \$86,618			
1987 MODERATE REGION 2 26,359 18,391 \$35,786,532	12,831 5,918 3,370 472	22,591 82.51%	80.91% 90.24% 83.81% 50.11%
R DOE RULES) 1987 COLDEST REGION 1 8,176 4,391 \$16,139,992	3,027 640 651 470	4,788 17.49%	19.09% 9.76% 16.19% 49.89%
NISTERED UNDER 1987 ALL REGIONS 57,478 45,725 \$75,553,995	15,858 6,558 4,021 942	27,379	
TOTAL UNDUPLICATED UNDER DOE RULES) 1987 1987 1987 1987 1987 1987 1987 198	Sum Single-Family Owner-Occ Sum Single-Family Rental Sum Multi-Family Rental Sum Mobile Homes	SUM RESIDENCE TYPES % ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ % All Regions Sum S-F Rental % All Regions Sum M-F Rental % All Regions Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

UTILITY FULL SCALE WEATHERIZATION		!	<u> </u>		.007
	1987	1987	1987	1987	198/
		COLDEST	MODERATE	WARM	CALIFOHNIA
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4
TOTAL UNITS	182,873	6,136	25,933	20,104	130,700
TOTAL UNDUPLICATED	164,840	4,270	21,356	8,514	130,700
TOTAL \$ w/ UNITS	\$81,270,447	\$5,053,955	\$19,945,800	\$2,065,692	\$54,205,000
Sum Single-Family Owner-Occ	18,014	2,157	15,857		
Sum Single-Family Rental	3,041	1,037	2,004		
Sum Multi-Family Rental	5,860	653	5,207		
Sum Mobile Homes	703		703		
SUM RESIDENCE TYPES	27,618	3,847	23,771		
% ALL REGIONS SUM TYPES		13.93%	86.07%		
% All Regions Sum S-F Own-Occ		11.97%	88.03%		
% All Regions Sum S-F Rental		34.10%	62.30%		
% All Regions Sum M-F Rental		11.14%	88.86%		
% All Regions Sum Mobile Homes			100.00%		
OTHER SIGNIFICANT FULL SCALE LOW INCOME WEATHERIZATION	OW INCOME WEAT	HERIZATION			
	1987	1987	1987	1987	1987
		COLDEST	MODERATE	WARM	CALIFORNIA
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4
TOTAL UNITS	4,107	1,243	2,864		
TOTAL UNDUPLICATED UNITS	2,639		2,639		
TOTAL \$ w/ UNITS	\$5,345,473	\$969,202	\$4,376,271		

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

1988	CALIFORNIA	HEGION 4	1,4,000	14,690	16,689	140,926	•		1988	CALIFORNIA	172,305	14,690	16,689	140,926			1988	CALIFORNIA	REGION 4	\$69,917,319	\$4,164,000	\$14,522,995	\$51,230,324			1988	CALIFORNIA	REGION 4	14,711	2,922	3,069	8,720	
1988	WARM	51 845	5	38,432		12,708	705		1988	WARM	51,845	38,432		12,708	8		1988	WARM	REGION 3	\$66,100,170	\$63,820,501		\$1,684,589	\$595,080		1988	WARM	REGION 3	38,973	30,502	6,434	1,392	645
1988	MODERATE	191 847		144,700	24,205	21,915	1,027		1988	MODERATE	173,250	144,700	14,011	13,777	70/		1988	MODERATE	REGION 2	\$342,465,404	\$257,397,395	\$62,456,162	\$22,124,554	\$487,293		1988	MODERATE	REGION 2	174,263	81,320	35,512	47,157	10,274
1988	COLDEST REGION 1	58.605		44,099	7,361	5,721	1,424		1988	COLDEST REGION 1	53,311	44,099	2'69'5	3,515			1988	COLDEST	HEGION 1	\$94,435,561	\$73,538,960	\$14,932,810	\$4,721,652	\$1,242,139		1988	COLDEST	REGION 1	53,415	30,565	9,890	10,190	2,770
1988	ALL BEGIONS	474,602		241,921	48,255	181,270	3,156		1988	ALL BEGIONS	450,711	241,921	36,397	170,926	-		1988		ALL REGIONS	\$572,918,454	\$398,920,856	\$91,911,967	\$79,761,119	\$2,324,512		1988		ALL REGIONS	281,362	145,309	54,905	67,459	13,689
		TOTAL UNITS		DOEWAP	XWSHH	VTILITY	OTHER	UNDUPLICATED TOTAL UNITS REPORTED			. TOTAL UNDUPLICATED	DOE/WAP	XW/SHH	OTHER		TOTAL DOLLARS WITH UNITS			CHIEF CAR A LATION	IOIAL & W/ UNITS	DOE/WAP	XW/SHH	Ctility	Other	RESIDENCE TYPES REPORTED				ALL RESIDENCE TYPES	Single-Family Owner-Occ	Single-Family Rental	Multi-Family Rental	Mobile Homes
	1988 1988 1988	1988 1988 1988 COLDEST MODERATE WARM CALIFO	1988 1988 1988 1988 1988 1988 CALIFC COLDEST MODERATE WARM CALIFC ALL REGIONS REGION 3 REGION 2 58.605 191.847 51.845 17	1988 1988 1988 1988 1988 CALIFC COLDEST MODERATE WARM CALIFC ALL REGIONS REGION 1 REGION 2 REGION 3 REGION 2 51,845 17	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988 1988 1988 1988 1988 1988 1988	1988 1988	ALL REGIONS	OTAL UNITS ALL REGIONS ALL RE	OTAL UNITS ALL REGIONS OTAL UNITS ALL REGIONS OTHER OTAL UNITS ALL REGIONS A	1988 1988	1988 1988	1988 1988	1988 1988	1988 1988	1988 1988 1989	1988 1988 1989	1988 1988	1988	1988	1988	1988 COLDEST 1988 MODERATE WARM CALLEGIONS 1988 COLDEST FEGION 1988 COLDEST FEGION 1988 COLDEST 1988 COLDEST 1988 144,700 38,432 17,811 24,205 144,700 38,432 14,700 14,244 1,027	1988	1988 1988 1988 1988 1989 1989 1980

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1988	1988	1988	1988	1988	_
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
TOTAL UNITS	241,921	44,099	144,700	38,432	14,690	
TOTAL \$ w/ UNITS	\$398,920,856	\$73,538,960	\$257,397,395	\$63,820,501	\$4,164,000	
Sum Single-Family Owner-Occ	116,884	24,451	600'69	30,502	2,922	
Sum Single-Family Rental	47,014	7,884	29,627	6,434	3,069	
Sum Multi-Family Rental	55,798	8,790	36,896	1,392	8,720	
Sum Mobile Homes	11,529	2,123	8,761	645		
SUM RESIDENCE TYPES	231,225	43,248	134,293	38,973	14,711	-
% ALL REGIONS SUM TYPES		18.70%	28.08%	16.86%	%96.9	
% All Regions Sum S-F Own-Occ		20.92%	50.49%	26.10%	2.50%	
% All Regions Sum S-F Rental		16.77%	63.02%	13.69%	6.53%	
% All Regions Sum M-F Rental		15.75%	66.12%	2.49%	15.63%	
% All Regions Sum Mobile Homes		18.41%	75.99%	2.59%		

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1988	1988	1988	1988	1000
		COLDEST	MODERATE	WARM	CALIFORNIA
	ALL REGIONS	REGION 1	REGION 2	REGION 3	A NOISIAN A NOISIAN
TOTAL UNITS	48,255	7,361	24.205		16.689
TOTAL UNDUPLICATED	36,397	5,697	14,011		16.689
TOTAL \$ w/ UNITS	\$91,911,967	\$14,932,810	\$62,456,162		\$14,522,995
Sum Single-Family Owner-Occ	14,482	4.231	10.251		
Sum Single-Family Rental	5,173	1.003	4.170		
Sum Multi-Family Rental	6,587	849	5.738		
Sum Mobile Homes	1,985	647	1,338		
SUM RESIDENCE TYPES	28,227	6,730	21,497		
SALL REGIONS SUM TYPES		23.84%	76.16%		
% All Regions Sum S-F Own-Occ		29.22%	70.78%		
% All Regions Sum S-F Rental		19.39%	80.61%		
% All Regions Sum M-F Rental		12.89%	87.11%		
% All Regions Sum Mobile Homes		32.59%	67.41%		

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

1988 CALIFORNIA	REGION 4	140,926 140,926	\$51,230,324												1988	CALIFORNIA	REGION 4			
1988 WARM	REGION 3	12,708 12,708	\$1,684,589												1988	WARM	REGION 3	705	705	\$595,080
1988 MODERATE	REGION 2	21,915	\$22,124,554	12,060	1,715	4,523	175	18,473	84.31%	86.50%	63.10%	89.14%	100.00%		1988	MODERATE	REGION 2	1,027	762	\$487,293
1988 COLDEST	REGION 1	5,721	\$4,721,652	1,883	1,003	551		3,437	15.69%	13.50%	36.90%	10.86%		HERIZATION	1988	COLDEST	REGION 1	1,424		\$1,242,139
10N 1988	ALL REGIONS	181,270	\$79,761,119	13,943	2,718	5,074	175	21,910						OW INCOME WEAT	1988		ALL REGIONS	3,156	1,467	\$2,324,512
UTILITY FULL SCALE WEATHERIZATION		TOTAL UNITS	TOTAL ONDOPLICATED TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes	OTHER SIGNIFICANT FULL SCALE LOW INCOME WEATHERIZATION				TOTAL UNITS	TOTAL UNDUPLICATED UNITS	TOTAL \$ w/ UNITS

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

						ſ
TOTAL UNITS REPORTED						
	1989	1989	1989	1989	1989	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
TOTAL UNITS	482,131	60,107	193,530	47,014	181,480	
DOFWAP	027 670	77 607	400			
XWSHH	55,575	+50'++ CO3' 9	133,620	42,859	6,499	
YTHILL	194 863	26,0	24,016	121,1	23,773	
OTHER	27,000	80/0	94,822	2,038	151,208	
	4,034	2,033	1,065	966		
UNDUPLICATED TOTAL UNITS REPORTED						
	1989	1989	1989	1989	1989	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
IOTAL UNDUPLICATED	459,502	55,778	175,230	47,014	181,480	
DOEWAP	227.672	44 694	133 620	40.050	400	
XWSHH	42 893	000	030,001	42,039	0,490	_
XLITION	186,619	7,700 4,700 4,700	13,716	121,1 120,0	23,773	
OTHER	0.318	600	4/6,02	850,2	802,161	
) j	70 t	OZE	988		
LOTAL DOLLARS WITH UNITS						
	1989	1989	1989	1989	1989	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
TOTAL \$ w/ UNITS	\$513,753,742	\$92,853,204	\$286,777,923	\$71,084,673	\$63,037,942	
DOFAWAP	4379 935 661	\$70 171 470	\$000 100 040			
XWUHH	£52,553,557	645, 17, 47,0	#500, 130,278	515,405,704	000,805,4¥	
(A)	\$75,749,750	413,240,360	\$25,874,318 \$20,400,000	\$1,053,529	\$12,594,100	
Other	\$4,306,021	\$1,609,816	\$613.327	\$583,353 \$2 082 878	\$46,234,842	
RESIDENCE TYPES REPORTED		<u>.</u>				
	1989	1989	1989	1989	1989	
		COLDEST	MODERATE	WARM	CALIFORNIA	
	ALL REGIONS	REGION 1	REGION 2	REGION 3	REGION 4	
ALL RESIDENCE TYPES	296,329	56,278	164,613	44,768	30,671	
Single-Family Owner-Occ	142,986	30,093	74,235	34,129	4,529	
Single-Family Rental	58,527	11,544	34,467	6,523	5,993	
Multi-Family Rental	76,837	10,665	44,074	1.949	20 149	_
Mobile Homes	17,979	3,976	11.837	2,167		
				Ž J		
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A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1989	CALIFORNIA	REGION 4	6,499	\$4,209,000	984	1,646	4,268		6,898	3.14%	0.87%	3.62%	9.12%	
	1989	WARM	REGION 3	42,859	\$67,364,913	34,129	6,523	1,949	2,167	44,768	20.37%	30.05%	14.36%	4.16%	15.63%
ULES)	1989	MODERATE	REGION 2	133,620	\$236,190,278	53,594	27,598	31,901	9,116	122,209	25.60%	47.15%	60.74%	68.14%	65.77%
IM UNDER DOE R	1989	COLDEST	REGION 1	44,694	\$72,171,473	24,969	9,671	8,697	2,578	45,915	20.89%	21.97%	21.28%	18.58%	18.60%
Y DOE/WAP PROGRA	1989		ALL REGIONS	227,672	\$379,935,664	113.676	45,438	46,815	13,861	219,790					
DOEIWAP UNITS (ADMINISTERED BY DOEIWAP PROGRAM UNDER DOE RULES)				TOTAL UNITS	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

	1989	CALIFORNIA	REGION 4	23.773	23 773	\$12,594,100	9 5.4E	2 !	4,347	15 881		23 773	44.12%	9000	42.82%	64.01%	2
	1989	WARM	REGION 3	1.121	1.121	\$1,053,529											
	1989	MODERATE	REGION 2	24,016	13,716	\$26,874,318	9.845	3.0/2	4,209	7,855	2,198	24,167	44.85%	%9809	42.05%	31.66%	80.22%
OOE RULES)	1989	COLDEST	REGION 1	6,592	4,283	\$13,240,360	2,786	1 535	coc'-	1,075	542	5,938	11.02%	17.22%	15.12%	4.33%	19.78%
VISTERED UNDER I	1989		ALL REGIONS	55,502	42,893	\$53,762,307	16,176	10 151		24,811	2,740	53,878					
HHS/WX UNITS (LIHEAP NOT ADMINISTERED UNDER DOE RULES)				TOTAL UNITS	101AL UNDUPLICATED	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental		Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes

A-5 TYPES AND NUMBERS OF UNITS, IN REGIONS (continued)

															••						
1989	CALIFORNIA REGION 4	151,208	151,208	\$46,234,842												1989	CALIFORNIA	REGION 4			
1989	WARM REGION 3	2,038	2,038	\$583,353												1989	WARM	REGION 3	966	966	\$2,082,878
1989	MODERATE REGION 2	34,829	26,974	\$23,100,000	10,796	2,600	4,318	523	18,237	80.47%	82.20%	88.50%	85.86%	37.93%		1989	MODERATE	REGION 2	1,065	920	\$613,327
1989	COLDEST BEGION 1	6,788	6,399	\$5,831,555	2,338	338	893	856	4,425	19.53%	17.80%	11.50%	17.14%	62.07%	HERIZATION	1989	COLDEST	REGION 1	2,033	405	\$1,609,816
10N 1989	SNOIS HE HA	194,863	186,619	\$75,749,750	13,134	2,938	5,211	1,379	22,662						OW INCOME WEAT.	1989		ALL REGIONS	4'094	2,318	\$4,306,021
UTILITY FULL SCALE WEATHERIZATION		TOTALUNITS	TOTAL UNDUPLICATED	TOTAL \$ w/ UNITS	Sum Single-Family Owner-Occ	Sum Single-Family Rental	Sum Multi-Family Rental	Sum Mobile Homes	SUM RESIDENCE TYPES	% ALL REGIONS SUM TYPES	% All Regions Sum S-F Own-Occ	% All Regions Sum S-F Rental	% All Regions Sum M-F Rental	% All Regions Sum Mobile Homes	OTHER SIGNIFICANT FULL SCALE LOW INCOME WEATHERIZATION				TOTAL UNITS	TOTAL UNDUPLICATED UNITS	TOTAL \$ w/ UNITS

APPENDIX B

STATE MANAGERS SURVEY: TOTALS BY YEAR

UTILITY SURVEY: TOTALS BY YEAR

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STATE MANAGERS' SURVEY

	•	nds \$1,795,024,856	inistered by the state DOE/WAP progra	
	70-65 IUI	us 3 1,793,024,636	B. Total PY 78-85 units 1,664,	369
	Please Itemize any funds administered total:	non DOE/WAP d under DOE rules in this	Unit types single family ownocc. single family rental	no. of units 864,823 247,879
	aa. PVE	\$ 27,069,494	multi-family rental	187,440
	ab. LIHEAP	\$ 439,620,841	mobile homes	42,670
	ac. STATE	\$ 22,789,930		42,070
	ad. Other (please specify	\$ 14,139,352 / source)		
weatr	No. Responding AP not administered the herization program. For all PY 78-85 funds.	under DOE rules. Include all f Please enter PY 78-85 dates if		
			B. Total PY 78-85 units 225, 244	
	Please itemize any included in this tot	Non-HHS funds al:	ba. How many if any of these	units
	included in this tot	Non-HHS funds ai: \$ 10.582.204	ba. How many if any of these were also units reported in above? (estimate if necessions)	n 1B.
	included in this tot	al:	were also units reported in above? (estimate if necession) bb. Unit types	n 1B.
	included in this tot aa. PVE ab. STATE ac. Other	\$\frac{10.582.204}{\$\frac{0}{2,614,813}}	were also units reported in above? (estimate if necessions) bb. <u>Unit types</u> single family ownocc	n 1B. sary) 18,283
	included in this tot aa. PVE ab. STATE	\$\frac{10.582.204}{\$\frac{0}{2,614,813}}	were also units reported in above? (estimate if necession) bb. Unit types	n 1B. sary) 18,283 no. of units
	included in this tot aa. PVE ab. STATE ac. Other	\$\frac{10.582.204}{\$\frac{0}{2,614,813}}	were also units reported in above? (estimate if necessions) bb. <u>Unit types</u> single family ownocc single family rental multi-family rental	n 1B. sary) 18,283 no. of units 92,174
	included in this tot aa. PVE ab. STATE ac. Other	\$\frac{10.582.204}{\$\frac{0}{2,614,813}}	were also units reported in above? (estimate if necessions) bb. <u>Unit types</u> single family ownocc single family rental	n 1B. sary) 18,283 no. of units 92,174 17,486
C.	included in this tot aa. PVE ab. STATE ac. Other (please specify No. Responding Brief description of	\$ 10.582.204 \$ 0 \$ 2,614,813 y source) : 15 program purposes	were also units reported in above? (estimate if necessions) bb. Unit types single family ownocc single family rental multi-family rental mobile homes	n 1B. sary) 18,283 no. of units 92,174 17,486 13,592
C	included in this tot aa. PVE ab. STATE ac. Other (please specify No. Responding Brief description of ca. same as DOE	\$ 10.582.204 \$ 0 \$ 2,614,813 y source) 15 program purposes but exceeds DOE cost limits	were also units reported in above? (estimate if necessions) bb. Unit types single family ownocc single family rental multi-family rental mobile homes (checkler)	n 18. sary) 18,283 no. of units 92,174 17,486 13,592 2,993
C.	included in this tot aa. PVE ab. STATE ac. Other (please specify No. Responding Brief description of ca. same as DOE	\$ 10.582.204 \$ 0 \$ 2,614,813 y source) : 15 program purposes	were also units reported in above? (estimate if necessions) bb. Unit types single family ownocc single family rental multi-family rental mobile homes (checkler)	n 18. sary) 18,283 no. of units 92,174 17,486 13,592 2,993 k if applicable)
C	included in this tot aa. PVE ab. STATE ac. Other (please specify No. Responding Brief description of ca. same as DOE	\$ 10,582.204 \$ 0 \$ 2,614,813 source) 15 program purposes but exceeds DOE cost limits work not permitted under sta	were also units reported in above? (estimate if necessions) bb. Unit types single family ownocc single family rental multi-family rental mobile homes (checkler)	n 18. sary) 18,283 no. of units 92,174 17,486 13,592 2,993 k if applicable)

STATE:	
SIAIE:	

A.	Total PY 78-85 funds \$		B. Total	PY 78-85 units	7,054	
	Please list names of util count:	ities included in this	ba.	Of these units,	how many are	listed
	1. (22)			above in: 1B. 2 Please estimate		
				total number of	units représe	nt re-
	2.			weatherization units completed		
	3.			0	, ,	
	4.		bb.	Unit types	<u>n</u>	o. of units
	5			single family ov		1,478
	J			single family re	ntal	88-
				multi-family		<u> 50</u> 0
				mobile home		<u>25</u> 0
	2. Contribute material	•		1	\$ <u> </u>	
	 Contribute services Contribute funds to Other. (Please special 	DOE program	0 1 2	1 5	\$ <u>0</u> \$ <u>0</u>	
Oth if a	4. Contribute funds to	DOE program ify) pw income weatherization	1 2 on: Please lis		\$0 \$0 s) not listed in	A, B, or C, 78-85.
<u>Oth</u> if a	4. Contribute funds to 5. Other. (Please spec	DOE program ify) pw income weatherization	1 2 on: Please lis		\$ 0 \$ 0 s) not listed in rization in PY	78-85.
ifa	4. Contribute funds to 5. Other. (Please spec	DOE program cify) Dow income weatherization of or more of funding a	1 2 on: Please lis	1 5 st any program(ull-scale weather	\$ 0 \$ 0 s) not listed in rization in PY	78-85. also include
ifa	4. Contribute funds to 5. Other. (Please spectors) her significant full-scale leading, which contributed 10 Program Name	DOE program cify) pw income weatherization which was a second of the control o	2 on: Please list vailable for fu	1 5 st any program(sull-scale weather	\$ 0 \$ 0 s) not listed in itzation in PY Units in iter	78-85. also include ns above nits No. of Ite
ifa	4. Contribute funds to 5. Other. (Please specially speci	DOE program cify) Dow income weatherization Which or more of funding a rotal PY 78-85 Funds \$ 19,733,387	2 on: Please list vailable for fu	1 5 st any program(ull-scale weather	\$ 0 \$ 0 s) not listed in ization in PY Units in iter	78-85. also include ms above nits No. of Ite
ifa	4. Contribute funds to 5. Other. (Please spectors) her significant full-scale leading, which contributed 10 Program Name	DOE program cify) Dow income weatherization Which or more of funding a rotal PY 78-85 Funds \$ 19,733,387	2 on: Please list vailable for fu	1 5 st any program(sull-scale weather	\$ 0 \$ 0 s) not listed in rization in PY Units in iter	78-85. also include ns above nits No. of Ite
if a	4. Contribute funds to 5. Other. (Please specially speci	DOE program cify) Dow income weatherization What or more of funding a rotal PY 78-85 Funds \$ 19,733,387	1 2 on: Please list ivailable for fu	st any program(sull-scale weather	\$ 0 \$ 0 s) not listed in rization in PY 1 Units in Iter	78-85. also include ms above nits No of Ite
if a	4. Contribute funds to 5. Other. (Please spectors) her significant full-scale leading, which contributed 10 Program Name 1. (3) 2. Brief program descriptionits.)	DOE program cify) Dow income weatherization What or more of funding a rotal PY 78-85 Funds \$ 19,733,387	2 on: Please list ivaliable for function is seen if necessarial in the property of the proper	st any program(: ull-scale weather Units 675	s) not listed in ization in PY Units in Iter No. of units and under any data any da	78-85. also include ms above nits No. of Ite 7 available on ty

STATE:	

£	Rehab. Program Name				Total 5	<u>.</u>	Total Abo		Energy Program Name
-	(4)			\$1	,869,66	66	4,67	<u> </u>	(2)
-				_			<u>.</u>		
If sor	me units are entered as haverage cost for expenditu	aving multiple	e funding sou "mixed" units	urces unde	er items 1 a if naces	.B, 2.B, 3	i.B, and 4	.B above,	please ente
	a. Units with DOE and LI				2,285	•	(n=9))	
b	o. Units with DOE and ut		·	S	1,000		- (n=1	•	
С		,	•	S			_ `		
d	d. Units with LIHEAP, DC	E & utility fu	nds (item 3.b	oa.3) \$			-		
е					1,962)	- (n=1	3)	
f.	Other combinations (p	lease specify	/):	ř			-	•	
•	•		•		1 20/	ı	(n=2	2)	
a. P	Please check off state, loc esources of any of the full ull-scale programs.	al, or private	and landlord		1,294	ch were c	ombined	with, and	add to, the themselves
a. P	Please check off state, loc esources of any of the full	al, or private I scale low-in	and landlord	l contribut erization p	tions which	ch were c above, b	ombined ut which	with, and	themselves Combir
a. P re fu	Please check off state, loc esources of any of the full	al, or private I scale low-in Type No-cost/	and landlord scome weath	l contribut erization p	tions which	ch were c above, b	ombined ut which	with, and	themselves Combir with wh
a. P re fu	Please check off state, loc esources of any of the ful ull-scale programs.	al, or private I scale low-in Type No-cost/	and landlord come weath	l contribut erization p	ions which programs	ch were c above, b	ombined ut which	with, and were not t	Combin with white Program
a. P re fu	Please check off state, loc esources of any of the ful ull-scale programs. se List Funds' Source	al, or private I scale low-in Type No-cost/ Low-cost	and landlord come weath of Support Materials	contributerization p	ions which constructions which constructions which constructions with the construction of the construction	ch were control of the control of th	ombined ut which which which which which which which will be seen to be a seen to b	with, and were not the second	Combin with white Program
a. P re fu	Please check off state, loc esources of any of the ful ull-scale programs. se List Funds' Source	al, or private I scale low-in Type No-cost/ Low-cost	and landlord come weath of Support Materials	contributerization p	ions which constructions which constructions which constructions with the construction of the construction	ch were control of the control of th	ombined ut which which which which which which which will be seen to be a seen to b	with, and were not t	Combin with white Program
a. P re fu	Please check off state, loc esources of any of the ful ull-scale programs. se List Funds' Source	al, or private I scale low-in Type No-cost/ Low-cost	and landlord come weath of Support Materials	contributerization p	ions which constructions which constructions which constructions with the construction of the construction	ch were control of the control of th	ombined ut which which which which which which which will be seen to be a seen to b	with, and were not the second	Combir with white Program
a. Prefit	Please check off state, loc esources of any of the ful ull-scale programs. se List Funds' Source	al, or private I scale low-in Type No-cost/ Low-cost	and landlord come weath of Support Materials	contributerization p	ions which constructions which constructions which constructions with the construction of the construction	ch were control of the control of th	ombined ut which which which which which which which will be seen to be a seen to b	with, and were not the second	chemselves Combine with with with units of the programe Combine Combine
e. Press	Please check off state, loc esources of any of the fullull-scale programs. Se List Funds' Source (5) more pages if necessary) se circle any of the above out the existence of the World entered data on Items 3 Can the availability and	al, or private I scale low-in Type No-cost/ Low-cost 0 which, in you eatherization or 4, please	and landlord acome weather of Support Materials 2 ur judgement Assistance Fanswer the fof the full scale	contributerization program. t, would no program. following:	Labor 4 oot have be	or other control of the control of t	No. of Units 5,263 able to electrograms	with, and were not to see the second	Combination with with with with with with with with
e. Press	Please check off state, loc esources of any of the ful ull-scale programs. Se List Funds' Source (5) more pages if necessary) se circle any of the above out the existence of the William (1)	al, or private I scale low-in Type No-cost/ Low-cost 0 which, in you eatherization or 4, please the Dominion of the Dominion	and landlord acome weather of Support Materials 2 ur judgement Assistance Fanswer the full scal	contributerization program. t, would no program. following:	Labor 4 oot have be	or other control of the control of t	No. of Units 5,263 able to electrograms	with, and were not to see the second	Combin with what we program (5) (5) (5) (5) (5) (5) (5) (5) (5) (5)

STATE MANAGERS' SURVEY

A.	. Total P	Y 86 funds	\$ <u>358.127.6</u>	512	B. Tota	l PY 86 units272,3	83
			y <u>non DOE/W</u> d under DOE i			it types gle family ownocc.	<u>no. of units</u> 11 <u>6,391</u>
	total:				sin	gle family rental	45,3-3
	aa. PVE		\$ 57,35	51,931	mu	ulti-family rental	49,012
	аь. ЦН	EAP	\$ 113,19		mo	bile homes	10,068
	ac. STA	NTE .	\$ 3,18	32,200			
	ad. Oth	er ase specif	\$v source)	00	,		
	No R	espondin	o• 14				
JHEAF		•	_	les include all	funding sou	rces administered throug	h the LIHEAP
veathe	rization	program.	Please enter P	Y 86 dates if dif	ferent from	DOE/WAP:	
veathe	rization	program.	Please enter P \$ 46,150,	Y 86 dates if dif	fferent from	DOE/WAP:	
veathe	Total P	program. Y 86 funds	Please enter P \$ 46,150, y <u>Non-HHS</u> fui	Y 86 dates if dif	ferent from B. Tota	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported	se units
veathe	Total P	program. Y 86 funds Itemize an d in this to	Please enter P \$ 46,150, y <u>Non-HHS</u> fui	Y 86 dates if dif ,560 nds	ferent from B. Tota	DOE/WAP:	se units
veathe	Total P Please include	program. Y 86 funds Itemize an d in this to	Please enter P \$ 46,150, y Non-HHS fuil stal:	Y 86 dates if dif ,560 nds	fferent from B. Tota ba.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if necular types	se units d in 1B. essary) 9,869
veathe	Total P Please include aa. PVI ab. STA	program. Y 86 funds Itemize an d in this to ATE ner	Please enter P \$ \$ 46,150, y Non-HHS function \$ 4,000, \$	Y 86 dates if diff ,560 nds ,000	fferent from B. Tota ba.	DOE/WAP: at PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownoc	se units d in 1B. essary) 9,869 no. of units cc 9,535
veathe	Total P Please include aa. PVI ab. STA	program. Y 86 funds Itemize an d in this to ATE ner	Please enter P \$ \$ 46,150, y Non-HHS function \$ 4,000, \$	2Y 86 dates if diff ,560 nds ,000	fferent from B. Tota ba.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownod single family rental	se units d in 1B. essary) 9,869 no. of units cc 9,535 4,937
veathe	Total P Please include aa. PVI ab. STA	program. Y 86 funds Itemize an d in this to ATE ner	Please enter P \$ \$ 46,150, y Non-HHS function \$ 4,000, \$	2Y 86 dates if diff ,560 nds ,000	fferent from B. Tota ba.	DOE/WAP: All PY 86 units40,536 How many if any of the were also units reported above? (estimate if nec	se units d in 1B. essary) 9,869 no. of units cc 9,535 4,937 5,716
veathe	Total P Please include aa. PVI ab. STA	program. Y 86 funds Itemize an d in this to ATE ner	Please enter P \$ \$ 46,150, y Non-HHS function \$ 4,000, \$	2Y 86 dates if diff ,560 nds ,000	fferent from B. Tota ba.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownod single family rental	se units d in 1B. essary) 9,869 no. of units cc 9,535 4,937
veathe	Total P Please include aa. PVI ab. ST/ ac. Oth (ple	y 86 funds Itemize an d in this to ATE her ease speci	Please enter P \$ \(\)	2Y 86 dates if diff ,560 nds ,000	fferent from B. Tota ba.	DOE/WAP: All PY 86 units40,536 How many if any of the were also units reported above? (estimate if nec	se units d in 1B. essary) 9,869 no. of units cc 9,535 4,937 5,716
veathe A.	Total P Please include aa. PVI ab. ST/ ac. Oth (ple	Y 86 funds Itemize and in this to ATE her ease specification	Please enter P \$ \(\)	9Y 86 dates if diff ,560 nds ,000 0	fferent from B. Tota ba.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownod single family rental multi-family rental mobile homes	se units d in 1B. essary) 9,869 no. of units cc 9,535 4,937 5,716
veathe A.	Total P Please include aa. PVI ab. ST/ ac. Oth (ple	Y 86 funds Itemize and in this to ATE her ease specifies	Please enter P \$ \(\)	9Y 86 dates if diff ,560 nds ,000 0	fferent from B. Tota ba. bb.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownod single family rental multi-family rental mobile homes	se units d in 1B. essary) 9,869 no. of units 9,535 4,937 5,716 1,157
veathe A.	Total P Please include aa. PVI ab. ST/ ac. Oth (ple	Y 86 funds Itemize and in this to ATE her ease specifies specifies and in this to esponding the part of the part	Please enter P \$ \(\)	PY 86 dates if diff., 560 nds	fferent from B. Tota ba. bb.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownod single family rental multi-family rental mobile homes (ch	se units d in 1B. essary) 9,869 no. of units cc 9,535 4,937 5,716 1,157 eck if applicable
veathe A.	Total P Please include aa. PVI ab. ST/ ac. Oth (ple	y 86 funds Itemize and in this to ATE Description of the as DOE Iting syste	Please enter P \$ \(\)	rposes DOE cost limits	fferent from B. Tota ba. bb.	DOE/WAP: All PY 86 units 40,536 How many if any of the were also units reported above? (estimate if nec Unit types single family ownod single family rental multi-family rental mobile homes (ch	se units d in 1B. essary) 9,869 no. of units 9,535 4,937 5,716 1,157 eck if applicable

A.	Total PY 86 Funds \$ 9,976,263	B. Tota	al PY 86 Units18,8	30
	Please list names of utilities included in this	ba.	Of these units, how ma	
	count:		above in: 1B. 1,228 Please estimate how m	
	1. (11)	•	total number of units re weatherization of DOE	epresent re- PVE or LIHEAP
	2.		units completed in pre-	
	3.		128	
	4.	bb.	Unit types single family ownocc.	no. of units 924
	_		single family rental	412
	5.		multi-family	251
			mobile home	114
C.		•	ate P.U.C.? Yes 4	No1
C.	Brief description of utility programs' relationship Che Use DOE subgrantees to implement	es, if any, to	DOE/WAP. Check if ap No. of Utilities Est. \(\) 8 \$ 20	No 1 pplicable. Value 6.863
C.	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program	es, if any, to eck if Yes	DOE/WAP. Check if ap No. of Utilities	No1 pplicable. Value 6.863
C.	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program	es, if any, to eck if Yes 6 1 0	DOE/WAP. Check if ap No. of Utilities	No1 oplicable. Value 6.86300
C.	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program	es, if any, to eck if Yes	DOE/WAP. Check if ap No. of Utilities	No1 pplicable. Value 6.863
C.	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program Contribute funds to DOE program Contribute funds to DOE program	es, if any, to eck if Yes 6 1 0 1	nate P.U.C.? Yes 4 DOE/WAP. Check if approximate St. Very 1	No1 oplicable. Value 6.863000
C.	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program Contribute funds to DOE program	es, if any, to eck if Yes 6 1 0 1 2	nate P.U.C.? Yes 4 DOE/WAP. Check if approximate St. Very 1	No1 oplicable. Value 6.8630000
C. D.	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program Contribute funds to DOE program Contribute funds to DOE program	es, if any, to eck if Yes 6 1 0 1 2	DOE/WAP. Check if ap No. of Utilities Est. V 8 \$ 20 1 \$ \$ 0 \$ \$ 5 \$ \$ st any program(s) not list	No1 pplicable. Value 6.86300000sted in A. B. or C.
Oth if ar	Brief description of utility programs' relationship Che Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program Contribute funds to DOE program Source The services is a service of the service of	es, if any, to eck if Yes 6 1 0 1 2	DOE/WAP. Check if approximate P.U.C.? Yes 4 DOE/WAP. Check if approximate St. No. of Utilities Est. No. of Ut	No1 pplicable. Value 6.86300000sted in A. B. or C.
Oth if an	Brief description of utility programs' relationship Chi Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program Contribute funds to DOE program must be serviced to DOE program contribute funds to DOE program must be serviced to DOE program contribute funds to DOE program must be serviced to DOE program contribute funds to DOE program must be serviced to DOE program must be serviced to DOE program contribute funds to DOE program must be serviced to DOE program m	es, if any, to eck if Yes 6 1 0 1 2 n: Please livallable for fi	DOE/WAP. Check if approximate P.U.C.? Yes 4 DOE/WAP. Check if approximate St. No. of Utilities Est. No. of Ut	No1 oplicable. Value 6.8630000 sted in A, B, or C, in PY 86.

1. ____(3)

STATE:	
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<u> </u>	Rehab. Program Name		Total \$	i	Total U Abov	nits Pro	ergy gram ame
-	(11)		\$2,855,23	9	2,580	<u>6 (8</u>	
		ving multiple funding sources es on such "mixed" units. Es			B, and 4.	B above, pl	ease enter
	a. Units with DOE and Uh		\$ 2,725	•	(n	= 5)	
	b. Units with DOE and util	•	\$ 2,120		(n:	=1)	
	c. Units with LIHEAP utilit	•	\$ 2,411		- (n:	= 2)	
		E & utility funds (Item 3.ba.3)	· —		•		
•		ram funds & DOE (Item 4.B)	\$ 2,450		- (p	=2)	
	f. Other combinations (pl		<u> 2,430</u>		- (11	-2)	
,	i. Other combinations (pr	base specify).	s 2,100		(n	=2)	
a. F	resources of any of the full	Scale Weatherization al, or private and landlord co scale low-income weatheriza	ntributions which ation programs	ch were co above, bu	v benidmc v hoihw tu	with, and ac vere not the	ld to, the emselves
a. F	Please check off state, loca	al, or private and landlord co	ation programs	above, bu	v benidmc V doidw tu	with, and ac vere not the	ımsəlves
a. F	Please check off state, loca resources of any of the full	al, or private and landlord conscale low-income weatherize Type of Support (che	ation programs	above, bu	t which v	with, and ac vere not the <u>Est. Value</u>	combine with whi
a. F	Please check off state, loca resources of any of the full full-scale programs.	al, or private and landlord conscale low-income weatherize Type of Support (che	ation programs	above, bu	t which v	vere not the	Combine with whi Program
a. F	Please check off state, loca resources of any of the full full-scale programs. se List Funds' Source	al, or private and landlord conscale low-income weatherization Type of Support (characterists) No-cost/ Low-cost Materials Fundamental Fundamental Cost	ation programs eck all that ap unds Labor	above, bu	No. of	Est. Value	Combine with whi Program
a. F	Please check off state, loca resources of any of the full full-scale programs. se List Funds' Source	al, or private and landlord conscale low-income weatherization Type of Support (characterists) No-cost/ Low-cost Materials Fundamental Fundamental Cost	ation programs eck all that ap unds Labor	above, bu	No. of	Est. Value	Combine with whi Program
a. F	Please check off state, loca resources of any of the full full-scale programs. se List Funds' Source	al, or private and landlord conscale low-income weatherization Type of Support (characterists) No-cost/ Low-cost Materials Fundamental Fundamental Cost	ation programs eck all that ap unds Labor	above, bu	No. of	Est. Value	Combine with whi Program
a. f	Please check off state, loca resources of any of the full full-scale programs. se List Funds' Source (4)	al, or private and landlord conscale low-income weatherization Type of Support (characterists) No-cost/ Low-cost Materials Fundamental Fundamental Cost	ation programs eck all that ap unds Labor	above, bu	No. of	Est. Value	Combine with white
a. f	Please check off state, loca resources of any of the full full-scale programs. se List Funds' Source	al, or private and landlord conscale low-income weatherization Type of Support (characterists) No-cost/ Low-cost Materials Fundamental Fundamental Cost	ation programs eck all that ap unds Labor	above, bu	No. of	Est. Value	Combine with whi Program
a. f	Please check off state, local resources of any of the full full-scale programs. SE List Funds' Source (4) Emore pages if necessary) ase circle any of the above	al, or private and landlord conscale low-income weatherization Type of Support (characterists) No-cost/ Low-cost Materials Fundamental Fundamental Cost	eck all that apunds Labor 0 4 ould not have	other	No. of Units	Est. Value \$ 522,37 \$ \$	Combine with white Program (4)
Plea (use	Please check off state, local resources of any of the full full-scale programs. SE List Funds' Source (4) Emore pages if necessary) Use circle any of the above out the existence of the Weight	al, or private and landlord colliscale low-income weatherizate to the scale low-cost was a scale low-income weatherizate to the scale low-income weatherizate t	eck all that apunds Labor 0 4 ould not have in gram.	other	No. of Units	Est. Value \$ 522,37 \$ \$	Combine with whi Program (4)
Plea (use	Please check off state, local resources of any of the full full-scale programs. SE List Funds' Source (4) Emore pages if necessary) Ise circle any of the above out the existence of the Wood entered data on Items 3 Can the availability and	al, or private and landlord conscale low-income weatherization Assistance Programmes and landlord conscale low-income weatherization Assistance Programmes and landlord conscale low-income weatherization and landlord conscale lan	eck all that apunds Labor 0 4 ould not have in gram. wing: tility programs	or other p	No. of Units 208 able to eliporograms	Est. Value \$ 522,37 \$ s igible house	Combine with while Program (4) eholds

STATE MANAGERS' SURVEY

A	Total PY 87 funds \$ 408,384,527	B. Total PY 87 units247,0	652
	Please itemize any non DOE/WAP funds administered under DOE rules in this total: aa. PVE \$ 130,228,194 ab. LIHEAP \$ 99,346,902 ac. STATE \$ 3,000,000 ad. Other \$ 0 (please specify source)	Unit types single family ownocc. single family rental multi-family rental mobile homes	no. of units 123,60 45,75 53,17 11,88
<u>LIHEAF</u> weathe	on the spontating. The property of the series of the serie	unding sources administered through ferent from DOE/WAP:	the UHEAP
weatne	onot administered under DOE rules. Include all f	runding sources administered through ferent from DOE/WAP: B. Total PY 87 units 57,478	the LIHEAP
weatne	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if diff	ferent from DOE/WAP:	- e units in 1B.
weatne	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if different Total PY 87 funds \$ 85,626,388 Please itemize any Non-HHS funds included in this total:	ba. How many if any of these were also units reported above? (estimate if necessingle family ownocc	- e units in 1B. ssary)11,75 no. of units15,858
weatne	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if different and PY 87 funds \$ 85,626,388 Please itemize any Non-HHS funds included in this total: aa. PVE \$ 13,856,770 ab. STATE \$ 200,000 ac. Other \$ 0	ba. How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental	e units in 1B. ssary) 11,75: no. of units 15,858 6,558
weatne	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if different and PY 87 funds \$ 85,626,388 Please itemize any Non-HHS funds included in this total: aa. PVE \$ 13,856,770 ab. STATE \$ 200,000 ac. Other \$ 0	ba. How many if any of these were also units reported above? (estimate if necessingle family ownocc	- e units in 1B. ssary)11,75 no. of units15,858
weatne	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if different and PY 87 funds \$ 85,626,388 Please itemize any Non-HHS funds included in this total: aa. PVE \$ 13,856,770 ab. STATE \$ 200,000 ac. Other \$ 0	ba. How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental	no. of units 15,858 6,558
A.	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if differization program. Please enter PY 87 dates if differizatio	B. Total PY 87 units 57,478 ba. How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental mobile homes	no. of units 15,858 6,558
A.	P not administered under DOE rules. Include all ferization program. Please enter PY 87 dates if different dates if different PY 87 funds \$ 85,626,388 Please itemize any Non-HHS funds included in this total: aa. PVE \$ 13,856,770 ab. STATE \$ 200,000 ac. Other \$ 0 (please specify source)	B. Total PY 87 units 57,478 ba. How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental mobile homes	no. of units 15,858 6,558 4,021 1,234

STATE	:
SIMIE	•

١.	Total PY 87 Funds \$_2	,862,209	B. Total	PY 87 Units	4,132	
	Please list names of uticount:	lities included in this	ba.	Of these units, habove in: 1B.		
	1. (12)			Please estimate total number of	how man	y, if any, of the
	2.			weatherization of units completed	f DOE, P	VE or LIHEAP
	3.			170		,
	4.		bb.	<u>Unit types</u> single family ow	nocc.	no. of units 1,464
	5.			single family ren		687
	5.	7.		multi-family		<u> 456</u>
				mobile home		203
	No. Responding: 3	3				
O.	Were the utility program		lated by the Sta	te P.U.C.?	es _3	No
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		•			
٥.	Brief description of util	ty programs' relations	ships, if any, to	DOE/WAP. Che	ck if appli	cable.
			Check if Yes			
	1. Use DOE subgrante	es to implement	5	5	\$ 275,	
	2. Contribute material	to DOE program	2		s	 _
	2 Contribute services	to DOE program	0		\$	
	5. Continuate services		•	1	e	0
	 Contribute services Contribute funds to 	DOE program	1		³ <u></u>	
			2	5	\$ \$	
	4. Contribute funds to					
	4. Contribute funds to					
<u>Oth</u>	4. Contribute funds to 5. Other. (Please spe	cify)	2 ation: Please li	5 st any program(s	\$	0 d in A, B, or C,
<u>Oth</u>	4. Contribute funds to 5. Other. (Please spe	cify)	2 ation: Please li	5 st any program(s	\$	0 d in A, B, or C, PY 87.
fa	4. Contribute funds to 5. Other. (Please spe	cify)	2 ation: Please li g available for f	st any program(s ull-scale weather	\$	0 d in A, B, or C,
fa	4. Contribute funds to 5. Other. (Please spe her significant full-scale try, which contributed 1 Program Name	low income weatheriz 0% or more of funding	ation: Please li g available for f	st any program(s ull-scale weather	\$	d in A, B, or C, PY 87. its also included items above of units No. of Item
fa	4. Contribute funds to 5. Other. (Please spenner significant full-scale any, which contributed 1 Program Name 1. (5)	cify) low income weatheriz 0% or more of funding Total PY 87 Fund \$ 5,345,473	ation: Please li g available for f	st any program(s ull-scale weather	\$	d in A, B, or C, PY 87. its also included items above
Oth ff a	4. Contribute funds to 5. Other. (Please spe her significant full-scale try, which contributed 1 Program Name	low income weatheriz 0% or more of funding	ation: Please li g available for f	st any program(s ull-scale weather	\$	d in A, B, or C, PY 87. its also included items above of units No. of Item
fa	4. Contribute funds to 5. Other. (Please spe ther significant full-scale try, which contributed 1 Program Name 1. (5) 2.	cify) low income weatheriz 0% or more of funding Total PY 87 Fund \$ 5,345,473	ation: Please li g available for f	st any program(sull-scale weather	\$	d in A, B, or C, PY 87. its also included items above of units No. of Item 1,468

STATE:	
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Re	ehab. Program Name				Total	\$	Total Abo		Energ Progra Nam	ım
	(12)			\$	6.517.5	532	3.9	963	(9)	_
If some	e units are entered as herage cost for expenditu	naving multiple	e funding so	urces und	er Items	1.B, 2.B,	3.B, and 4	I.B abov	ve, plea	se ente
a .	Units with DOE and L				3,131		(21		
b.	Units with DOE and u		•		2,306		- (n=			
C.	Units with LIHEAP util		•		2,726		- (n= (n=	•		
d.	Units with LIHEAP, DO		-	•	3,000		- (n=	•		
e.	Units with "Other" pro-				2,250		- (n=	-,		
f.	Other combinations (p		•	, ,			(11-	1)	•	
		' '	•							
a. Pleares	ces combined with Full ase check off state, loc ources of any of the full	al. or private	and landlord	1 contribut	tions which	ch word o	n= combined ut which		nd add t	o, the elves
a. Pleares		al, or private : Il scale low-ind	and landlord come weath	i contributerization p	tions which	ch were c above, b	- combined		nd add t t thems	o, the elves
a. Ple res full-	ase check off state, loc ources of any of the ful	al, or private : Il scale low-ind	and landlord come weath	i contributerization p	tions which	ch were c above, b	combined ut which v		t thems (o, the elves Combinately vith with with with with with with with w
a. Ple. res. full- Please	ase check off state, loc ources of any of the ful -scale programs.	al, or private of scale low-index of the scal	and landlord come weath	d contribut erization p	tions whic programs	ch were c above, b	ombined ut which w	with, an were no <u>Est. V</u>	t thems (v alue <u>f</u>	elves Combination of the services of the servi
a. Ple. res. full- Please	ase check off state, loc ources of any of the fui -scale programs. List Funds' Source	Type No-cost/ Low-cost	and landlord come weath of Support	d contribut erization p	tions which programs If that app	ch were c above, b ply) Other	combined ut which v	with, an were no <u>Est. V</u>	t thems (elves Combination of the combination of the combina
a. Ple. res. full-	ase check off state, loc ources of any of the fui -scale programs. List Funds' Source	Type No-cost/ Low-cost	and landlord come weath of Support	d contribut erization p	tions which programs If that app	ch were c above, b ply) Other	ombined ut which w	with, an were no <u>Est. V</u>	t thems (v alue <u>f</u>	elves Combination of the services of the servi
a. Ple. res. full-	ase check off state, loc ources of any of the fui -scale programs. List Funds' Source	Type No-cost/ Low-cost	and landlord come weath of Support	d contribut erization p	tions which programs If that app	ch were c above, b ply) Other	ombined ut which w	with, an were no <u>Est. V</u>	t thems (v alue <u>f</u>	elves Combination of the combination of the combina
a. Pleares	ase check off state, loc ources of any of the ful -scale programs. List Funds' Source	Type No-cost/ Low-cost	and landlord come weath of Support	d contribut erization p	tions which programs If that app	ch were c above, b ply) Other	ombined ut which w	with, an were no <u>Est. V</u>	t thems (v alue <u>f</u>	elves Combi vith wi
a. Please (use mo	ase check off state, loc ources of any of the fui -scale programs. List Funds' Source	Type No-cost/ Low-cost 0 which, in you eatherization	and landlord come weath of Support Materials 5 r judgement Assistance F	contributerization processes to the contributerization processes t	Labor	oh were cabove, b	No. of Units	with, an were no s 1,6	7alue F 55,240	Combination of the control of the co

STATE MANAGERS' SURVEY

A.	Total P	Y 88 funds	\$ <u>398,920,856</u>	В	. Tota	I PY 88 units 241,92	<u>1</u>
	funds a		non DOE/WAP under DOE rule	s in this		t types gle family ownocc.	<u>no. of unit:</u> 1 <u>16,88</u> -
	total:				sin	gle family rental	<u>47,01</u> 4
	aa. PV	E	\$ 173,209,0	48	mu	lti-family rental	<u>55,79</u> 8
	аь. Цн	HEAP	\$ 53,918,99	95	mo	bile homes	11,529
	ac. ST.	ATE	\$ 3,200,00	00			
	ad. Otl	_	\$ 243,00	00			
	(pl	ease specify	source)				
				·			
1E A E		lesponding Iministered		Include all funding	7 5011	ces administered through	the LIHEAP
						DOE/WAP:	
A.	Total F	Y 88 funds	\$ 100,824,58	83 B	. Tota	I PY 88 units 48, 255	<u>.</u>
A.	Please include	itemize any od in this tot	Non-HHS funds			How many if any of these were also units reported	in 1B.
A.	Please include aa. PV	temize any d in this tot E	Non-HHS funds		ba.	How many if any of these were also units reported above? (estimate if neces	in 1B. ssary) <u>11,85</u>
A.	Please include aa. PV ab. ST	itemize any ed in this tot /E ATE	Non-HHS funds		ba.	How many if any of these were also units reported above? (estimate if neces	in 1B. ssary) 11,85 no. of unit
A.	Please include aa. PV ab. ST ac. Ot	itemize any ed in this tot E ATE her	Non-HHS funds al: \$ 33,362,29 \$ \$	96	ba.	How many if any of these were also units reported above? (estimate if necessable types single family ownocc	in 1B. ssary) 11,85 no. of unit 14,482
A.	Please include aa. PV ab. ST ac. Ot	itemize any ed in this tot /E ATE	Non-HHS funds al: \$ 33,362,29 \$ \$	96	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental	in 1B. ssary) 11,85 no. of unit 14,482 5,173
A.	Please include aa. PV ab. ST ac. Ot	itemize any ed in this tot E ATE her	Non-HHS funds al: \$ 33,362,29 \$ \$	96	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental	in 1B. ssary) 11,85 no. of unit 14,482 5,173 6,587
A.	Please include aa. PV ab. ST ac. Ot (pi	itemize any ed in this tot /E ATE her lease specifi	* Non-HHS funds al: \$_33,362,29 \$_ \$_ \$_ y source)	96	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental	in 1B. ssary) 11,85 no. of unit 14,482 5,173
	Please include aa. PV ab. ST ac. Ot (pi	temize any ded in this total the fease specific esponding	Non-HHS funds al: \$ 33,362,29 \$ y source)	96 0 0	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental mobile homes	in 1B. ssary) 11,85 no. of unit 14,482 5,173 6,587 1,985
	Please include aa. PV ab. ST ac. Ot (pi	esponding	Non-HHS funds al: \$ 33,362,29 \$ \$ y source)	96 0 0	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental mobile homes	in 1B. ssary) 11,85 no. of unit 14,482 5,173 6,587 1,985 ck if applicable
	Please include aa. PV ab. ST ac. Ot (pi	esponding escription of me as DOE	Non-HHS funds al: \$ 33,362,29 \$ \$ y source) 16 f program purpor but exceeds DO	96 0 0 ses E cost limits	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental mobile homes	in 1B. ssary) 11,85 no. of unit 14,482 5,173 6,587 1,985 ck if applicable 7
	Please include aa. PV ab. ST ac. Ot (pi	esponding escription of me as DOE	Non-HHS funds al: \$ 33,362,29 \$ \$ source) : 16 f program purpos but exceeds DO n work not permi	96 0 0	ba.	How many if any of these were also units reported above? (estimate if necessingle family ownocc single family rental multi-family rental mobile homes	in 1B. ssary) 11,85 no. of unit 14,482 5,173 6,587 1,985 ck if applicable

C	Please list names of utilities included in this count:	ba.	Of about 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	···	
	Junt.			w many are ils	ted
1	/ 1 / 5		above in: 1B. 3, 20 Please estimate ho	ow many, if an	y, of the
	(14)		total number of unweatherization of t	its represent r	0 -
2			units completed in	previous year	'S :
3	i.	L L			4
4		DD.	Unit types single family own.		of units ,631
5	·		single family rental	_	984
			multi-family	-	640
			mobile home	-	323
No	o. Responding: 5				
2. 3. 4.	Use DOE subgrantees to implement Contribute material to DOE program Contribute services to DOE program Contribute funds to DOE program Other. (Please specify)	6 1 0 1 2	1 0	6 0 0 0 6 0 0 0	
Other if any	significant full-scale low income weatheriza, which contributed 10% or more of funding	available for fu	II-scale weatherizat	ot listed in A, i ion in PY 88. Units also in items a	included
A. <u>P</u>				No. of units	No of Its
A. <u>P</u>	(4) \$ 2,324,512	3.15	6		140. 01 116
		3.15	6	1,689	
1. 2. C. Bi				1,689	

STATE	:	

5	If any housing repair of	or rehabilitation programs	s contributed funding to any	v units listed in items	1-4 above, please list:

Rehab. Program Name	<u>Total \$</u>	Total Units Above	Energy Program Name
(11)	\$2,066,014	1,809	<u>(ŝ </u>

6. If some units are entered as having multiple funding sources under items 1.B, 2.B, 3.B, and 4.B above, please enter the average cost for expenditures on such "mixed" units. Estimate if necessary.

a.	Units with DOE and LIHEAP funds (item 2.ba)	\$_	3,002	(n=4)
b.	Units with DOE and utility funds (item 3.ba.1)	\$	2,600	(n=1)
C.	Units with LIHEAP utility funds (item 3.ba.2)	\$	3,000	(n=1)
	Units with LIHEAP, DOE & utility funds (Item 3.ba.3)	\$	3,000	(n=1)
e.	Units with "Other" program funds & DOE (Item 4.B)	\$_	2,472	_ (n=1)
f.	Other combinations (please specify):			
		\$_	1,923	(n=3)

- 7. Resources combined with Full-Scale Weatherization
 - a. Please check off state, local, or private and landlord contributions which were combined with, and add to, the resources of any of the full scale low-income weatherization programs above, but which were not themselves full-scale programs.

	Type	of Support	(check a	i that ap	oly)			0bi
Please List Funds' Source	No-cost/ Low-cost	<u>Materials</u>	<u>Funds</u>	<u>Labor</u>	<u>Other</u>	No. of Units	Est. Value	Combined with which Program?
(10)	0	6	1	7	0	4,536	\$ 1,865,55	55 (9)
							\$	
							\$	
(use more pages if pecessary)							\$	

(use more pages if necessary)

Please circle any of the above which, in your judgement, would not have been available to eligible households without the existence of the Weatherization Assistance Program.

If you entered data on Items 3 or 4, please answer the following:

Can the availability and/or scope of the full scale utility programs or other programs listed in Items 3 and 4 be attributed to existence of the DOE Weatherization Assistance Program? Yes $\frac{7}{}$ No $\frac{1}{}$ If yes, please explain briefly $\frac{}{}$ (0)

STATE MANAGERS' SURVEY

A. Total PY 89 ful	nds \$ 379,935,664	B. Total PY 89 units	
funds administ total:	any <u>non DOE/WAP</u> ered under DOE rules in this	Unit types single family ownocc single family rental	45,438
aa. PVE	\$ 170,450,735	multi-family rental	46,815
ab. LIHEAP	\$58,065,855	mobile homes	13,861
ac. STATE	\$ 450,000		
ad. Other	\$3,709,395 ecify source)		
(prease sp	ecity source)		
No. Respond	ling: 16		
weatherization program	red under DOE rules. Include all fin. Please enter PY 89 dates if difference \$ 61,305,823	ferent from DOE/WAP:	
weatherization program A. Total PY 89 fu	n. Please enter PY 89 dates if difference states if difference states in the states in	B. Total PY 89 units 55, ba. How many if any were also units re	502 of these units
weatherization program A. Total PY 89 fu Please Itemize included in thi	n. Please enter PY 89 dates if difference states if difference states in the states in	ba. How many if any were also units re above? (estimate	of these units ported in 1B. if necessary) 12,60
A. Total PY 89 fu Please Itemize included in thi aa. PVE ab. STATE ac. Other	n. Please enter PY 89 dates if differents any Non-HHS funds s total: \$ 4,127,731 \$ 0 \$ 0	B. Total PY 89 units55, ba. How many if any were also units re above? (estimate bb. <u>Unit types</u> single family or	of these units ported in 1B. if necessary) 12,60 no. of unit wnocc 16,176
A. Total PY 89 fu Please Itemize included in thi aa. PVE ab. STATE ac. Other	n. Please enter PY 89 dates if differents any Non-HHS funds s total: \$ 4,127,731 \$ 0	B. Total PY 89 units 55, ba. How many if any were also units re above? (estimate bb. Unit types single family or single family re	of these units ported in 1B. if necessary) 12,60 mo. of unit wnocc 16,176 10,151
A. Total PY 89 fu Please Itemize included in thi aa. PVE ab. STATE ac. Other	n. Please enter PY 89 dates if differents any Non-HHS funds s total: \$ 4,127,731 \$ 0 \$ 0	ba. How many if any were also units re above? (estimate bb. Unit types single family or multi-family rer	of these units ported in 1B. if necessary) 12,60 no. of unit wnocc 16,176 10,151 1111 24,811
A. Total PY 89 fu Please Itemize included in thi aa. PVE ab. STATE ac. Other (please sp	n. Please enter PY 89 dates if differents any Non-HHS funds s total: \$ 4,127,731 \$ 0 \$ ecify source)	B. Total PY 89 units 55, ba. How many if any were also units re above? (estimate bb. Unit types single family or single family re	of these units ported in 1B. if necessary) 12,60 mo. of unit wnocc 16,176 10,151
A. Total PY 89 fur Please Itemize included in this aa. PVE ab. STATE ac. Other (please sponsor) No. Responsor	n. Please enter PY 89 dates if differents \$ 61,305,823 any Non-HHS funds stotal: \$ 4,127,731 \$ 0 \$ cecify source)	ba. How many if any were also units re above? (estimate bb. Unit types single family or multi-family rer	of these units ported in 1B. if necessary) 12,60 mo. of unit wnocc 16,176 ntal 24,811 2,740
A. Total PY 89 fur Please Itemize included in this aa. PVE ab. STATE ac. Other (please sponsor) No. Responsor. C. Brief descriptions	n. Please enter PY 89 dates if differents \$\frac{61,305,823}{4,127,731}\$\$\frac{0}{5}\$ ecify source)	ba. How many if any were also units re above? (estimate bb. Unit types single family or multi-family rer	of these units ported in 1B. if necessary) 12,60 mo. of unit wnocc 16,176 10,151 24,811 2,740 (check if applicable
A. Total PY 89 fur Please Itemize included in this aa. PVE ab. STATE ac. Other (please sponsor) No. Responsor. C. Brief description.	n. Please enter PY 89 dates if differents \$ 61,305,823 any Non-HHS funds stotal: \$ 4,127,731 \$ 0 \$ cecify source)	B. Total PY 89 units55, ba. How many if any were also units re above? (estimate bb. <u>Unit types</u> single family or multi-family rer mobile homes	of these units ported in 1B. if necessary) 12,60 mo. of unit wnocc 16,176 ntal 24,811 2,740

STATE:	
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A.	Total PY 89 Funds \$	16,566,966	В.	Total	PY 89 Units _	15,77	9
	Please list names of count:	s	ba.	Of these units, how ma above in: 1B1,350		2B . 0	
	1. (14)				Please estimate total number of		ny, if any, of the present re-
	2.				weatherization units complete		PVE or LIHEAP ous years:
	3.				0	·	·
	4.			ob.	Unit types single family o	wnocc.	<u>no. of units</u> 687
					single family re	ental	411
					multi-family		275
					mobile home		_138
	No. Responding:	4					
C.	Were the utility progra	ams listed in 3.A. mar	ndated by the	Stat	e P.U.C.? `	Yes _3	No _1
D.	Brief description of ut	ility programs' relatio	nships, if any,	to C	OOE/WAP. Ch	eck if app	licable.
			Check if Ye	s .	No. of Utilities	Est. Va	lue
	1. Use DOE subgran	•	5		6	\$	0
	Contribute materia	· -	1		1	\$	0
	3. Contribute service		0		0	\$	0
	4. Contribute funds to	· -	0		0	\$	0
	5. Other. (Please sp	ecity)	2		5	\$	0
Oth if a	ner significant full-scale iny, which contributed	low income weather	<u>ization</u> : Pleas	e list	any program(s) not liste	ed in A, B, or C,
	,, which contributed	TO A CI THOIS OF IGING!	ing avallable in	עטו וכ	i-scale weathe		
A.	Program Name	Total PY 89 Fur	nds B. T	otal	Units		its also included items above
Λ.							
	1. (9)	\$ 24,306,02	21 4	,09	4		of units No. of Iter ,776
	1						
	2.	\$	· <u>-</u>				
C.	2.			essar	ry. Please incl	ude any d	ata available on typ
C.	2. Brief program descrip units.)		pages if nec				ata available on typ

STATE:

	Rehab. Program Name				Total \$		Total U Abov		
	(13)			\$3	,810,506	<u> </u>	2,069	(7)	
	f some units are entered as the average cost for expending						B, and 4.i	B above, ple	ase enter
••	a. Units with DOE and				3,214		(n=2))	
	b. Units with DOE and		•				•		
	c. Units with LIHEAP u	•	•	\$					
	d. Units with LIHEAP, [OCE & utility ful	nds (item 3.b	oa.3) \$					
	e. Units with "Other" pr	ogram funds &	DOE (Item	4.B) \$	2,716		(n=2))	
	f. Other combinations	(please specify	y):				•		
				\$	2,267		(n=4))	
	Resources combined with France. a. Please check off state, leading resources of any of the full-scale programs.	ocal, or private	and landlord	d contribut erization p	ions whic programs	th were co above, bu	ombined v at which v	with, and advere not the	d to, the mselves
	a. Please check off state, le	ocal, or private full scale low-in	and landlord	erization p	rograms	above, bu	ombined v it which v	with, and advere not the	mselves
a	a. Please check off state, le	ocal, or private full scale low-in Type No-cost/	and landlord come weath of Support	erization p	orograms	above, bu	nt which w	with, and advere not the	nselves Combi
a	Please check off state, leaves of any of the full-scale programs.	ocal, or private full scale low-in Type No-cost/	and landlord come weath of Support	erization p	orograms	above, bu	No. of	vere not the	Combi
a	Please check off state, leave resources of any of the full-scale programs. Please List Funds' Source	ocal, or private full scale low-in Type No-cost/ Low-cost	and landlord come weath of Support	erization publication (check al	I that app	above, bu	No. of	ere not the	Combi
a	Please check off state, leave resources of any of the full-scale programs. Please List Funds' Source	ocal, or private full scale low-in Type No-cost/ Low-cost	and landlord come weath of Support	erization publication (check al	I that app	above, bu	No. of	ere not the	Combined the Combi
a	Please check off state, leave resources of any of the full-scale programs. Please List Funds' Source	ocal, or private full scale low-in Type No-cost/ Low-cost	and landlord come weath of Support	erization publication (check al	I that app	above, bu	No. of	Est. Value \$ 6,191,	Combined the Combi
a	Please check off state, leave resources of any of the full-scale programs. Please List Funds' Source	ocal, or private full scale low-in Type No-cost/ Low-cost	and landlord come weath of Support	erization publication (check al	I that app	above, bu	No. of	ere not the	Comi with Progr
## ## ## ## ## ## ## ## ## ## ## ## ##	a. Please check off state, le resources of any of the full-scale programs. Please List Funds' Source (17) (use more pages if necessar	Type No-cost/ Low-cost 0	and landlord come weath of Support	check at	Labor 10	oly) Other 3	No. of Units	Est. Value \$ 6,191,1	Comb with w Progra
## ## ## ## ## ## ## ## ## ## ## ## ##	a. Please check off state, leaves of any of the full-scale programs. Please List Funds' Source (17)	Type No-cost/ Low-cost O we which, in yo	and landlord come weath of Support Materials 9 our judgemen	check al Funds 1	Labor 10	oly) Other 3	No. of Units	Est. Value \$ 6,191,1	Combi with w Progra
## ## ## ## ## ## ## ## ## ## ## ## ##	a. Please check off state, le resources of any of the full-scale programs. Please List Funds' Source (17) (use more pages if necessal Please circle any of the abo	Type No-cost/ Low-cost O we which, in yo Weatherization	and landlord come weath of Support Materials 9 our judgement Assistance	rization processing from the control of the control	Labor 10	oly) Other 3	No. of Units	Est. Value \$ 6,191,1	Combi with w Progra
## ## ## ## ## ## ## ## ## ## ## ## ##	a. Please check off state, le resources of any of the full-scale programs. Please List Funds' Source (17) (use more pages if necessal Please circle any of the abowithout the existence of the	Type No-cost/ Low-cost O we which, in yo Weatherization 3 or 4, please	and landlord come weath of Support Materials 9 our judgement Assistance answer the of the full sca	rization processing from the content of the content	Labor 10 not have been programs	Other 3 Deen avail	No. of Units 1,540 able to eli	Est. Value \$ 6,191, \$ \$ igible house	Combi with with with with with with with wit

Company	Name	

No. Responding: 98

US DEPARTMENT OF ENERGY WEATHERIZATION ASSISTANCE EVALUATION

THE SCOPE OF UTILITY LOW INCOME WEATHERIZATION PROGRAMS

A.		funds spent on erization program	\$ 113,803,660	(n=24)	
В.	Total or in	units completed in whole part with utility resources	306,719	(n=24)	
		<u>Unit Types</u> (n=15)	No. of Units		
	1. si	ngle family, owner occupied	53,005		
	2. si	ngle family, rental	23,564		
	3. m	ulti-family, rental	38,103	•	
	4. m	obile homes	303		
<i>C</i>	31 <i>1</i> •			Yes No	
C.	the ut	he program mandated by the booility?	dy that regulates	11 0	
13					
D.	If any funded	of the units listed in item B abo d program resources, please indi Number of units among those utility and public program res	cate the following: in 1.B. with combined		
υ.	funde	Number of units among those utility and public program res	cate the following: in 1.B. with combined ources	76,840	(:
υ.	fundea	Number of units among those utility and public program res The publicly funded program(cate the following: in 1.B. with combined cources (s):		(:
D.	fundea	Number of units among those utility and public program res	in 1.B. with combined cources (s): (g) Weatherization h and Human Services (y) Assistance Program's	76,840 Please Check	(:
D.	fundea	Number of units among those utility and public program res The publicly funded program(a. U.S. Department of Energy b. U.S. Department of Healt Low-Income Home Energy	in 1.B. with combined ources s): gy Weatherization th and Human Services y Assistance Program's	76,840 Please Check	(:
D.	fundea	Number of units among those utility and public program res The publicly funded program(a. U.S. Department of Energy b. U.S. Department of Healt Low-Income Home Energy Weatherization (LIHEAP)	in 1.B. with combined ources s): gy Weatherization th and Human Services y Assistance Program's	76,840 Please Check 5	(

	1.	Ins	ulation, heat loss		2.	Ai	r or water leakage	
		٤.	attic insulation	22		a.	weatherstrip/caulk	
		b.	wall insulation	11		ь.	window replacement	
		c.	basement insulation	9		c.	storm windows/doors	
		d.	wrap water heater/ducts	24		đ.	home repairs	
		e.	other (please specify)	11		e.	other (please specify)	
	3.	He	ating system			Н	ot water system	
			repair/tune up	5	7.		repair/tune up	
			replacement	5			replacement	
			other	1			other	
	5.		jor appliance		6.		ghting measures	
			lacement	0		·		
	7.	Mi	scelllaneous					
		a .	water saving measures	7				
			water saving measures cooling measures	1				
		b.	_					
<u>n addi</u> esourc	es d	b. c. to th	other (please specify) e activities above, did the	1 2	n PY 19	978- 1 pro	85 donate energy conservograms? If yes, please in No. of units assisted	'atio idica
n addi esourc	es di To	b. c. to th irectl	other (please specify) e activities above, did they to public sector low-including	e company i come weath	erization	978- 1 pro	ograms? If yes, please in	atio dica
n addi esourc	es di To	b. c. to th irectl	other (please specify) e activities above, did they to public sector low-ine	e company i come weath	erization le)	pro	ograms? If yes, please in	vatio idica
n addi esourc	es di To	b. c. to th irectl	other (please specify) e activities above, did they to public sector low-including Resource (please check	e company i come weath \$all applicab	erization	pro	ograms? If yes, please in	vatio dica
<u>n addi</u> esourc	es di To	b. c. to th irectl	other (please specify) e activities above, did they to public sector low-including Resource (please check cash	e company i come weath sall applicab	erization ————————————————————————————————————	pro	ograms? If yes, please in	vatio dica
<u>In addi</u> resourc	es di To	b. c. to th irectl	cooling measures other (please specify) e activities above, did they to public sector low-including Resource (please check cash materials	e company i come weath sall applicab tr	erization le) quipmen aining	n pro	No. of units assisted	atio: dica
<u>n addi</u> esourc	es di To	b. c. to th irectl	cooling measures other (please specify) e activities above, did the y to public sector low-incoming Resource (please check cash materials personnel	e company i come weath sall applicab tr	erization le) quipmen aining	n pro	No. of units assisted	vatio dica
In addi resourc	To	b. c. to th irectl	cooling measures other (please specify) e activities above, did the y to public sector low-incoming Resource (please check cash materials personnel	e company i come weath \$	le) quipmen aining ther blease sp	nt pro	No. of units assisted y)	vation dica
In addi	To	b. c. to th irectl	cooling measures other (please specify) e activities above, did the y to public sector low-including Resource (please check cash materials personnel vehicles	e company i come weath s all applicab tr (g	quipmen aining other please sp	nt pro	No. of units assisted y)	vatio dica

3. If your company provided other forms of energy conservation assistance to low income households at no charge, please indicate below:

Measure		Check If Yes	No. of Low Income Recipient Households (Only)	Average Cost Per Household Max/Min
blower door	test		0	
heating syste	m performance test	8	6,251	\$55/8
cooling syste	m performance test	1	0	
heating/cooli	ng system safety test	2	800	
indoor air qu	ality instrumented test	2	27	\$25/25
light bulbs, l	lighting measures	3	0	\$25/25
attic insulation	no	8	26,610	\$25/25
wall insulation	no	6	0	
heating syste	em:			
	repair/tune up		1,978	\$561/70
	replacement	4	251	<u>\$1,680/1,50</u> 0
water heater	:			
	repair/tune up	· 3	<u> 175</u>	
	replacement			
window repl	acement	3	0	
storm windo	ws/door	12	29	\$25/25
home repairs	5	5	0	\$25/25
caulk or wea	ther strip	17	61,976	\$50/6
low cost/no	cost kit	9	26,004	\$80/4
water system	wrap up	6	69	\$12/7
duct wrap u	o	3	615	
client educat	ion/information			
if yes:	by mail	15	332,055	\$397/0.04
	at home training	18	21,542	\$150/10
	center based training	7	240	\$100/10
cooling mean	sures	2	0	
major applia	nce replacement	2	0	
Other (pleas	e specify)	3	35	\$30/30

PY	19	86	5
mo/	yr	-	mo/yr

Company Name	
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No.	Responding:	57

US DEPARTMENT OF ENERGY WEATHERIZATION ASSISTANCE EVALUATION

THE SCOPE OF UTILITY LOW INCOME WEATHERIZATION PROGRAMS

	Total funds spent on weatherization program	\$ 40,069,871	_ (n=2)	2)
В.	Total units completed in whole	136,868	(n=2)	3)
	or in part with utility resources		-	
	<u>Unit Types</u> (n=18)	No. of Units		
	1. single family, owner occupied	73,645		
	2. single family, rental	8,755		
	3. multi-family, rental	35,788		
	4. mobile homes	170		
_			Yes	No
C.	Was the program mandated by the boothe utility?	ly that regulates	11	16
	funded program resources, please indicated in the second of the second o	in 1.B. with combined	22,27	74
	2. The publicly funded program(s):	Please	Check
	a. U.S. Department of Energ	y Weatherization		4
	b. U.S. Department of Healt Low-Income Home Energy Weatherization (LIHEAP)	y Assistance Program's		5
	c. State program (please give	e name)		7

1986	

	1.	Insulat	on, heat loss		2.	Aiı	r or water leakage	
		a. atti	c insulation	21	-	â.	weatherstrip/caulk	25
		b. wa	l insulation	10	-	ь.	window replacement	<u> </u>
		c. bas	ement insulation	9	-	c.	storm windows/doors	15
		d. wra	ap water heater/ducts	22	-	d.	home repairs	12
		e. oth	er (please specify)	10	-	e.	other (please specify)	
	3.		g system		- 4.	Ho	ot water system	
		a. rep	air/tune up	7	<u>-</u>	a.	repair/tune up	5
		b. rep	lacement	5	<u>.</u>	b.	replacement	4
		c. oth	er	0	_	c.	other	0
	5.	Major replace	appliance ement	0	6.	Li	ghting measures	1
	7	Miscel	llaneous					
		a. wa	ter saving measures	8	-			
		b. co	oling measures	1	_			
		c. oth	ner (please specify)	2	_			
In add directl	ition y to p	to the a	ctivities above, did th	e company	in PY 19	986 5?]	donate energy conservat If yes, please indicate:	ion reso
In add directl	y to p	to the a	ctivities above, did the	e company	in PY 19	986 s?]	donate energy conservat If yes, please indicate: No. of units assisted	ion reso
In add directl	y to p To	to the a public so tal fund	ctivities above, did the	e company therization	programs	986 5?]	If yes, please indicate:	ion reso
In add directl	y to p To	to the a bublic so tal fund	ctivities above, did the ctor low-income wea	e company therization \$ all applica	programs	s?]	If yes, please indicate:	ion reso
In add directl	y to p To	to the a bublic so tal fund pe of R	ctivities above, did the ctor low-income wearing esource (please check	e company therization \$all applica	programs ble)	s?]	If yes, please indicate:	ion reso
<u>In add</u> directl	y to p To	to the a public so tal fund pe of R	ctivities above, did the ctor low-income wearing esource (please check sh	e company therization \$ all applica	programs ble) equipmentraining Other	it	No. of units assisted	ion reso
<u>In add</u> directl	y to p To	to the a public so tal fund pe of R	ctivities above, did the ctor low-income wearing esource (please check ish	e company therization \$ all applica	programs ble) equipmentraining	it	No. of units assisted	ion res
<u>In add</u> directl	y to p	to the a public so tal fund pe of R ca m po	ctivities above, did the ctor low-income wearing esource (please check ish	e company therization \$ all applica	programs ble) equipmentraining Other (please sp	nt peci	No. of units assisted fy)	ion reso
<u>In add</u> directl	y to p	to the a public so tal fund pe of R ca m vo	ctivities above, did the ctor low-income weaking esource (please check ish aterials ersonnel ehicles	e company therization \$ all applica	programs ble) equipmentraining Other (please spanse) all appli	nt peci	No. of units assisted fy)	ion reso

3. If your company provided other forms of energy conservation assistance to low income households at no charge, please indicate below:

Measure		Check If Yes	No. of Low Income Recipient Households (Only)	Average Cost Per Household Max/Min
blower door	test	3	1,050	\$50/50
heating syste	m performance test	8	3,042	\$100/9
cooling syste	m performance test	1	0	
heating/cooli	ng system safety test	4	4,375	\$30/30
indoor air qu	sality instrumented test	3	9	\$25/25
light bulbs, l	ighting measures	2	0_	\$30/30
attic insulation	n	8	11,728	\$30/30
wall insulation	on	6	0	\$30/30
heating syste	m:			
	repair/tune up	8	1,331	\$590/75
	replacement	6	204	\$1,680/906
water heater:				
	repair/tune up	5	503	\$30/30
	replacement			
window repla	acement	4	0	<u>\$17/17</u>
storm windo	ws/door	9	0	\$500/500
home repairs		7	0	\$500/30
caulk or wea	ther strip	16	43,337	\$250/4
low cost/no	cost kit	10	13,876	\$147/0
water system	wrap up		2,206	\$59/9
duct wrap up	•	3	48	\$20/20
client educati	on/information			
if yes:	by mail	15	89,432	\$381/0.03
	at home training	18	5.247	\$166/30
	center based training	6	40	\$100/100
cooling meas	ures	1	0	
major applia	nce replacement	1	0	
Other (please	e specify)	6	113	\$62/32

Company	Name	
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No. Responding: 59

US DEPARTMENT OF ENERGY WEATHERIZATION ASSISTANCE EVALUATION

THE SCOPE OF UTILITY LOW INCOME WEATHERIZATION PROGRAMS

Α.	Total funds spent on weatherization program	\$ <u>78,900,949</u>	(n=30)	
В.	Total units completed in whole or in part with utility resources	182,042	(n=31)	
	Unit Types (n=23)	No. of Units		
	1. single family, owner occupied	30,664		
	2. single family, rental	8,492		
	3. multi-family, rental	31,316		
	4. mobile homes	734		
_			Yes No	
C.	Was the program mandated by the boothe utility?	dy that regulates	12 20	
D.	If any of the units listed in item B abo	ove involved combining you	ur program with p	ublicly-
	funded program resources, please indi Number of units among those utility and public program res	cate the following: in 1.B. with combined	25,717	
Σ.	funded program resources, please indi 1. Number of units among those	cate the following: in 1.B. with combined sources		
	1. Number of units among those utility and public program res	cate the following: in 1.B. with combined sources (s):	25,717	ublicly- (n=1
J.	 funded program resources, please indi Number of units among those utility and public program res The publicly funded program 	cate the following: in 1.B. with combined sources (s): gy Weatherization th and Human Services y Assistance Program's	25,717 Please Check	
	funded program resources, please indi 1. Number of units among those utility and public program res 2. The publicly funded program a. U.S. Department of Energy b. U.S. Department of Healt Low-Income Home Energy	cate the following: in 1.B. with combined sources (s): gy Weatherization th and Human Services y Assistance Program's	25,717 Please Check 7	
	funded program resources, please indi Number of units among those utility and public program res The publicly funded program a. U.S. Department of Energy b. U.S. Department of Healt Low-Income Home Energy Weatherization (LIHEAP)	cate the following: in 1.B. with combined sources (s): gy Weatherization th and Human Services y Assistance Program's	25,717 Please Check 7	

	1.	Insulati	on, heat loss		2.	Ai	r or water leakage	
		a. atti	c insulation	29	_	a.	weatherstrip/caulk	3(
		b. wal	l insulation	15	_	b.	window replacement	16
		c. base	ement insulation	16	_	c.	storm windows/doors	21
		d. wra	p water heater/ducts	28	_	đ.	home repairs	15
		e. oth	er (please specify)	_13		e.	other (please specify)	10
	3.	Heating	system		- -	U.		
	٥.	_	air/tune up	10	٩.		ot water system	
		-	acement	7	_		repair/tune up replacement	
		c. othe		0			other	
	5.		appliance	0	- 6.		ghting measures	
	7.	Miscell			-			
			er saving measures	8				
				•				
			_	0	-			
		b. coo	ling measures er (please specify)		-			
In addirectly	to p	b. coo	ling measures er (please specify) tivities above, did the tor low-income weath	0 3	- - in PY 19 programs	987 (s? I	donate energy conservation f yes, please indicate: No. of units assisted	on res
<u>In addir</u> directly	To	b. cool c. other to the act bublic sectal fundir	ling measures er (please specify) tivities above, did the tor low-income weath	0 3 company nerization	programs ——	987 s? I	f yes, please indicate:	on reso
<u>In addir</u> directly	To	b. cool c. other to the act bublic sectal fundir	ling measures er (please specify) tivities above, did the tor low-income weath	0 3 company nerization \$all application	programs ——	s? I	f yes, please indicate:	on reso
<u>In addirectly</u>	To	b. coode. c. other to the actorophic sectal fundir	ling measures er (please specify) tivities above, did the tor low-income weath	company nerization \$all application	programs ble)	s? I	f yes, please indicate:	on reso
In addirectly	To	b. coode. c. other to the account of the account	tivities above, did the tor low-income weath	company nerization \$all application	programs ble) equipmen training Other	s? I	f yes, please indicate: No. of units assisted	on reso
In addirectly	To	b. cool c. other to the account of t	tivities above, did the tor low-income weath	company nerization \$all application	programs ble) equipmen	s? I	f yes, please indicate: No. of units assisted	on reso
In addirectly	To p	b. cool c. other to the account of t	tivities above, did the stor low-income weath generate (please check and please check and p	company nerization \$	programs ble) equipment training Other please sp	it ecif	f yes, please indicate: No. of units assisted y)	on reso
In addirectly	To p	b. cool c. other to the actoublic sectal fundir pe of Res mat pers veh	tivities above, did the tor low-income weath generals course (please check and course check and course (please check and course)	company nerization \$	programs ble) equipment training Other (please sp	it ecif	f yes, please indicate: No. of units assisted y)	on reso

3. If your company provided other forms of energy conservation assistance to low income households at no charge, please indicate below:

Measure	Check If Yes	No. of Low Income Recipient Households (Only)	Average Cost Per Household Max/Min
blower door test	5	1,301	\$538/50
heating system performance test	7	3,500	\$35/9
cooling system performance test	1	0	
heating/cooling system safety test	4	4,075	\$35/35
indoor air quality instrumented test	3	9	\$25/25
light bulbs, lighting measures	3	<u>77</u>	\$376/30
attic insulation	11	7,869	\$630/30
wall insulation	9	77	\$630/30
heating system:			
repair/tune up	7	1,030	\$90/90
replacement	6	315	\$1,500/906
water heater:			
repair/tune up	5	530	\$30/30
replacement			
window replacement	5	0	\$20/20
storm windows/door	9	0	\$500/500
home repairs	7	0	\$500/30
caulk or weather strip	18	41,583	\$30/4
low cost/no cost kit	12	15,565	\$186/4
water system wrap up	10	2,431	\$59/9
duct wrap up	6	44	\$20/20
client education/information			
if yes: by mail	17	92,719	\$775/0.03
at home training	17	7,631	\$150/30
center based training	8	690	\$100/93
cooling measures	2	0	
major appliance replacement	2	0_	
Other (please specify)	6	240	\$500/34

PY	19	88	3
mo/	yr	-	mo/yr

Company	Name	

No.	Respondi	ne:	5.5

US DEPARTMENT OF ENERGY WEATHERIZATION ASSISTANCE EVALUATION

THE SCOPE OF UTILITY LOW INCOME WEATHERIZATION PROGRAMS

	Total funds spent on weatherization program	\$ 77,561,119	(n=31)
В.	Total units completed in whole or in part with utility resources	178,238	(n=29)
	Unit Types (n=22)	No. of Units	
	1. single family, owner occupied	28,104	
	2. single family, rental	7,669	
	3. multi-family, rental	28,223	
	4. mobile homes	205	
C.	Was the program mandated by the both the utility?	dy that regulates	Yes No 14 16
D.	If any of the units listed in item B abofunded program resources, please indi 1. Number of units among those	cate the following:	ur program with I
	utility and public program res	ources	21.600
	utility and public program res	ources	21,600 Please Check
	utility and public program res	ources s):	21,600 Please Check
	2. The publicly funded program (ources s): y Weatherization h and Human Services y Assistance Program's	Please Check
	2. The publicly funded program (a. U.S. Department of Energy b. U.S. Department of Healt Low-Income Home Energy	ources (s): (s): (s) Weatherization (h) and Human Services (s) Assistance Program's	Please Check

	1.	Ins	sulation, heat loss		2.	Ai	r or water leakage	
		a.	attic insulation	29	_	a.	weatherstrip/caulk	29
		ъ.	wall insulation	15	_	b.	window replacement	13
		c.	basement insulation	15	-	c.	storm windows/doors	21
		d.	wrap water heater/ducts	26		d.	home repairs	16
		e.	other (please specify)	11	_	e.	other (please specify)	12
	3.	Не	eating system		_ _ 	Но	ot water system	
	٠.	a .	repair/tune up	13			repair/tune up	8
			replacement	14	_		replacement	6
			other	2		c.	other	4
	5.		ajor appliance placement	0	6.	Li	ghting measures	2
	7.		iscelllaneous					
		a.	water saving measures	10				
					_			
		b.	cooling measures	2	_			
			-	2	- -			
In addit directly	ion to p	c.	cooling measures	4 company	in PY 19	988 s?]	donate energy conservat If yes, please indicate:	ion res
<u>In addit</u> directly	to p	c. to t	other (please specify) he activities above, did the	4 company	in PY 19	988 s?]	donate energy conservat If yes, please indicate: No. of units assisted	ion res
<u>In addit</u> directly	to p	c. to t publ	other (please specify) he activities above, did the ic sector low-income weat	e company herization	programs	988 s?]	If yes, please indicate:	ion res
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3. If your company provided other forms of energy conservation assistance to low income households at no charge, please indicate below:

Measure		Check If Yes	No. of Low Income Recipient Households (Only)	Average Cost Per Household Max/Min
blower door	test	6	7,629	\$538/50
heating syste	m performance test	9	9,110	\$35/9
cooling system performance test		2	0	
heating/cooli	ng system safety test	5	6,915	\$35/35
indoor air qu	ality instrumented test	2	0	
light bulbs, l	ighting measures	3	10,164	\$326/7
attic insulation	ac	10	9,336	\$1,265/1,265
wall insulation	on	8	5	\$945/945
heating syste	m:			
	repair/tune up	8	6,046	\$95/65
	replacement	11	1,846	\$1,800/691
water heater	:			
	repair/tune up	6	3,530	\$45/30
	replacement			
window repl	acement	6	175	\$320/320
storm windo	ws/door	7	0	
home repairs	•	5	0	
caulk or wea	ther strip	18	40,418	\$6/4
low cost/no	cost kit	14	16,633	\$182/4
water system	ı wrap up	15	4,502	\$490/9
duct wrap up	•	99	9	
client educat	ion/information			
if yes:	by mail	17	93,336	\$40/0.03
	at home training	18	4,336	\$180/40
	center based training	7	867	\$180/93
cooling meas	sures	3	3,372	\$550/550
major applia	nce replacement	4	323	\$500/500
Other (please	e specify)	6	86	\$62/35

Company Name	
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No. Responding: 65

US DEPARTMENT OF ENERGY WEATHERIZATION ASSISTANCE EVALUATION

THE SCOPE OF UTILITY LOW INCOME WEATHERIZATION PROGRAMS

Α.	Total funds spent on weatherization program	\$ 72,824,507	(n=37)
B.	Total units completed in whole or in part with utility resources	180,457	(n=37)
	<u>Unit Types</u> (n=24)	No. of Units	
	1. single family, owner occupied	115,946	
	2. single family, rental	7,712	
	3. multi-family, rental	50,179	
	4. mobile homes	541	
C.	Was the program mandated by the botthe utility?	dy that regulates	Yes No 15 21
D.	If any of the units listed in item B abofunded program resources, please indi 1. Number of units among those	cate the following:	our program with pub
	utility and public program res	9,954	
	2. The publicly funded program	Please Check	
	a. U.S. Department of Energ	10	
	b. U.S. Department of Healt Low-Income Home Energ Weatherization (LIHEAP)	10	
	c. State program (please give	e name)	12
	d. Other (please specify)		6

	1.	Ins	sulation, heat loss		2.	Ai	ir or water leakage	
		2.	attic insulation	33			weatherstrip/caulk	
		Ъ.	wall insulation	20			window replacement	
		c.	basement insulation	19	_		storm windows/doors	
		d.	wrap water heater/ducts	31			home repairs	
			other (please specify)	12			other (please specify)	
					_			——————————————————————————————————————
	3.	He	ating system		-	ш		
	•		repair/tune up	15	7.		ot water system	
			replacement	15	-		repair/tune up	
			other	1	-		replacement	
	5.		jor appliance		-		ghting measures	
		rep	lacement	0	-	1-17	groung measures	
	7.	Mi	scelllaneous					
		a.	water saving measures	13				
					-			
			cooling measures	3	_			
		b.	-		 			
<u>In addit</u> directly	Tot	b. c. to thoublical fu	other (please specify) e activities above, did the sector low-income weat	3 4 c company herization \$	program	989 s? I	donate energy conservation of units assisted	on no
<u>In addit</u> directly	Tot	b. c. to thoublical fu	other (please specify) e activities above, did the sector low-income weat	3 4 c company herization \$	program	989 s? I	f yes, please indicate:	on re
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<u>In addit</u> directly	Tot	b. c. to thoublical fu	other (please specify) e activities above, did the sector low-income weat anding Resource (please check	4 company herization \$all applical	program: ——— ble)	s? I	f yes, please indicate:	n ac
<u>In addit</u> directly	Tot	b. c. to thoublical fu	cooling measures other (please specify) e activities above, did the sector low-income weat anding f Resource (please check cash materials personnel	all application	program: ble)	s? I	f yes, please indicate: No. of units assisted	re
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In addit directly	Tot	b. c. to th ublical fu	cooling measures other (please specify) e activities above, did the sector low-income weat anding f Resource (please check cash materials personnel vehicles	3 4 e company herization \$all applica	programs ble) equipmentraining Other (please sp	s? I	f yes, please indicate: No. of units assisted y)	on re

3. If your company provided other forms of energy conservation assistance to low income households at no charge, please indicate below:

<u>Measure</u>	Check If Yes	No. of Low Income Recipient Households (Only)	Average Cost Per Household Max/Min
blower door test	7	7.634	\$538/50
heating system performance test	10	8,549	\$35/9
cooling system performance test	2	0	
heating/cooling system safety test	6	6,749	\$100/35
indoor air quality instrumented test	2	0	
light bulbs, lighting measures	5	21,021	\$293/12
attic insulation	11	3	\$1,317/250
wall insulation	9	1	<u>\$1,317/1,31</u> 7
heating system:			
repair/tune up	12	6,031	\$183/65
replacement	12	8,902	\$1,975/876
water heater:			
repair/tune up	9	2,848	\$380/30
replacement			
window replacement	6	0_	
storm windows/door		0	
home repairs	6	0	
caulk or weather strip	21	34,160	\$15/4
low cost/no cost kit	14	13,971	\$173/4
water system wrap up	17	5.771	\$504/9
duct wrap up	11	320	\$2/2
client education/information			
if yes: by mail	18	88,306	\$40/0.03
at home training	24	5,811	\$230/30
center based training	6	1,322	\$230/93
cooling measures	4	4,321	\$550/550
major appliance replacement	6	817	\$3,000/257
Other (please specify)		437	\$433/12

APPENDIX C DETAILED UTILITY RESPONSES

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₽	City of ID Falls Elec Dept	- 167							
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ξŞ.	Board of Public Utilities	l K		2,13					
X S	Midwest Energy Inc	^							
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Z	Jersey Central Pow & Light Co	8	\$451,039	1,285	1,175	01.			-
ž	Gas Company of New Mexico								
ž	Brooklyn Union Gas Co	-							
ž	City of Jamestown	S.							
ž	Consolidated Edison	8							
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ž	Village of Akron	ß							
ž	Village of Churchville	2							
ž	Villege of Silver Springs	S							
ž	Village of Tupper Lake	2							
Š	Blue Ridge Electric Corp	7	\$2,400		9				
S	City of Wilson	S	006,9\$	210	02	140			
2	Valley City Public Works	S.	-						-
B	Columbia Gas of Ohio	_	\$400,000	3,000	2,250	450			
ᆼ	East Ohio Gas Co	-							
ᆼ	South Central Power Co	7							
ð	Edmond Public Works Authority	5							
ŏ	OK Gas & Electric Co	ო	\$704,737	3,088	3,088				
O	Consumers Power	7	\$32,691	27					
OB		5	\$1,051,870	846	422	211	145	8	
Ā	Central Elec Coop Inc	7							
Ą	Peoples Natural Gas Co	-							
Ā	Philadelphia Gas Works	4	\$2,099,267	4,197	848	3,349			
SC		ဖ							
SD		-							
¥		ဖ	\$5,500,000	8,100	6,000		2,100		
Z	TN Valley Authority	S	\$3,309,000	62,783					
ĭ	City Public Service	ĸ							
5	City of Provo	2							

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	ST UTILITY COMPANY NAME	UT Mountain Fuel VA City of Danville VA Northern VA Elec Coop VA Northern Va Natural Gas	•			,	

S	ST UTILITY COMPANY NAME	1.D.1 COMBINED RESOURCE UNITS	1.D.2.a DOE WEATHERZ	1.D.2.b LIHEAP	1.D.2.c 1 STATE S	1.D.2.c STATE PROG NAME	1.D.2.d 1.D.2.d OTHER OTHERSPECIFIED
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ST	UTILITY COMPANY NAME	1.D.1 COMBINED RESOURCE UNITS	1.D.2.a DOE WEATHERZ	1.D.2.b LIHEAP	1.D.2.c 1 STATE 8	1.D.2.c STATE PROG NAME	1.D.2.d 1.D.2.d OTHER OTHER SPECIFIED
W S S S S S S S S S S S S S S S S S S S	City of Vicksburg Entex, Div of ARKLA Kansas City Power & Light Springfield City Utilities Union Electric Co Dawson County Pub Pow Minnegasco Niobra Valley EMC Omaha Pub Power Southwest Gas Co NH Electric Coop Jersey Central Pow & Light Co Gas Company of New Mexico Brooklyn Union Gas Co City of Jamestown Consolidated Edison Great Falls Gas Co Niagra Mohawk Power Co Obsego EC Sherburne				-	Low-I Direct Grant Program	
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Village of Akron Village of Churchville Village of Churchville Village of Silver Springs Village of Tupper Lake Blue Ridge Electric Corp City of Wilson Valley City Public Works Columbia Gas of Ohio East Ohio Gas Co South Central Power Co Edmond Public Works Authority OK Gas & Electric Co Consumers Power Eugene Water & Electric Central Elec Coop Inc Peoples Natural Gas Works Comm of Public Works Minnegasco Memphis Lght, Gas & Water Div TN Valley Authority City Public Service	210 27 846 4,197 62,783	- -	-	- -	1 Altern. Energy Corp	1 Bonneville Power Adm

ST UTILITY COMPANY NAME	2 #	1.D.1 COMBINED RESOURCE UNITS	1.D.2.a DOE WEATHERZ	1.D.2.b LIHEAP	1.D.2.c 1.f STATE ST	1.D.2.c STATE PROG NAME	•	1.D.2.d 1.D.2.d OTHER OTHER SPECIFIED	
UT Mountain Fuel VA City of Darville VA Northern VA Elec Coop VA Northern Va Natural Gas WA Seattle City Light Dept WI Northern States Power Co WI Wisconsin Electric Power Co WI Wisconsin Gas Company WY Cheyenne Light, Fuel & Power WY City of Gillette WY Tri-County Electric BP Bonneville Power Admin		3,425	-	-				1 Bonneville 1 soler bank HUD 1 HUD Solar Bank	
N TOTAL	86	11 76,840	ഗ	4	4		വ	ဖ	9

5	UTILITY COMPANY NAME	USED DOE SUBCONTRCTRS	ATTIC	WALL INSUL	1.F.1.c BASEMENT INSUL	WRAP WCTS	1.F.1.0 OTHER INSUL	1.F.1.e OTHER-SPECIFIED	
Ļ	AL Power Co					-	-		
\$	Alagasco					•	•		
8	Joe Wheeler EMC								
¥	AK Power & Telephone								
ਨੂੰ ,	Chugach Elec Assoc								
7	Satt River Project								
€	City of Long Beach Gas Dept								
₹	City of Los Angeles								
ğ	Pacific Gas & Electric	-	-			-			
춫	Plumas Sierra REC		•			•			
ğ	Southern CA Gas Co	-	-			-			
₹	Colorado Springs Util					•			
Š	Connecticut Nat Gas Co								
준	Florida Power & Light								
Jac	Jacksonville Elec Auth								
8	Peoples' Gas System Inc								
5	Carroll EMC								
في ا	Georgie Power Co								
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Š,	Ocmulge EMC								
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ž	Snapping Shoals EMC								
388	Gasco, Inc								
₹	City of ID Falls Elec Dept								
=	IA-IL Gas & Elec								
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Ę	United Cities Gas Co								
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B	Detroit Edison	•	•			- •		:	
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2	Minnegasco	•	-						
8	Northern States Power					•			
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1.F.1.e OTHER 1.F.1.e INSUL OTHER-SPECIFIED				1 PVC foam tape	1 Conversion Windows	1 Floor insulation 1 floor
1.F.1.d WRAP DUCTS			-			
1.F.1.c BASEMENT INSUL		-	-	-		
1.F.1.b WALL INSUL			-	-		
1.F.1.a ATTIC INSUL			-			
1.E USED DOE SUBCONTRCTRS		-		-		·
UTILITY COMPANY NAME	City of Vicksburg Entex, Div of ARKLA Kansas City Power & Light Springfield City Utilities Union Electric Co Dawson County Pub Pow Minnegasco	Niobra Valley EMC Omaha Pub Power Southwest Gas Co NH Electric Coop Jersey Central Pow & Light Co Gas Company of New Mexico Brooklyn Union Gas Co City of Jamestown	Consolidated Edison Great Falls Gas Co Niagra Mohawk Power Co Otsego EC Sherburne Village of Akron Village of Churchville	Willage of Tupper Lake Blue Ridge Electric Corp City of Wilson Valley City Public Works Columbia Gas of Ohlo East Ohlo Gas Co South Central Power Co		Minnegasco Memphis Lght, Gae & Water Div TN Valley Authority City Public Service City of Provo
st	N N N N N N N N N N N N N N N N N N N	######################################	\$ \$ \$ \$ \$ \$ \$ \$	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	×	8 K K K P

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3 1.F.1.e OTHER-SPECIFIED	underfloor, pipewrap foundation/crawispace	radon mitigation
1.F.1.e OTHER INSUL		- =
1.F.1.d WRAP DUCTS		45
1.F.1.c BASEMENT INSUL		~ o
1.F.1.b WALL INSUL		- =
1.F.1.a ATTIC INSUL		- 8
1.E USED DOE SUBCONTRCTRS		1
		86
ST UTILITY COMPANY NAME	Mountain Fuel City of Danville Northern VA Elec Coop Northern Va Netural Gas Seattle City Light Dept Northern States Power Co Wisconsin Electric Power Co Wisconsin Electric Power Co Cheyenne Light, Fuel & Power City of Gillette	Bonneville Power Admin N TOTAL
st	5\$\$\$\$\$\$\$\$\$	& Z P

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		1.F.2.a WEATHER-	1.F.2.b	STORM	1.F.2.d	1.F.2.e		1.F.3.a	1.F.3.b	1.F.3.b	
	ST ITH ITY COMPANY NAME	STRIP/ CAULK	WINDOW REPLACE	WINDOWS /DOORS	HOME REPAIRS	OTHER LEAKAGE	1.F.2.0 OTHER SPECIFIED	HEATING	HEATING REPLACE	HEA I ING OTHER	
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▼	AZ Salt River Project										-
_	CA City of Long Beach Gas Dept										_
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ν 2		UTILITY COMPANY NAME	1.F.2.a WEATHER- STRIP/ CAULK	1.F.2.b WINDOW REPLACE	1.F.2.c STORM WINDOWS /DOORS	1.F.2.d HOME REPAIRS	1.F.2.e OTHER LEAKAGE	1.F.2.e OTHER SPECIFIED	1.F.3.a HEATING REPAIR	1.F.3.b HEATING REPLACE	1.F.3.b HEATING OTHER
22222	MS City of Vicksburg MS Entex, Div of ARKLA MO Kansas City Power & Li MO Springfield City Utilities MO Union Electric Co	City of Vicksburg Entex, Div of ARKLA Kansas City Power & Light Springfield City Utilities									
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298888		City of Wilson Valley City Public Works Columbia Gas of Chio East Chio Gas Co South Central Power Co			-		-	electric outlet sealers	-		
		ectric Co ower r & Electric Coop inc ral Gas Co Gas Works ilic Works					-	thresholds, regiaze windows			
8	-, , - -	minnegasco Memphis Lght, Gas & Water Div TN Valley Authority City Public Service City of Provo				-					

ST UTILITY COMPANY NAME	1.F.2.a WEATHER- STRIP/ CAULK	1.F.2.b WINDOW REPLACE	1.F.2.c STORM WINDOWS /DOORS	1.F.2.d HOME REPAIRS	1.F.2.e OTHER LEAKAGE	1.F.2.e OTHER SPECIFIED	1.F.3.a HEATING REPAIR	1.F.3.b HEATING REPLACE	1.F.3.b HEATING OTHER
UT Mountain Fuel VA City of Danville VA Northern VA Elec Coop VA Northern Va Natural Gas WA Seattle City Light Dept WI Northern States Power Co WI Wisconsin Electric Power Co WI Wisconsin Gas Company		-	-		-	blower door			-
	98 24	- ω	- 5	10		replacements glazing	ko N	ဟ	←

		1.F.4.a HOT WATER	1.F.4.b HOT WATER	1.F.4.b HOT WATER OTHER	1.F.5 APPLIANCE REPLACE	1.F.6 LIGHTING MEASURES	1.F.7.a WATER SAVING MEASURES	1.F.7.b COOLING MEASURES	1.F.7.C OTHER MEASURES	1.F.7.C OTHER SPECIFIED
ST	UTILITY COMPANY NAME		1257	i i :	i					
MS W	City of Vicksburg									
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	I.A. City Public Solvice									
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1.F.7.C OTHER 1.F.7.C MEASURES OTHER SPECIFIED	1 Electric WH wrap	N N
1.F.7.b COOLING MEASURES		-
1.F.7.a WATER SAVING MEASURES		
1.F.6 LIGHTING MEASURES	-	-
1.F.5 APPLIANCE REPLACE		•
1.F.4.b HOT WATER OTHER		-
1.F.4.b HOT WATER REPLACE		8
1.F.4.a HOT WATER REPAIR		ĸ
		86
. UTILITY COMPANY NAME	Mountain Fuel City of Danville Northern VA Elec Coop Northern Va Natural Gas A Seattle City Light Dept Northern States Power Co Wisconsin Electric Power Co Wisconsin Gas Company C Cheyenne Light, Fuel & Power City of Gillette	BP Bonneville Power Admin N TOTAL
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	1.8.3	MULT FAM	1011101				1,242	,	30,221																	5	9																
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	1.8	TOTAL	0	2,595			51,340		43,285								137				26			1	8		3,000			0	8 8	7,927		•	ıΩ								
	A.L	SUNIE INTOI	I UI AL FUNDS	\$478,000			\$17,000,000										\$81,493						\$40,000	,	\$10,000	,	\$850,000			1	\$58,632	\$1,376,717			\$2,350								
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			UTILITY COMPANY NAME	AL Power Co	Alagasco	Chugach Elec Assoc	Pacific Gas & Electric	Plumas Sierra REC	Southern CA Gas Co	Connecticut Nat Gas	Jacksonville Elec Auth	Carroll EMC	Georgia Power Co.	Habersham EMC	Ocmulgee EMC	IA-II Gas & Elec	Illinois Power	Northern Illinois Gas Co	lowa Power	Board of Public Utilities	Kentucky Power Co	Louisville Gas & Elec Co	Louisianna Pow & Light Co	_	MI Consolidated Gas Co						Southwest Gas Co	Jersey Central Pow & Light	Great Falls Gas Co	Niagra Mohawk Power Co			Cass County EC	Columbia Gas of Ohio	Columbus Southern Power	East Ohio Gas Co	Ohio Edison Co	South Central Power Co	
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UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1986

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1.8.4	MOBILE HOMES														;	, 8	3			r	?	170				
1.8.3	MULT FAM RENTAL			230	8					Č	3				Cac	3 2	747		2,956	a	0	35,788				
1.8.2	SING FAM RENTAL			142	7			026	5							191	2			α	•	8,755				
1.8.1	SING FAM OWNER OCC	198	1	081	3	1.350				407	i		8	2 2	346	615	2		3,429	Ę.	2	73,645				
2 .	TOTAL	1.192	6	. 192		1.350	-	970	1	610	17.614		8	101	299	1 052	1510) :	6,385	23	2	136,868				
1.8	TOTAL FUNDS	\$299,223	\$16,361	\$649,194	· • • •	\$405,000		\$532,000		\$710,000	\$928,000		\$30,000	\$1,662,400	\$478,800	\$1.386.402	\$3,137,899	2001	\$9,937,400	22	1	\$40,069,871				
į	UTIL TYPEA	n	7	S	7	-	4	-	9	9	S	-	8	ĸ	ო	8	٠	· m								
,	ST UTILITY COMPANY NAME	OK OK Gas & Elec Co	OR Consumers Power	OR Eugene Water & Electric	PA Central Electric Coop Inc	PA Columbia Gas of PA	A Peoples Natural Gas Co	A Philadelphia Gas Works	SC Comm of Public Works	TN Memphis Lght, Water & Gas Div	TN TN Valley Authority	VA Northern VA Natural Gas	VA Virginia Power	WA Seattle City Light	WI Northern States Power	WI WI Electric Power Co	VI Wisconsin Gas Co	WY Cheyenne Light, Fuel & Power	BP Bonneville Power	257		TOTAL	B. KEV TO LITH ITV TVDE: 4 One 2 Classical	5 Public Electric. 6 Public Combination	7 Rural Coop	
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1.D.2.c 1.D.2.c STATE STATE PROG NAME	1 AL Dept Econ & Comm Aff													1 IL home WAP			1 CAAs											1 Low-I Direct Grant Program												,
1.D.2.b LIHEAP																	-						-																	
1.D.2.a DOE WEATHERZ																							-																	
1.D.1 COMBINED RESOURCE UNITS	78	i															26				200	ļ	1.800																	
T UTILITY COMPANY NAME	L AL Power Co												. Illinois Power	Northern Illinois Gas Co		_						_					•				_	Ī.							OH South Central Power Co	
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UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1986

			COMBINED	1.D.2.a				
ST	ST UTILITY COMPANY NAME		UNITS	WEATHERZ	1.D.Z.b LIHEAP	T.D.Z.G T.D.Z.G STATE STATE PROG NAME	1.D.2.d 1.D.2.d OTHER OTHER SPECIFIED	
ð	OK Gas & Elec Co							
8	3 Consumers Power		6				o lie constant	
S B	Eugene Water & Electric		339	-	-			
A	_				•			
₽	Columbia Gas of PA							
ĕ.	Peoples Natural Gas Co							
ĕ	_		970			-		
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Z	_							
<u></u>	•		17,614			1 TN State CAA		
≶	4							
≶	Virginia Power			-		1 Crater Area Agency On Aging		
š			1,104			A. A. C. A. C. C. A. C.	1 Deposition	
₹	Northern States Power							
₹	_		141				Acced reion Cliff	
₹	_						Name of the second	
≩	Cheyenne Light, Fuel & Power							
B B	Bonneville Power			-	-			
-								
z		57	9	4	ທ	^	4	4
<u>۲</u>	TOTAL		22,274					•

ST	UTILITY COMPANY NAME	1.E USED DOE SUBCONTRCTRS	1.F.1.a ATTIC INSUE	1.F.1.b WALL INSUL	1.F.1.c BASEMENT INSUL	1.F.1.d WRAP DUCTS	1.F.1.e OTHER INSUL	1.F.1.e OTHER:SPECIFIED	
4 4 4	AL Power Co Alagasco Chuqach Elec Assoc					-			
₹ 5			-			-			
§ ₹		-				-			
卢교	Connecticut Nat Gas Jacksonville Elec Auth								
Ø Ø									
& & ⊙	4 Georgia Power Co. 4 Habersham EMC								
ĕ B									
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	Illinois Power Northern Illinois Gas Co	-		-		-	-	floor, timer, skirting	
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≩		-				-	_	Plastic over windows	
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žŽ	E Central maine Fower Co	-							
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Q Q ∑	MO Springfield City Utilities MO Union Flectric								
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<u></u> }	Y Niagra Mohawk Power Co		-		-	-			
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<u>ک</u> کے ح	C City of Wilson								
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0	OH South Central Power Co								

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1986

ST	UTILITY COMPANY NAME	1.E USED DOE SUBCONTRCTRS		1.F.1.a ATTIC INSUL	1.F.1.b WALL INSUL	1.F.1.c BASEMENT INSUL	1.F.1.d WRAP DUCTS	1.F.1.0 OTHER 1.F.1.0 INSUL OTHER-SPECIFIED
¥ & & &	OK Gas & Elec Co Consumers Power Eugene Water & Electric Central Electric Coop Inc		-					1 conversion windows
8 P P P	Columbia Gas of PA Peoples Natural Gas Co Philadelphia Gas Works Comm of Public Works			-				1 garage ceiling
Z Z S	Memphis Lght, Water & Gas Div TN Valley Authority Northern VA Natural Gas							1 floor
\$ \$ \$ \$ \$ \$	Virginia Power Seattle City Light Northern States Power WI Electric Power Co							1 roof and step repair 1 undritr/pipewrp/clokthermo 1 foundation/floor/crawispace
8 Z	Chayanna Light, Fuel & Power Bonnaville Power	57 1	10	- 12	- 6	- o	- 23	1 radon 10 10
2	TOTAL							

ST	UTILITY COMPANY NAME	1.F.2.a WEATHER- STRIP/ CAULK	1.F.2.b WINDOW REPLACE	1.F.2.c STORM WINDOWS /DOORS	1.F.2.d HOME REPAIRS	1.F.2.e OTHER LEAKAGE	1.F.2.e OTHER SPECIFIED	1.F.3.a HEATING REPAIR	1.F.3.b HEATING REPLACE	1.F.3.b HEATING ÓTHER
۶ ا	AL Power Co		-	-		-				
₹ ₹ 5	Alegasco Chugach Elec Assoc Pacific Gas & Electric	· -			-					
555 E	Plumas Sierra REC Southern CA Gas Co Connecticut Nat Gas Jacksonville Elec Auth	**	-	-	-			-	•	
8 8 8 8	Carroll EMC Georgia Power Co. Habersham EMC Ocmulgee EMC									
크 코 크 존	IA-II Gas & Elec Illinois Power Northern Illinois Gas Co Iowa Power				-	-	replace glass, thresholds			
\$ \$ \$	Board of Public Utilities Kentucky Power Co	-				-	Plastic over windows			
⋩≾≝⋾				-		-	see survey			
Z Z W Z Z		-			-			-	-	
2 2 2 2 2	Union Electric Southwest Gas Co Jersey Central Pow & Light Great Falls Gas Co Niarra Mohawit Power Co				-		door thresholds Air con Covers			
₹₽₽₹₹₹				-				-	-	

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1986

		1.F.2.a WEATHER- STRIP/	\$	1.F.2.b INDOW	1.F.2.c STORM WINDOWS	1.F.2.d HOMF	1.F.2.e OTHER		1.F.3.8	1.F.3.b	1.F.3.b
ST	ST UTILITY COMPANY NAME	V O	CAULK RE	PLACE	/DOORS	REPAIRS	LEAKAGE	OTHER SPECIFIED	REPAIR	REPLACE	OTHER
ð	OK Gas & Elec Co			-			•	the state of the s			
8	Consumers Power		_	-	-	-	-	uitestiones, regiaze wriciws			
	Eugene Water & Electric		_	-	· -	• •					
	Central Electric Coop Inc			•	•	•					
	Columbia Gas of PA		_						•		
_	Peoples Natural Gas Co								_		
	Philadelphia Gas Works		_						•		
သွ	Comm of Public Works								-		
_	Memphis Lght, Water & Gas Div		_		-	-					
•	TN Valley Authortty		_			•					
<u></u>	Northern VA Natural Gas				•						
	Virginia Power		_	-	-	-	-	dooreuse of a singly and a singly a singly and a singly and a singly and a singly a singly and a singly a singly a singly and a singly a			
_	Seattle City Light		_		•	· -	•	con smoother, grazaring/ vertiles/ ulapsoons	•		
	Northern States Power		_	-	-	-	-	Mower door	•	•	
	WI Electric Power Co		-		•	•	•	500	-	-	
	Wisconsin Gas Co		_	-		-			•	•	
≩	Cheyenne Light, Fuel & Power					-			-	_	
98	Bonneville Power		-	-	-		-	alazina			
z		57	25	o	15	12	5	G.	^	ď	c
TOTAL	AL							•	•)	•

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1.F.7.C OTHER SPECIFIED	Thermostat pilot prog
1.F.7.C OTHER MEASURES	-
1.F.7.b COOLING MEASURES	-
1.F.7.a WATER SAVING MEASURES	
1.F.6 LIGHTING MEASURES	
1.F.5 APPLIANCE REPLACE	
1.F.4.b HOT WATER OTHER	
1.F.4.b HOT WATER REPLACE	-
1.F.4.a HOT WATER REPAIR	
UTILITY COMPANY NAME	AL Power Co Alagasco Chugach Elec Assoc Pecific Gas & Electric Plumas Sierra REC Southern CA Gas Co Connecticut Nat Gas Jacksonville Elec Auth Carroll EMC Georgia Power Co. Habersham EMC Comulgee EMC Illinois Power Northern Illinois Gas Co lowa Power Northern Illinois Gas Co Inva Power Northern Illinois Gas Co Inva Power Northern Illinois Gas Co Oentral Maine Power Co Contral Maine Power Co Contral Maine Power Co Northern States Power Entex, Div of ARKLA Springfield City Utilities Union Electric Southwest Gas Co Niggra Mohlawk Power Co Orange&Rockland Util City of Wilson Cass County EC Columbus Southern Power East Ohio Gas Co Ohio Edison Co South Central Power Co Ohio Edison Co
ST U	A A S A S A S A S A S A S A S A S A S A

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1.F.7.C OTHER 1.F.7.C MEASURES OTHER SPECIFIED	electric WH wrap	
1.F.7.C OTHER MEASURES	-	N
1.F.7.b COOLING MEASURES		-
1.F.7.a WATER SAVING MEASURES	-	∞
1.F.6 LIGHTING MEASURES	-	-
1.F.5 APPLIANCE REPLACE		•
1.F.4.b HOT WATER OTHER		0
1.F.4.b HOT WATER REPLACE		4
1.F.4.8 HOT WATER REPAIR		ю
		57
UTILITY COMPANY NAME	OK Gas & Elec Co Consumers Power Eugene Water & Electric Central Electric Coop Inc Columbia Gas of PA Peoples Natural Gas Co Philadelphia Gas Works Comm of Public Works Memphis Lght, Water & Gas Div TN Valley Authority Northern VA Natural Gas Virginia Power Seettle City Light Northern States Power Wil Electric Power Co Wisconsin Gas Co Cheyenne Light, Fuel & Power Bonneville Power	AL
ST (S S S S S S S S S S S S S S S S S S S	N TOTAL

181 181 182 184 MANDAI MANDAI LIST PROMEROCC RENTAL HOMES PROGRAM CUNITS OWNER OCC RENTAL HOMES PROGRAM CUNITS OWNER OCC RENTAL HOMES PROGRAM CONTRIBUTION CONTRI								•	•	KEY: 1 = YES 0 = NO
			15	A.	1.B TOTAL	1.B.1 SING FAM	1.B.2 SING FAM	1.B.3 MULT FAM	1.B.4 MOBILE	MANDATED
Adageaco Jungari Floor Assoc Jungari Floor Jungari Flore Jungari Floor Jungari Flo	ST	UTILITY COMPANY NAME	TYPEa	TOTAL FUNDS	UNITS	OWNER OCC	RENTAL	RENTAL	HOMES	PROGRAM
Only ages Feeter Assoc 7 \$280,000,000 69,226 Pacific Gas & Electric Cas & Commonwealt Electric Cas & San & Sa	٩	Alagasco	-							0
Purmas Same REC Purmas Same REC Purmas Same REC Commondered Mark das Co. Commondered Mark das Co. Commondered Mark Georgia Power Commondered ENG Markington Wither Power Co. Commondered ENG Markington Markingto	¥	Chugach Elec Assoc	7		,					•
Southern Call Gas Co. Commonwealth Edeland Compage River Commonwealth Edeland	გ	Pacific Gas & Electric	က	\$28,000,000	89,226					-
Commorbiant Base Co. 1 \$56,205,890 41,538 11,218 5,372 24,999 Connorderut Natur Gas Co. 1 \$66,146 23 22 11,218 5,372 24,999 Connorderut Natur Gas Co. 2 \$66,146 23 22 11,218 5,372 24,999 Ladraconile Ere Auth Case Commorbiant Edition Co. 3 \$66,146 23 26 26 25 26 26 26 26 26 26 26 26 26 26 26 26 26	გ	Plumas Sierra REC	7			:		0		•
Commonwealth Edition Commonw	Š	Southern Cal Gas Co.	-	\$26,205,890	41,538	11,218	5,372	24,948		-
Justice Auth	Ç	Connecticut Natur Gas	-							
Control of the Power Control of the Control of th	댙	Jacksonville Elec Auth	S.							
Helbenthant EMC 7 \$66,146 23 22 7 Washington Water Power Co 890,490 206 20 7 Washington Water Power Co 80,490 206 80,490 206 81,490 206 81,490 206 82,490 206 82,490 206 83,490 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400 206 84,400	g	Georgia Power	2							
Commonwealth Edison Code 1 \$66,146 23 22 Commonwealth Edison Code 2 \$50,490 206 2 Commonwealth Edison Code 3 \$50,490 206 3 Commonwealth Edison Code 3 \$50,900 30 167 25 Illinois Power Code 2 \$20,000 189 167 25 Lous Power Code 3 \$20,000 189 167 25 Lous Power Code 3 \$20,000 789 300 79 300 Louis Place Code 1 \$500,000 3,000 79 300 70 300 Min Consolidated Gas Code 1 \$500,000 3,000 1,000 500 70 300 Min Consolidated Gas Code 1 \$500,000 3,000 1,000 500 70 1,000 500 Northern States Power 1 \$500,000 3,000 1,000 1,000 500 70 1,000 500 Northern S	₽	Habersham EMC	7						•	•
Second commonwealth Edison Commonwealth Edis	Ø.	Ocmulgee EMC	7	\$66,146	23	ช			-	- (
Commonwealth Edison Co	₽	Washington Water Power Co	6	\$90,490	902					0
Hard Gast & Electors 3 \$63,363 91 Hard Gast & Electors 3 \$63,363 91 Northern I Gast & Control 1 \$20,000 199 167 25 Louisville Gast & Electors 2 \$20,000 199 167 25 Louisville Gast & Electors 3 \$20,000 1,500 1,500 1,500 Louisville Gast & Electors 1 \$200,000 3,000 1,500 1,500 1,000 Louisville Gast & Electors 1 \$200,000 3,000 1,500 1,500 1,000 Louisville Gast & Electors 3 \$279,513 273 273 Minnegaeco 1 \$1,274,55 398 3,893 3,893 Montana Power Co 3 \$279,513 273 273 273 Montana Power Co 3 \$279,513 2,893 3,893 Southwest Gast Co 1 \$1,074 663 Southwest Gast Co 1 \$1,500,000 1,000 1,000 Columbia & Electric Co 3 \$1,500,000 1,000 1,000 Columbia Gas of Countrial Power Co 3 \$1,500,000 1,000 1,000 Columbia Gas of Countrial Gas of Co	굍	Commonwealth Edison Co	2							
lilinoise Power Co	_	IA-IL Gas& Elec	ო							
Northern II Gas Co. I section of the control of the cont	_	Illinois Power Co	ღ	\$63,363	91					0
lower Power Careard Multiples Board of Public Utilities Board of Public Utilities Louisville Gas & Elec Louisv	_	Northern II Gas Co	-							
Board of Public Utilities	≤	lowa Power	8	\$20,000	189	167	52			0
Kentucky Power Co. Kentucky Power Co. 2 25 25 Louisalina Bow & Light 3 \$20,000 79 390 Central Maine Power 1 \$500,000 769 300 79 390 Mi Consolidated Gas Co. 1 \$500,000 3,000 1,500 70 500 Min Consolidated Gas Co. 1 \$500,000 3,000 1,500 1,000 500 Enflex, Div of ARKLA 6 3 \$273 273 50 1,000 500 Fentex, Div of ARKLA 6 3 \$273,435 398 273 273 273 Sprinfeld Crit Utilities 1 \$1,297,435 398 3,893	XS.	Board of Public Utilities	S							,
Louisville Gas & Elec Louisville Gas & Elec Louisianta Powe & Light Central Marine Power Mi Consolidated Gas Co Miningated Northane States Power Entex, Div of ARKLA Entex, Div of ARKLA Sprinfield City Utilities Union Electric Montana Power Co Southwest Gas Co Ningra Mohawk Power Co Ningra Mohaw Ningra Nin	⋩	Kentucky Power Co	2		25	52				0
Louisianna Pow & Light 3 \$20,000 769 300 79 390 Control Maine Bower 1 \$20,000 1,000 1,000 70 390 Control Maine Bower 2 1 \$800,000 3,000 1,500 1,000 500 Control Box Light 2 2 \$182,745 399 276 1,074 663 South Settled Box Columbus Southern Power Columbus Southern Gas Columbus Southern Columbus Southern Gas Columbus Southern Gas Columbus Southern Gas Columbus Southern Columbus Southern Gas Columbus Southern Gas Columbus Southern Power Columbus South	⋩	Louisville Gas & Elec	ဂ							(
Central Maine Power 769 390 79 390 Mf Consolidated Gae Co 1 \$800,000 3,000 1,500 1,000 500 Northern States Power 1 \$800,000 3,000 1,500 1,000 500 Enflex, Div of ARKLA 1 \$100,000 3 \$279,513 273 500 Sprinfield City Utilities 3 \$182,145 398 3,893 3,893 Annian Exposer Construct	5	Louisianna Pow & Light	က	\$20,000		•	1	Ö		0 (
Minnegaco Northannegaco Northa	Σ	Central Maine Power	8		69/	3	2	980		>
Minnegaeco Minnegaeco 1,000 500 Flort Vertherm States Power 1 \$600,000 3,000 1,500 500 Entex Power 1 \$162,745 396 273 273 273 Sprinfield City Utilities 3 \$274,551,3 273 273 273 273 Union Electric Montana Power Co 1 \$162,745 396 398 3983 3983 3983 4983	Σ	MI Consolidated Gas Co	-							
Northern States Power 1,500 1,000 500 Entex, Div of ARKLA 1 \$800,000 3,000 1,500 1,000 500 Entex, Div of ARKLA 6 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 1 \$100 <td>Z</td> <td>Minnegasco</td> <td>-</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td>•</td>	Z	Minnegasco	-			1				•
Entex, Div of ARKLA I Sprinfield City Utilides 3 \$279,513 273 Notion Electric 3 \$279,513 273 Notion Electric 3 \$182,745 396 Northwest Gas Co 1 \$182,745 398 Jersey Central Powe Light 2 \$1,297,495 3,893 3,893 Great Falls Gas Co 1 \$1,297,495 3,893 276 1,074 663 Great Falls Gas Co 3 \$287,200 2,872 859 276 1,074 663 City of Wilson 5 5 1,000 1,000 1,000 1,000 1,000 City of Wilson 5 3 \$1,500,000 1,000 1,000 1,000 City of Wilson 5 3 \$1,537,500 3,575 2,283 1,252 40 Columbia Gas of Chio 1 \$1,233,600 5,600 3,024 336 2,240 Columbia Colison Co 2 2 2 2 2	Z	Northern States Power	-	\$800,000	3,000	1,500	1,000	8		- •
Sprinfield City Utilities 6 Union Electric 3 \$279,513 273 273 Union Electric 3 \$182,745 396 398 Southwaret Gas Co 1 \$182,745 398 3,893 3,893 Jersey Central Pow & Light 2 \$1,297,495 3,893 3,893 3,893 Jerset Falls Gas Co 1 \$2287,200 2,872 859 276 1,074 663 Niagra Mohawk Power Co 3 \$8,294 19 19 19 19 19 Crass County EC 7 \$1,500,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 2,283 1,252 40 Columbia Southern Power 2 \$1,537,500 3,575 2,283 1,252 40 Columbia Southern Power 2 2 \$4,233,600 5,600 3,024 336 2,240 South Central Power Co 7 7 \$1,233,600 3,024	¥	Entex, Div of ARKLA	-							_
Union Electric 3	₹	Sprinfield City Utilities	9							
Montana Power Co 3 \$279,513 273 273 273 273 273 273 273 273 273 273 273 273 273 273 273 273 273 273 274	Q	Union Electric	က			;				•
Southwest Gas Co 1 \$102,745 398 3,893 3,240 3,893 3,240	Ξ	Montana Power Co	ო	\$279,513	273	273				۰ د
Jersey Central Pow & Light 2 \$1,297,495 3,893 3,893 3,893 3,893 Great Falls Gas Co 1 1 1 2 1,252 4 6 3 \$1,297,495 3,893 3,893 3,893 3,893 3,893 3,893 3 4 6 3 4 4 6 3 4 6 3 4 6 3 4 6 3 4 6 3 4 6 3 4	Ž	Southwest Gas Co	-	\$182,745	398					- •
Great Falls Gas Co. 1 \$287,200 2,872 859 276 1,074 663 Niagra Mohawk Power Co. 3 \$8,294 19 19 19 65 Orange & Bockland Utility 5 \$1,500,000 1,000 1,000 1,000 1,000 City of Wilson 7 \$1,500,000 1,000 1,000 1,000 40 Columbia Gas of Ohio 2 \$1,537,500 3,575 2,283 1,252 40 Columbus Southern Power 2 \$4,233,600 5,600 3,024 336 2,240 South Central Power Co. 7 \$4,233,600 5,600 3,024 336 2,240	Z	Jersey Central Pow & Light	8	\$1,297,495	3,893	3,893				-
Niagra Mohawk Power Co 3 \$287,200 2.872 859 276 1,074 963 Orange & Rockland Utility 3 \$8,294 19 19 19 19 1074 963 City of Wilson 5 3 \$1,500,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 2,283 1,252 40 40 40 40 2,283 1,252 40 2,24	È	Great Falls Gas Co	-				į	,	Ċ	c
Orange & Rockland Utility 3 \$8,294 19 19 City of Wilson 5 \$1,500,000 1,000 1,000 1,000 Columbia Gas of Ohio 1 \$1,537,500 3,575 2,283 1,252 40 Columbus Southern Power 2 \$4,233,600 5,600 3,024 336 2,240 South Central Power Co 7 7 7 7 7	ž	Niagra Mohawk Power Co	က	\$287,200	2,872	828	2/6	4/0,1	3	O (
City of Wilson 5 Case County EC 7 \$1,500,000 1,000 1,000 Cincinnation as & Electric Co. 3 \$1,537,500 3,575 2,283 1,252 40 Columbia Gas of Ohio 2 \$1,537,500 3,575 2,283 1,252 40 Columbus Southern Power 2 \$4,233,600 5,600 3,024 336 2,240 South Central Power Co 7 7 7 7	ž	Orange & Rockland Utility	e	\$8,294	19	19				0
Cass County EC 7 \$1,500,000 1,000 1,000 Cincinnati Gas & Electric Co 3 \$1,537,500 3,575 2,283 1,252 40 Columbia Gas of Ohio 2 2,283 1,252 40 Columbus Southern Power 2 \$4,233,600 5,600 3,024 336 2,240 Ohio Edison Co 2 2 4,233,600 5,600 3,024 336 2,240 South Central Power Co 7 7 7 7 7	ž	City of Wilson	S							
Cincinnati Gas & Electric Co 3 \$1,500,000 1,000 1,000 Columbia Gas of Ohio 1 \$1,537,500 3,575 2,283 1,252 40 Columbus Southern Power 2 2 4,237,500 5,600 3,024 336 2,240 Chio Edison Co 2 2 4,233,600 5,600 3,024 336 2,240 South Central Power Co 7 7 7	2	Cass County EC	7			,				
Columbia Gas of Ohio 1 \$1,537,500 3,575 2,283 1,252 40 Columbus Southern Power 2 2 40	Ö	Cincinnati Gas & Electric Co	ဗ	\$1,500,000	000	00,1			•	•
Columbus Southern Power 2 East Ohio GAs Co 1 \$4,233,600 5,600 3,024 336 2,240 Ohio Edison Co 2 2 2 South Central Power Co 7	₽	Columbia Gas of Ohio	-	\$1,537,500	3,575	2,283	7,252		€	-
East Ohio GAs Co 1 \$4,233,600 5,600 3,024 336 2,240 Ohio Edison Co 2 2 2 5,600 3,024 336 2,240 South Central Power Co 7 7 7 7	P	Columbus Southern Power	8				1			•
Ohio Edison Co South Central Power Co	동	East Ohio GAs Co	-	\$4,233,600	2,600	3,024	336	2,240		0
South Central Power Co	ᆼ	Ohio Edison Co	5							
	ē	South Central Power Co	7							

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1987

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									KEY: 1=YES
									ON =0
			1.A	1.8	1.8.1	1.8.2	1.8.3	1.8.4	0.1
		<u>ई</u>		TOTAL	SING FAM	SING FAM	MULT FAM	MOBILE	MANDATED
ST	UTILITY COMPANY NAME	TYPEA	TOTAL FUNDS	UNITS	OWNER OCC	RENTAL	RENTAL	HOMES	PROGRAM
ò		•			•				
5		က	\$207,801	90	90				0
g	Consumers Power	7	\$25,756	o					· c
OR	Eugene Water & Electric	50	\$737,101	414	140	115	150		•
Ā	Central Elec Coop Inc	7			2	2	3		>
A	Columbia Gas of PA	_	\$550,000	1 571	1571				c
PA	Peoples Natural Gas Co	_							5
Æ	Philadelphia Gas Works	4	\$350,000	980	280				•
သွ	Comm of Public Works	· φ	2001200	3	3				>
¥	Memphis Lght, Gas & Water Div	9	\$612,000	372	284		•		•
ž	TN Valley Authority	· w	\$977,000	18 547	}		2		> c
*	Virginia Power	8	\$94,000	91	181				o c
*	Seattle City Light	'n	\$1,242,000	822	625		197		•
×	Washington Water Power	m	\$203	339			2		- c
₹	Northern States Power	m	\$379,100	485	323		134	86	-
₹	Wi Electric Power Co	2	\$255,852	119	19	37	6	9 0	
₹	Wisconsin Gas Co	-	\$3,249,000	2.053		;	?	ı	- +
≩	Cheyenne Light, Fuel & Power	က							-
8	Bonneville		\$5,628,900	3,352	1,815		1,537		
z		29	30	3	23	σ	-	LC.	5
2	TOTAL		\$78,900,949	182,042	30,664	8,492	31,316	73,	!
 ad	XEY TO UTILITY TYPE: 1 Gas, 2 Electric, 3 Combination, 4 Public Gas, 5 Public Electric, 6 Public Combination, 7 Rural Coop	ric, ,r							

1.D.2.d 1.D.2.d OTHER OTHERSPECIFIED	† PYE	
1.D.2.c 1.D.2.c STATE STATE PROG NAME	1 GA Energy Fund 1 Dept Energ & Nat Resour 1 FIVCO 1 ME State Repair Prog 1 RCS Energy Audit 1 Low-I Direct Grant Program	
1.D.2.b LIHEAP		
1.D.2.a DOE WEATHERZ	· ·	
1.D.1 COMBINED RESOURCE UNITS V	23 206 1189 25 25 0 0 0	
. UTILITY COMPANY NAME		OH Ohio Edison Co OH South Central Power Co
ST	4 X Q Q Q C T G Q Q G T T T T T R X X X X X X X X X X X X X X	00

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1987

	∪ æ	1.D.1 COMBINED RESOURCE	1.D.2.8 DOE	1.D.2.b	1.D.2.c 1.D.2.c	1.D.2.d 1.E	1.D.2.d	
O I LITT COMPANT NAME			WEATHERZ	LIHEAP	STATE STATE PROG NAME	OTHER OT	OTHER SPECIFIED	
OK Gas & Electric Co								
Consumers Power						-	Ronneville	
Eugene Water & Electric		233	-	-		-	2	
Central Elec Coop Inc								
Columbia Gas of PA		0						
Peoples Natural Gas Co								
Philadelphia Gas Works		380				ð		
Comm of Public Works						-	ON HAVAN BUILDING	
Memphis Lght, Gas & Water Div								
TN Valley Authority		18,547			1 TN State CAA			
Virginia Power		81			1 County of York	-	Crater Are Access	
Seattle City Light		823					Craici Ca Cycy Cyling Romerille	
Washington Water Power		339	-	-		-		
Northern States Power				-				
WI Electric Power Co				•				_
Wisconsin Gas Co								
Cheyenne Light, Fuel & Power								_
Bonneville			-	-				_
			-	-				
	28	16	7	œ	60	60	L.	
TOTAL		25.717					•	
								_

							
1.F.1.e OTHER-SPECIFIED			ground cover/ventilation	perimeter, floor, skirting	Plastic over Windows		floor, vents, blowerdoor
1.F.1.e OTHER INSUL			-		- •	** **	-
1.F.1.d WRAP DUCTS	- •	.		-	- ,		
1.F.1.c BASEMENT INSUL		·		-			
1.F.1.b WALL INSUL				-		- , -	-
1.F.1.8 ATTIC INSUL	- ,	-		-		- -	
1.E USED DOE SUBCONTRCTRS	•	-	-	-	-	-	,
UTILITY COMPANY NAME	Alagasco Chugach Elec Assoc Pacific Gas & Electric Plumas Sierra REC	Southern Cal Gas Co. Connecticut Natur Gas Jacksonville Elec Auth Georgia Power Habersham EMC			Kentucky Power Co Louisville Gas & Elec		Montana Power Co Southwest Gas Co Jersey Central Pow & Light Great Falls Gas Co Niegra Mohawk Power Co Orange & Rockland Utility City of Wilson Cass County EC Clocinnati Gas & Electric Co Columbus Southern Power East Ohio GAs Co Ohio Edison Co South Central Power Co
ST	4 ¥ 8 8	8 8 7 4 9 9	Q D T H =	¥ ≯ ⊏ ¥	ᇫᇫ	W W W W W W W W W W W W W W W W W W W	# \$ 2 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1987

1.F.1.0 OTHER-SPECIFIED	conversion windows	garage ceiling	floor roof & stern nemain/rescentes/les	undrift/pipewrp/cloktherm	foundation/crawlspace/floor radon	13
1.F.1.0 OTHER INSUL	-	-		· -	- -	E
1.F.1.d WRAP DUCTS				· - - ·		78
1.F.1.c BASEMENT INSUL						16
1.F.1.b WALL INSUL			-			2
1.F.1.8 ATTIC INSUL				,		53
1.E USED DOE SUBCONTRCTRS	-		-	***	-	14
						29
ST UTILITY COMPANY NAME	OK Gas & Electric Co Consumers Power Eugene Water & Electric Central Elec Coop Inc		Memphis Lght, Gas & Water Div TN Valley Authority Virginia Power	Seattle City Light Washington Water Power Northern States Douer	WI Electric Power Co Wisconsin Gas Co Cheyenne Light, Fuel & Power Bonneville	N TOTAL
-	¥ & & &	8 4 4 S	Z Z S	8 8 8	# ¥ ₹ ₹	z [

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i		1.F.2.8 WEATHER- STRIP/	1.F.2.b WINDOW	1.F.2.c STORM WINDOWS	1.F.2.d HOME	1.F.2.e OTHER	1.F.2.e	1.F.3.a HEATING	1.F.3.b HEATING	1.F.3.b HEATING
٠,	ST UTILITY COMPANY NAME	CAULK	REPLACE	/DOORS	REPAIRS	LEAKAGE	OTHER SPECIFIED	REPAIR	REPLACE	OTHER
	_	-		-						
1	_									
_		-	-		-					
								,	•	
_		-	-	-	-			-	-	
_	CT Connecticut Natur Gas									
_			•							
	GA Habersham EMC									
_	GA Ocmulgee EMC	_	_	-				-	-	
_	ID Washington Water Power Co			-						
_	Commonwealth Edison Co									
_	- IA-IL Gas& Elec									
	Illinois Power Co	-		-		-	Replace glass, thresholds			
_	Northern II Gas Co	-		-	-					
_	A Jowe Power	-								
_	,,	•								
		•				•	Disease action of the party of			
		-				-	PIBBLE OVER WILLIAMS			
_	_									
_	LA Louisianna Pow & Light									
_	ME Central Maine Power	-	- .	-		-	replacement doors			
_	MI MI Consolidated Gas Co									
_	MN Minnegasco									
_		_			-			-	-	
_		•								
_ '										
_										
_	MO Union Electric									
_	MT Montana Power Co	-		-	-	-	switchplate gaskets	-	-	
_	NV Southwest Gas Co	-		-	-	-	door thresholds			
		-		-		-	Air Con Covers			
_										
_										
_	NY Orange & Rockland Utility	-		-						
_	NC City of Wilson									
	ND Cass County EC									
		-	•	_				-		
			-	=	•			•	•	
	OH Columbia Gas of Ohio	_			-			-	-	
_	OH Columbus Southern Power									
_	OH Fast Ohio GAs Co	_								
_	_									
_										
	OH South Central Power Co									

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1987

ST	UTILITY COMPANY NAME	1.F.2.a WEATHER- STRIP/ CAULK	2.a 1.F.2.b IP/ WINDOW LK REPLACE	1.F.2.c STORM WINDOWS /DOORS	1.F.2.d HOME REPAIRS	1.F.2.e OTHER LEAKAGE	1.F.2.e Other specified	1.F.3.a HEATING REPAIR	1.F.3.b HEATING REPLACE	1.F.3.b HEATING OTHER
ð	OK Gas & Electric Co		-			•	thresholds, reclaze wndws			
Ö				-	-	•				
<u>е</u>	Eugene Water & Electric		1	_	,-					
A	-									
PA	Columbia Gas of PA		_					-		
₽ A	Peoples Natural Gas Co									
P.	Philadelphia Gas Works		-	-	-			-		
သွ	_							•		
ĭ	Memphis Lght, Gas & Water Div		_	-	-					
ĭ	•		-	-						
*			-	-	-	-	glazing/doorsweeps/vents/trapdoor			
*	Seattle City Light		_		-					
×	Washington Water Power		-	-						
₹	Northern States Power		-	-	-	-	blower door	-	-	
₹	WI Electric Power Co		-					i	•	
₹	Wisconsin Gas Co		-		-			-	•	
≩	Cheyenne Light, Fuel & Power							•	•	
В	Bonneville		-	-		-	glazing			
z		59 3	30 16	72	15	10	10	9	7	o
<u> </u>	TOTAL					1				ı
_										

1.F.Z.C OTHER 1.F.Z.C MEASURES OTHER SPECIFIED		1 attic fan	1 ventilation
1.F.7.b COOLING MEASURES			
1.F.7.a WATER SAVING MEASURES	-		
1.F.6 LIGHTING MEASURES		-	
1.F.5 APPLIANCE REPLACE			
1.F.4.b HOT WATER OTHER		-	-
1.F.4.b HOT WATER REPLACE			-
1.F.4.a HOT WATER REPAIR			-
UTILITY COMPANY NAME	Alagasco Chugach Elec Assoc Pacific Gas & Electric Plumas Sierra REC Southern Cal Gas Co. Connecticut Natur Gas Jacksonville Elec Auth Georgia Power Habersham EMC	Ocmulgee EMC Washington Water Power Co Commonwealth Edison Co IA-IL Gas& Elec Illinois Power Co Northern Il Gas Co Iowa Power Board of Public Utities Kentucky Power Co Louisville Gas & Elec Louisville Gas & Elec MI Connoclidated Gas Co Minnegasco Northern States Power	Entex, Div of ARKLA Sprinfield City Utilities Union Electric Montana Power Co Southwest Gas Co Jersey Central Pow & Light Great Falls Gas Co Niagra Mohawk Power Co Orange & Rockland Utility City of Wilson Cass County EC Cinclinnati Gas & Electric Co Columbia Gas of Ohio Columbia Gas of Ohio Columbia Gouthem Power East Ohio GAs Co Ohio Edison Co
ST	4	Q D = = = = Q X X X X X X X X X X X	#¥\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1987

ST	UTILITY COMPANY NAME	Í	1.F.4.a HOT WATER REPAIR	1.F.4.b HOT WATER REPLACE	1.F.4.b HOT WATER OTHER	1.F.5 APPLIANCE REPLACE	1.F.6 LIGHTING MEASURES	1.F.7.a WATER SAVING MEASURES	1.F.7.b COOLING MEASURES	1.F.7.C OTHER 1 MEASURES 0	1.F.7.C OTHER SPECIFIED
# \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	OK Gas & Electric Co Consumers Power Eugene Water & Electric Central Elec Coop Inc Columbia Gas of PA Peoples Natural Gas Co Philadelphia Gas Works Comm of Public Works Memphis Lght, Gas & Water Div TN Valley Authority Virginia Power Seattle City Light Washington Water Power Washington Water Power Willectric Power Co Wisconsin Gas Co Cheyenne Light, Fuel & Power Bonneville									-	1 electric WH wrap
z P	N TOTAL	26	ıo	4	8	0	ო	co	0	m	n

STATE STAT																																									
UTIL 1A 1B 1.B	KEY: 1 = YES 0 = NO 1.C	MANDATED	0	_		_				0	0				0	-	0			0	0				-		0	-	-		0	-			0 (0		0			
UTIL TYTOMPANY NAME TYPEs TOTAL FUNDS UNITS OWNER OCC RENTAL RE Addressed to the control of the	1.8.4	MOBILE																																	ļ	175					
1.8 1.8	1.8.3	MULT FAM RENTAL				22,526															290				200													1,680			
UTIL TOTAL FUNDS UNITS UNITS	1.8.2	SING FAM RENTAL				4,831											44				120				1,000											1,197		252			
UTILL TYPE TYPE TYPE TOTAL FUNDS LANGUAGE LOUGH TYPE TYPE TOTAL FUNDS LANGUAGE LOUGH TYPE TOTAL FUNDS LANGUAGE TOTAL F	1.8.1	SING FAM OWNER OCC				13,080				37		=					200				465				1,500		120		1,750		:	4				4,878		2,268			
Alagasco Chugach Elec Assoc Pacific Gas & Elec Plumas Sierra REC Southern Cal Gas Jacksonville Elec Auth Carroll EMC Georgia Power Greystone Power Co. Habersham EMC Ocmulge EMC Commonwealth Edison Co. Habersham EMC Oculisie EMC Commission Co. Northern IL Gas Co. Northern IL Gas Co. Northern IL Gas Co. Northern IL Gas Co. Northern Edison Co. Northern Bay State Gas Co. Northern States Power Collisianna Power Co. Springfield City Utilities Northern States Power Collisianna Fower Co. Southwest Gas Co. Northern States Power Collisianna Fower Co. Southwest Gas Co. Orange & Rockland Utility City of Wilson Cass County EC Cincinnat Gas & Electric Columbus Gas of Ohio Columbus Gas of Ohio Columbus Gas of Ohio Columbus Gas Co. Ohio Edison Co. South Central Power East Ohio Gas Co. Ohio Edison Co. South Central Power East Ohio Gas Co. Ohio Edison Co. South Central Power Columbus Southern Power East Ohio Gas Co. Ohio Edison Co. South Central Power Columbus Southern Power Columbus Southern Power East Ohio Gas Co. Ohio Edison Co. South Central Power Columbus Southern Power Columbus Columbus Power Colum	8 .	TOTAL		100,489		40,437				37	15				82	22	244				1,175				3,000		120	202	1,750		2,702	4			009	6,250		4,200			
Alagasco Chugach Elec Assoc Pacific Gas & Elec Plumas Sierra REC Southern Cal Gas Connecticut Natural Gas Jacksonville Elec Auth Carroll EMC Georgia Power Greystone Power Co. Habersham EMC Commonwealth Edison Co Habersham EMC Comulge EMC Commonwealth Edison Co M-IL Gas & Elec Illinois Power Co Northern IL Gas Co lowa Power Commonwealth Edison Co M-IL Gas & Elec Illinois Power Co Northern IL Gas Co Ordusville Gas & Elec Louisville Gas & Elec Louisville Gas & Elec Courisville Gas & Elec Courisville Gas & Elec Louisville Gas & Elec Courisman Power & Light Central Maine Power Co Bay State Gas Co MI Consolidated Gas Minegasco Northern States Power Springfield City Utilities Montana Power Co Southwest Gas Co Jersey Central Power Co Orange & Rockland Utility Great Falls Gas Co Orange & Rockland Utility City of Wilson Columbia Gas of Ohio Columbia Gas of Ohio Columbus Southern Power East Ohio Edison Co South Central Power	1.A	TOTAL FUNDS		\$31,300,000		\$19,930,324				\$48,747	\$39,916	\$28,523			\$32,173	\$54,229	\$25,000			\$50,000					\$750,000		\$137,857	\$216,016	\$652,968		\$270,200	\$45,469			\$1,387,350	\$5,700,000		\$3,400,000			
		UTIL TYPEa	1 .	~ m	7		- ທ	7	2	7	7	7	2	ო	က	-	2	5	ო	က	2	-	-	-	•	9	က	-	2	-	က	m	is i	_	m ·	-	5	-	2	7	
######################################		UTILITY COMPANY NAME	Alagasco Chigoph Elso Assoc	Uniquen Elec Associ Pacific Gas & Elec	Plumas Sierra REC	Southern Cal Gas	Correction Natural Gas Jacksonville Elec Auth	Carroll EMC	Georgia Power	Greystone Power Co.	Habersham EMC	Ocmulge EMC	Commonwealth Edison Co	IA-IL Gas & Elec	Illinois Power Co	Northern IL Gas Co	lowa Power	Board of Public Utilities	Louisville Gas & Elec	Louisianna Power & Light	Central Maine Power Co	Bay State Gas Co	MI Consolidated Gas				Montana Power Co	Southwest Gas Co	Jersey Central Pow&Light	Great Falls Gas Co	Niagra Mohawk Power Co	Orange & Rockland Utility	City of Wilson	Cass County EC	Cincinnati Gas & Electric	Columbia Gas of Ohio	Columbus Southern Power	East Ohio Gas Co	Ohio Edison Co	South Central Power	
		ST	AL A	€ &	ζ V	₹	5 d	GA	ďγ	GA GA	GA GA	g A	: ك	<u>ب</u> ـ	=	<u>-</u>	_	ξŞ	₹	5	Ž	¥	Ξ	Σ	Z Z	Θ	¥	Ž	3	ž	Ż :	≥	2	2	₩ 8	5	ᆼ	<u>F</u>	B	P	

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1988

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								ON =0
		1.A	1.B	1.8.1	1.8.2	1.8.3	1.B.4) (
	<u>1</u> 5		TOTAL	SING FAM	SING FAM	MULT FAM	MOBILE	MANDATED
UTILITY COMPANY NAME	TYPEa	TOTAL FUNDS		OWNER OCC	RENTAL	RENTAL	HOMES	PROGRAM
OK Gas & Electric Co	ო	\$58.387	271	176				•
Eugene Water & Electric	LC?	\$1 048 434	902		č	•		•
op Inc	7	toriotoi.	3	Z <u>*</u>	717	447		0
Columbia Gas PA		\$448,440	165	160	LC.			•
Peoples Natural Gas	-	\$293,698	17	6) ko	4		
Philadelphia Gas Works	4	\$173,000		247	•	•		- c
Comm of Public Works	9	-	İ	:				•
Memphis Lght, Gas & Water Div	9	\$634,000	330	297		33		
ority	S	000'609\$	11,548	į		}		· c
Seattle City Light	5	\$926,693	556	385		171		·
	-	\$26,110	19	14	ო	-	-	• -
Northern States Power	ო	\$313,500	304	247	ı	- S8	· &	
WI Electric Power Co	8	\$10,185	24		0	8	} <	- +
Wisconsin Gas Co	-	\$3,484,000	2,254	l	1	!	•	
Bonneville Power		\$5,466,900		1,981		2,226		-
	55	31	29	22	=	12	4	14
		\$77,561,119	178,238	28,104	7,669	28,223	205	•
KEY TO UTILITY TYPE: 1 Gas, 2 Electric, 3 Combination, 4 Public Gas, 5 Public Electric, 6 Public Combination, 7 Rural Coop	ý .							

1.D.2.d 1.D.2.d OTHER OTHER SPECIFIED		. 1 PVE	1 OH Dept of Development
1.D.2.c 1.D.2.c STATE STATE PROG NAME		1 GA Res Finance Auth 1 GA Energy Fund 1 GA Energy Fund 1 Dpt Enrg & Nat Resource 1 IL home WAP	1 Low-I Direct Grant Program 1 OH Utility Match Prog
1.D.2.b LIHEAP	-		
1.D.2.a DOE WEATHERZ			
1.D.1 COMBINED RESOURCE UNITS	TE T	37	1,800 0 2,702 4,200
ST UTILITY COMPANY NAME	AL Alagasco AK Chugach Elec Assoc CA Pacific Gas & Elec CA Plumas Sierra REC CA Southern Cal Gas CT Connecticut Natural Gas FL Jacksonville Elec Auth GA Cacrail Power		

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1988

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2.c 1.D.2.c TE STATE PROG NAME				1 TN State CAA	1 Commun Action Program	1 WI-Milwaukee, City of	-
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1.D.2.a DOE WEATHERZ	-	-					ດ
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ST UTILITY COMPANY NAME	OK Gas & Electric Co Eugene Water & Electric	Central Elec Coop Inc Columbia Gas PA Peoples Natural Gas	Philadelphia Gas Works Comm of Public Works	Memphis Lght, Gas & Water Div TN Valley Authority Seattle City Light	City Gas Co Northern States Power	WI Electric Power Co Wisconsin Gas Co Bonneville Power	AL
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	Š	City of Wilson						
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UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1988

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1.F.2.e OTHER LEAKAGE										-				-					-	-						-	-	-						_	-					
1.F.2.d HOME REPAIRS		-	-	,											-	-								-		-	-								-					
1.F.2.c STORM WINDOWS /DOORS	-			-					-	-	-			-	-	-			-	-						-	-	-			-			-						
1.F.2.b WINDOW REPLACE		-	-	-					-	-	-					-				-														_						
1.F.2.a WEATHER- STRIP/ CAULK		•	-	-					-	-	-			-	-	-				-				-		-	-	-			-			-	-		-			
ST UTILITY COMPANY NAME	_	AK Chugach Elec Assoc					_	-	_		GA Ocmulge EMC	. Commonwealth Edison Co	. IA-IL Gas & Elec	. Illinois Power Co	. Northern IL Gas Co		KS Board of Public Utilities	KY Louisville Gas & Elec	LA Louisianna Power & Light	ME Central Maine Power Co	MA Bay State Gas Co	II MI Consolidated Gas	MN Minnegasco	MN Northern States Power	MO Springfield City Utilities	MT Montana Power Co	NV Southwest Gas Co	•	_	NY Niagra Mohawk Power Co	NY Orange & Rockland Utility	NC City of Wilson	ND Cass County EC	OH Cincinnati Gas & Electric	OH Columbia Gas of Ohio	OH Columbus Southern Power	OH East Ohio Gas Co	OH Ohio Edison Co	OH South Central Power	
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UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1988

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1.F.3.b HEATING HE REPLACE C		4
1.F.3.a HEATING HE REPAIR RE		13
	windows	12
1.F.2.e OTHER SPECIFIED	thresholds, reglaze windows sealing by pass blower door	
1.F.2.e OTHER LEAKAGE		5
1.F.2.d HOME REPAIRS		91
1.F.2.c STORM WINDOWS /DOORS		21
1.F.2.b WINDOW V		13
1.F.2.a WEATHER- STRIP/ CAULK		53
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ST UTILITY COMPANY NAME	OK Gas & Electric Co Eugene Water & Electric Central Elec Coop Inc Columbia Gas PA Peoples Natural Gas Philadelphia Gas Works Comm of Public Works Memphis Lght, Gas & Water Div TN Valley Authority Seattle City Light City Gas Co Northern States Power WI Electric Power Co Wisconsin Gas Co Bonneville Power	N TOTAL
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ST UTILITY COMPANY NAME	AL Alagasco AK Chugach Elec Assoc CA Pacific Gas & Elec CA Southern Cal Gas CT Connecticut Natural Gas FL Jacksonville Elec Auth GA Carroll EMC GA Georgia Power GA Greystone Power Co. GA Habersham EMC	GA Ocmulge EMC IL Commonwealth Edison Co IL IA-IL Gas & Elec IL Illinois Power Co IL Northern IL Gas Co IL Northern IL Gas Co IL Nous Power KS Board of Public Utilities KY Louisville Gas & Elec LA Louisville Gas & Elec LA Central Maine Power Co MA Bay State Gas Co MI MI Consolidated Gas		OH Ohio Edison Co OH South Central Power

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1988

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1.F.7.C OTHER SPECIFIED	customer education	electric wh and pipe wra	
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1.F.7.b COOLING MEASURES			0
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1.F.6 LIGHTING MEASURES		-	0
1.F.5 APPLIANCE REPLACE			0
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UTILITY COMPANY NAME	OK Gas & Electric Co Eugene Water & Electric Central Elec Coop Inc Columbia Gas PA Peoples Natural Gas Philadelphia Gas Works Comm of Public Works Memphis Lght, Gas & Wate TN Valley Authority Seartle City Light	City Gas Co Northern States Power WI Electric Power Co Wisconsin Gas Co Bonneville Power	AL
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Bay State Gas 1 MI Consolidated Gas 1 \$825,000 3,000 1,800 800 400 Minegasco 1 \$825,000 3,000 1,800 800 400 Springfield City Utilities 3 \$326,051 347 80 17 8 Union Electric Co 3 \$489,925 25 17 8 8 City of Boulder City 5 \$68,925 25 17 8 8 City of Boulder City 5 \$68,925 25 17 8 8 Southwest Gas Co 1 \$121,751 328 1,663 1,663 1 8 Jersey Central Pow & Light 2 \$90,000 1,248 753 430 Great Falls Gas Co 1 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$215,100 1,71 171 171 171 171 171 171 171 171 171	Bay State Gas 1 Bay State Gas 1 MI Consolidated Gas 1 \$825,000 3,000 1,800 800 400 A Minnegasco 1 \$825,000 3,000 1,800 800 400 A Northern States Power 5 \$66 25 17 80 A Northern States Power 3 \$326,051 347 17 8 A Union Electric Co 4 3 \$48,925 25 17 8 A Springfield City Utilities 5 \$68,925 25 17 8 Montana Power City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co Jubics States Co NM 2 \$90,000 1,249 774 194 753 430 Great Falls Gas Co NM 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$3,637 171 771 171 171 171	Ä	Central Maine Power Co	8	\$960,000	876	340	8	444		0
MI Consolidated Gas 1 \$825,000 3,000 1,800 800 400 Minnegasco I \$825,000 3,000 1,800 800 400 I Northerm States Power 3 \$226,051 347 80 800 400 I Northerm States Power 3 \$226,051 347 17 8 I Wontans Power 1 \$121,751 328 1,663 1,663 1,663 Southwest Gas Co 1 \$121,751 328 1,663 1,663 1,663 Jersey Central Pow & Light 2 \$590,000 1,248 774 194 753 430 Great Falls Gas Co 1 \$1,248 774 194 753 430 Ningra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 5 \$3,637 171 771 194 753 430	MI Consolidated Gas 1 \$625,000 3,000 1,800 800 400 Minnegasco In Northern States Power 1 \$625,000 3,000 1,800 800 400 Springfield City Utilities 3 \$326,051 347 17 8 Union Electric Co 3 \$68,925 25 17 8 Union Electric Co 1 \$121,751 328 17 8 City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 1,663 Jensey Central Pow & Light 2 \$90,000 1,248 774 194 753 430 Great Falls Gas Co 1 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$2,151 771 194 753 430 Village of Endicott 5 \$4,367 171 171 171 171 171 171	¥	Bay State Gas	-							
4 Minnegasco 1 \$825,000 3,000 1,800 800 400 1 Northern States Power 1 \$825,000 3,000 1,800 800 400 2 Springfield City Utilities 3 \$326,051 347 8 8 3 Union Electric Co 3 \$489,25 25 17 8 3 Southwest Gas Co 1 \$121,751 328 1,663 1,663 1,663 4 Public Service Co of NM 2 \$587,697 1,663 1,663 1,663 1,663 6 Great Falls Gas Co 1 \$40,000 1,248 774 194 753 430 6 Orange & Rockland Utility 3 \$215,100 2,151 774 194 753 430 6 Orange & Rockland Utility 5 \$3,537 171 171 174 194 753 430	4 Minnegasco 1 \$825,000 3,000 1,900 800 400 4 Northern States Power 1 \$825,000 3,000 1,900 800 400 5 Springfield City Utilities 5 \$326,051 347 8 8 6 Union Electric Co 3 \$326,051 347 8 8 6 Union Electric Co 4 1 \$121,751 328 17 8 6 City of Boulder City 5 \$68,925 25 17 8 8 6 City of Boulder City 5 \$1,663 1	Ξ	MI Consolidated Gas	-							
Northern States Power 1 \$825,000 3,000 1,800 800 400 Springfield City Utilities 3 \$326,051 347 8 347 8 347 8 9	Northern States Power 1 \$825,000 3,000 1,800 800 400 Springfield City Utilities 6 \$226,051 347 \$326,051 347 \$347 \$326,051 347 \$347 \$347 \$347 \$347 \$346	ž	Minnegasco	-							
Springfield City Utitities 6 Union Electric Co 3 \$326,051 347 Montana Power 3 \$68,925 25 17 8 City of Boulder City 5 \$68,925 25 17 8 City of Boulder City 2 \$121,751 328 1,663 1,663 1,663 1 Jersey Central Pow & Light 2 \$90,000 1,248	Springfield City Utitities 6 Union Electric Co 3 \$326,051 347 Montana Power 3 \$68,925 25 17 8 City of Boulder City 5 \$68,925 25 17 8 City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 1,663 Jerbey Central Pow & Light 2 \$597,697 1,663 1,248 1,248 Great Falls Gas Co 1 1,248 774 194 753 430 Great Falls Gas Co Niegra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 171 171 171 171	ž	Northern States Power	-	\$825,000	3,000	1,800	900	400		-
Union Electric Co 3 \$326,051 347 8 Montana Power 3 \$56,925 25 17 8 City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 1,663 8 Jersey Central Pow & Light 2 \$587,697 1,663 1,663 8 Great Falls Gas Co 1 1 2 \$50,000 1,248 753 430 Great Falls Gas Co 1	Union Electric Co 3 \$326,051 347 8 Montana Power 3 \$68,925 25 17 8 City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 1,663 Jersey Central Pow & Light 2 \$567,697 1,663 1,663 1,663 Public Service Co of NM 2 \$590,000 1,248 774 194 753 430 Great Falls Gas Co Niegra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 171 171 171 171	Ŷ	Springfield City Utilities	9		•					
Montana Power 3 \$326,051 347 8 City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 8 8 Jerbey Central Pow & Light 2 \$587,697 1,663 1,663 8 I Public Service Co of NM 2 \$90,000 1,248 774 774 Great Falls Gas Co 1 \$40,000 2,151 774 194 753 430 Orange & Pockland Utility 3 \$49,992 11 774 194 753 430 Village of Endicott 5 \$3,637 171 171 171 171	Montana Power 3 \$326,051 347 8 City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 8 Jersey Central Pow & Light 2 \$567,697 1,663 1,663 8 I Public Service Co of NM 2 \$90,000 1,248 774 194 753 430 Great Falls Gas Co 1 \$6,992 11 774 194 753 430 Niegra Mohawk Power Co 3 \$6,992 11 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 171 171 171	Q	Union Electric Co	၈							
City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 8 Jersey Central Pow & Light 2 \$587,697 1,663 1,663 8 I Public Service Co of NM 2 \$90,000 1,248 774 194 753 430 Great Falls Gas Co Niagra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 171 171 174 <	City of Boulder City 5 \$68,925 25 17 8 Southwest Gas Co 1 \$121,751 328 1,663 8 Jersey Central Pow & Light 2 \$587,697 1,663 1,663 8 I Public Service Co of NM 2 \$90,000 1,248 774 194 753 430 Great Falls Gas Co Ningra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 171 171 171	¥	Montana Power	က	\$326,051	347					0
Southwest Gas Co 1 \$121,751 328 Jersey Central Pow & Light 2 \$587,697 1,663 I Public Service Co of NM 2 \$90,000 1,248 Great Falls Gas Co 1 4 753 430 Niagra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 43,637 171 Village of Endicott 5 \$3,637 171 171 171	Southwest Gas Co 1 \$121,751 328 Jersey Central Pow & Light 2 \$587,697 1,663 I Public Service Co of NM 2 \$90,000 1,248 Great Falls Gas Co 1 \$215,100 2,151 Ningra Mohawk Power Co 3 \$215,100 2,151 Orange & Rockland Utility 3 \$8,992 11 Village of Endicott 5 \$3,637 171	≩	City of Boulder City	ĸ	\$68,925	52	17			80	0
Jersey Central Pow & Light 2 \$587,697 1,663 1,663 1 Public Service Co of NM 2 \$90,000 1,248 Great Falls Gas Co 1 \$215,100 2,151 774 194 753 430 Niagra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$9,992 11 Village of Endicott 5 \$3,637 171	Jersey Central Pow & Light 2 \$587,697 1,663 1,663 1 Public Service Co of NM Great Falls Gas Co 1 \$90,000 1,248 774 194 753 430 Niegra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 171 171 Village of Endicott 5 \$3,637 171 171	⋛	Southwest Gas Co		\$121.751	328					-
Public Service Co of NM 2 \$90,000 1,248 Great Falls Gas Co 1 \$215,100 2,151 774 194 753 430 Niegra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$6,992 11 11 11 11 Village of Endicott 5 \$3,637 171	Public Service Co of NM 2 \$90,000 1,248 Great Falls Gas Co 1 \$215,100 2,151 774 194 753 430 Ningra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Pockland Utility 3 \$6,992 11 11 Village of Endicott 5 \$3,637 171	3	Jersey Central Pow & Light	- 04	\$587,697	1.663	1.663				-
Great Falls Gas Co 1 \$215,100 2,151 774 194 753 430 Niegra Mohawk Power Co 3 \$15,150 2,151 774 194 753 430 Orange & Rockland Utility 3 \$1,992 11 Village of Endicott 5 \$3,637 171	Great Falls Gas Co 1 Niegra Mohawk Power Co 3 School Crange & Pockland Utility 3 \$6,992 11 Village of Endicott 5 \$3,637 171	ž	Public Service Co of NM	8	\$90,000	1.248					-
Niegra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$8,992 11 Village of Endicott 5 \$3,637 171	Niegra Mohawk Power Co 3 \$215,100 2,151 774 194 753 430 Orange & Rockland Utility 3 \$6,992 11 Village of Endicott 5 \$3,637 171	ž	Great Falls Gas Co	-		!					•
Orange & Rockland Utility 3 \$8,992 11 Village of Endicott 5 \$3,637 171	Orange & Rockland Utility 3 \$8,992 11 Village of Endicott 5 \$3,637 171	ž	Niagra Mohawk Power Co	က	\$215,100	2.151	77.4	<u>46</u>	753	430	C
Village of Endicott 5 \$3,637 171	Village of Endicott 5 \$3,637 171	ž	Orange & Rockland Utility	n	\$8,992	=			•	•	1
		ž	Village of Endicott	ĸ	\$3,637	171					c
			ò		1	•					•

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1989

									KEY: 1=YES 0= NO
		Ē	1.A	1.B	1.8.1 SING FAM	1.B.2	1.B.3	1.8.4	1.C
ST	UTILITY COMPANY NAME	TYPEA	TOTAL FUNDS	UNITS	OWNER OCC	RENTAL	RENTAL	HOMES	PROGRAM
Š	City of Wilson	ß							
물	Cass County EC	7							
ᆼ	Cincinnati Gas & Electric	က	\$1,432,000	648					0
ᆼ	Cleveland Elec Illuminating	a							٠.
ᇹ	Columbia Gas of Ohio	-	\$6,500,000	5,985	3,890	2,017		78	0
ᆼ	Columbus Southern Power	~							
동	East Ohio Gas Co	-	\$4,000,000	4,000	2,160	240	1.600		0
퓽	Ohio Edison Co	8		•		l	•		•
동	South Central Power	7							
ð	OK Gas & Electric &o	6	\$163,359	964	56				0
8	Consumers Power	7	\$2,171	7	9	-			0
e B	Eugene Water & Electric	ß	\$757,508	531	107	142	282		0
₽	Central Elec Coop Inc	7							•
Ā	Columbia Gas of PA	-	\$517,993	112	112				-
Ā	Peoples Natural Gas	-	\$492,504	271					
ĕ.	Philadelphia Gas Works	4							
တ္တ	Comm of Public Works	ø							
Z	Memphis Lght, Gas & Water Div	9	\$277,000	102	8		8		0
¥	Seattle City Light	S	\$838,314	607	425		182		_
	Washington Water Power	ო	\$246,985	355					0
₹	City Gas Co	-	\$34,003	ଷ	16	ო	-		-
₹	Northern States Power	ო	\$297,600	413	171		=	18	-
₹	WI Electric Power Co	N	\$3,818	S	ĸ				-
₹	Wisconsin Gas Co		\$3,232,000	1,752					-
8	Bonneville Power		\$4,035,000	3,118	1,567		1,551		
z	65		37	37	24	=	12	Ŋ	5
<u>გ</u>	TOTAL		\$72,824,507	180,457	115,946	7,712	50,179	541	
œj	KEY TO UTILITY TYPE: 1 Gas, 2 Electric, 3 Combination, 4 Public Gas, 5 Public Electric, 6 Public Combination, 7 Rural Coop								

ST	UTILITY COMPANY NAME	1.D.1 COMBINED RESOURCE UNITS	1.D.2.a DOE WEATHERZ	1.D.2.b LIHEAP	1.D.2.c 1.D.2.c STATE STATE	1.D.2.c STATE PROG NAME	1.D.2.d 1.D.2.d OTHER OTHER SPECIFIED
4 4 8 8 8 8 8 E 8 E	•	ढ		-			
₹ 5 5 5 5 2 2 3 5 5 ± :		7 12 5 196 176			1 GA Rea 1 GA Ene 1 GA Ene	GA Resid Finance Autho GA Energy Fund GA Energy Fund	
	IL Commonwealth Edison Illinois Power Co Northern IL GAs Co Northern IL GAs Co Lowa Power Board of Public Utilities Louisville Gas & Electric Louisville Power & Light Central Maine Power Co	.	-		1 IL home WAP	IL home WAP ME State Repair	1 PVE
A M M M M M M M M M M M M M M M M M M M	Bay State Gas Mil Consolidated Gas Minnegasco Northern States Power Springfield City Utilities Union Electric Co Montana Power City of Boulder City	2,000 half 25				share	1 CDBG
33 5555	Southwest Gas Co Jersey Central Pow & Light Public Service Co of NM Great Falls Gas Co Niegra Mohawk Power Co Orange & Rockland Utility Village of Endicott	2,151	-		1 Low-I D	Low-I Direct Grant Program	

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1989

•	Ö	<u>.</u>					
	ü	COMBINED	1.D.2.a				
UTILITY COMPANY NAME	É		WEATHERZ	LIHEAP	STATE STATE PROGNAME	-	I.D.Z.4 I.D.Z.4 OTHER OTHERSPECIFIED
Cincinnati Gas & Electric					1 OH Dept of Development		
Cleveland Elec Illuminating					-		
Columbia Gas of Ohio							
Columbus Southern Power							
		4.000			1 OH Utility Match Prog		
Ohio Edison Co					Borress (magnetic		
South Central Power							
OK Gas & Electric Co							
Consumers Power							1 Consumers Power Inc
Eugene Water & Electric		309	-	_			1 Excon PVE
Central Elec Coop Inc							
Columbia Gas of PA							
Peoples Natural Gas			-	-			
Philadelphia Gas Works							
Comm of Public Works							
Memphis Lght, Gas & Water Div							
		607					1 Bonneville
Washington Water Power		355	_	-	1 energy matchmakers		
		17			1 Comm Action Program		1 City Block Grant
Northern States Power				_	ò		
WI Electric Power Co							
Wisconsin Gas Co		75			1 Wi-Milwaukee, City of		
			-	-	•		
	65	18	10	9	12	12	9
		9,954					

15 15 16 16 15 16 15 16 15 16 15 16 15 16 16	-					
UTILITY COMPANY NAME SUBCONTROTRS INSUL IF IF ID IF ID IF ID IF ID ID IDCTS Abgraco Chuigach Ebe Asacc Beloc Burke Class & EBe Churtes Same REC Burke Class & EBE Churte Coordia Burke Class & EBE Churte Coordia Burke Class & EBE Churte Class & EBE C			ground cover/ventil/artic fan ground cover/ventilation	timer, perimeter, floor	see survey floor insulation	floors
USED DOE ATTIC WALL BASEMENT SUBCONTRICTRS INSUL	1.F.1.e OTHER INSUL	-		-		-
1	1.F.1.d WRAP DUCTS					
1.E 1.F.1.a	1.F.1.c BASEMENT INSUL			-		
USED DOE USED DOE USED DOE USED OF Angaeco Chugach Elec Assoc Pecific Gas & Elec Plumas Sierra REC Southern Cal Gas Co Public Service Oo I CO Connecticut Nat Gas DC Natural Gas Jacksonville Elec Auth Carroll EMC Georgia Power Co. Habersham EMC Comulge EMC Georgia Power Co. Habersham EMC Comulge EMC Comulge EMC Comulge EMC Comulge EMC II. Commonwealth Edison Illinose Power Co North Power Co Northing Board of Public Utilities Louisinta Power Co Northing States Power Springfield City Utilities Universe Gas Minnegaeco Minnegaeco Minnegaeco Minnegaeco Montana Power Springfield City Utilities Universe Gardes City Springfield City Utilities Universe Gardes Co Montana Power City of Bouldes City Southward Gas Co Montana Power City of Bouldes City Southward Gas Co Montana Power City of Bouldes City Southward Gas Co Montana Power Co Negae Eleckicand Utility Village of Endicott Village of Endicott	1.F.1.b WALL INSUL					
USED E Alegasco Chugach Elec Assoc Pacific Gas & Elec Fulmas Sierra REC Southern Cal Gas Co Public Service Co of CO Connecticut Nat Gas DC Natural Gas Jacksonville Elec Auth Carroll EMC Georgia Power Co Habersham EMC Conneige EMC Georgia Power Co Habersham EMC Conneige EMC All Gas & Electric I. Commonweath Edison Illinois Power Co Nushington Water Power Co Nushington Water Power Co Nushington Water Power Co Soriutige EMC All Gas & Electric Louisville Gas & Electric Springfield City Utilities I Minnegasco Northern States Power City of Boulder City Southwest Gas Co Northern States Power City of Boulder City Southwest Gas Co Northern Power Co Ningra Mohawk Power Co Orange & Bockland Utility Village of Endicott	1.F.1.a ATTIC INSUL					
	1.E USED DOE SUBCONTRCTRS			-	-	
~ * * \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	UTILITY COMPANY NAME		Carroll EMC Georgia Power Co. Graystone Power Co. Habersham EMC Ocmulge EMC Idaho Power Co Washington Water Power Co. IA-II Gas&Electric	IL Commonweath Edison Illinois Power Co Northern IL GAs Co Iowa Power Board of Public Utilities		
	ST	4 4 8 8 8 8 8 8 8 8 8 8	8 8 8 8 8 9 9 2 2 1 :	X	\$ 5 8 8 8 8 8 8	

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1989

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-	-	-	-	-			Bonneville Power	8
		-	-	-			Wisconsin Gas Co	₹
		-	-	-			WI Electric Power Co	₹
-	-	-	-	-	-		Northern States Power	₹
		-	-	-	-		City Gas Co	₹
	-	-	-	-			Washington Water Power	×
-	-	-	-	-	-		Seattle City Light	×
	-			-			Memphis Lght, Gas & Water D	Z
							Comm of Public Works	သွင
							Philadelphia Gas Works	Ā
	-			-	-		Peoples Natural Gas	Ā
-	-		-	-			Columbia Gas of PA	Ā
							Central Elec Coop Inc	PA
-	-	-	-	-	-		Eugene Water & Electric	8
	-	-		-	-		Consumers Power	O E
	-			-			OK Gas & Electric Co	ð
							South Central Power	ē
							Ohio Edison Co	P
	-	-	-	-	-		East Ohio Gas Co	P
							Columbus Southern Power	P
	-		-	-	-		Columbia Gas of Ohio	₽
							Cleveland Elec Illuminating	P
	-	-	-	-			Cincinnati Gas & Electric	ᆼ
							_	皇
								S
OTHER	WHAP	BASEMEN	WALL	NSUL	SUBCONTRCTRS		UTILITY COMPANY NAME	ST
1.F.1.0	1.F.1.d	1.F.1.c	1.F.1.b	1.F.1.8	1.6			
1.F.1.e OTHER-SPECIFIED Conversion Window seal by-pass underfloor/pipewrap basement/floor/crawfspace		1.F.1.e OTHER INSUL.	WRAP OTHER DUCTS INSUL	BASEMENT WRAP OTHER INSUL DUCTS INSUL 15.1.6 1	1.F.1.b	1.F.1.a 1.F.1.b 1.F.1.c 1.F.1.d 1.F.1.e ATTIC WALL BASEMENT WAAP OTHER INSUL INSUL INSUL DUCTS INSUL INSUL INSUL INSUL DUCTS INSUL I	USED DOE ATTIC WALL BASENENT WRAP OTHER SUBCONTRCTRS INSUL INSUL BASENENT WRAP OTHER INSUL BASENENT WRAP OTHER INSUL BASENENT WRAP INSUL BASENENT WRAP OTHER INSUL BASENENT WAS INSULED WAS INSUL	USED DOE ATTIC WALL BASEMENT WARP Cob of Wilson Cobumbus Southern Power Counting Gas of Ontion Columbus Southern Power Counting Gas of Ontion Columbus Southern Power Eagen Ware Electric Consumers Power Counting Gas of Ontio Columbus Gas of Ontio Columbus Southern Power Eagen Ware Electric Counting Gas of Ontio Columbus Gas of Ontio Columbus Southern Power Eagen Ware Electric Counting Gas of Ontio Columbus

ST	UTILITY COMPANY NAME	1.F.2.a WEATHER- STRIP/ CAULK	1.F.2.b WINDOW REPLACE	1.F.2.c STORM WINDOWS /DOORS	1.F.2.d HOME REPAIRS	1.F.2.e OTHER LEAKAGE	1.F.2.e OTHER SPECIFIED	1.F.3.8 HEATING REPAIR	1.F.3.b HEATING REPLACE	1.F.3.b HEATING OTHER
4	Alagasco	-		٠						
¥	Chugach Elec Assoc	•	•		•					
§ §	Pacific des à Erec Plumas Sierra REC	-	-		-					
<u>క</u>	Southern Cal Gas Co	-	-	-	-			-	-	
8	Public Service Co of CO	-			-			-	-	
<u>ნ</u> 8	Connecticut Nat Gas									
₹ 2	DC Natural Gas									
- 8	Carroll EMC									
8	Georgia Power Co.									
Ø	Greystone Power Co	-	-	-				-	-	
&	Habersham EMC	-	-	-		-	infil contr/door replace	-	-	
ტ	Ocmulge EMC	-	-	-			•	_	_	
Ö (Idaho Power Co	-	-	-	-			-		
⊇ =	Washington Water Power Co		-	-						
<u> </u>	I Commonwealth Edison									
<u>_</u>	Illinois Power Co	-		-		-	reply glass, thresholds			
_	Northern IL GAs Co	-		· 	-					
_	lowa Power	-	-	-	-					
S S	Board of Public Utilities									
⋩.	Louisville Gas & Electric									
≤ ! 	Louisiana Power & Light					-	see survey			
¥ :	Central Maine Power Co	-		-		-	replacement doors			
₹ ₹	Bay, State Gas MI Consolidated Gas									
Σ	Minnedasco									
Σ	Northern States Power	-			-			-	•	
Š	Springfield City Utilities	•			•			-	-	
Ş	Union Electric Co									
¥	Montana Power	-		-	-	-	vents, blower door, switch	-	-	
≩ :	City of Boulder City	-							-	
2 :	Southwest Gas Co	-		-	-	-	door thresholds, cooler covers			
2 2	Jersey Central Pow & Light Public Service Co of NM	- •				-	Air Con Covers			
ξ <u>≥</u>	Public Selvice Co of IVM Great Falls Gas Co	-		-						
ž	Niegra Mohawk Dower Co									
ž	Orange & Bockland I Hilly									
ž	Village of Endloot	-								
:		•								

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1989

		WEA	1.F.2.a WEATHER-		1.F.2.c STORM	1.F.2.d	1.F.2.e		1.F.3.a	1.F.3.b	1.F.3.b
ST	UTILITY COMPANY NAME		STRIP/ CAULK	WINDOW	WINDOWS /DOORS	HOME	OTHER LEAKAGE	1.F.2.e OTHER SPECIFIED	HEATING REPAIR	HEATING REPLACE	HEATING OTHER
Š	City of Wilson										
Q	Cass County EC										
ē	Cincinnati Gas & Electric		-	-	-		-	replace broken glass	-	-	
ᆼ	Cleveland Elec Illuminating								•	•	
₹	Columbia Gas of Ohio		-			-	-	sealing by pass	-	-	
ᅙ	Columbus Southern Power										
₹	East Ohio Gas Co		-						-		
ᇹ	Ohio Edison Co								•		
ᆼ	South Central Power										
ð	OK Gas & Electric Co		-	-			-	thresholds, reglaze windows			
e B	Consumers Power										
e B	Eugene Water & Electric		-	-	-	-					
ĕ	Central Elec Coop Inc										
ĕ	Columbia Gas of PA		-			-			-	-	-
A	Peoples Natural Gas		-	-	-	-			-	_	
Ā	Philadelphia Gas Works										
ပ္တ	Comm of Public Works										
ĸ	Memphis Lght, Gas & Water Div		-		-	-					
×	Seattle City Light					-					
×	Washington Water Power			-	-						
₹	City Gas Co									_	
₹	Northern States Power		-	-	-	-			-	_	
₹	WI Electric Power Co		-	-						•	
₹	Wisconsin Gas Co		-	-		-			-	-	
8	Bonneville Power		-	-	-		-	glazing		•	
z		65	မ	18	22	17	-	1	15	15	-
TOTAL	TAL										

ST	4 X Q Q			m
UTILITY COMPANY NAME	Alagasco Chugach Elec Assoc Pacific Gas & Elec Plumas Siens REC	Southern Cal Gas Co Public Service Co of CO Connecticut Nat Gas DC Natural Gas	Jacksonville Elec Auth Cerroll EMC Georgia Power Co. Greystone Power Co Habersham EMC Ocmulge EMC Idaho Power Co	Hall Gass Electric IL Commonwealth Edison Illinois Power Co Northern IL GAs Co lowa Power Board of Public Utilities Louisville Gas & Electric Control Maine Power Co Bay State Gas Minnegasco Northern States Power Springfield City Utilities Union Electric Co Montana Power City of Boulder City Southwest Gas Co Jersey Central Pow & Light Public Service Co of NM Great Falls Gas Co Niagra Mohawk Power Co Orange & Rockland Utility Village of Endicott
1.F.4.a HOT WATER REPAIR		-		-
1.F.4.b HOT WATER REPLACE		-		-
1.F.4.b HOT WATER OTHER			-	
1.F.5 APPLIANCE REPLACE				
1.F.6 LIGHTING MEASURES	-			-
1.F.7.a WATER SAVING MEASURES	-	-		
1.F.7.b COOLING MEASURES				-
1.F.7.C OTHER MEASURES		-	-	
1.F.7.C OTHER SPECIFIED		client education	attic fan	

UTILITY FULL SCALE LOW INCOME WEATHERIZATION: PY 1989

_		4
1.F.7.C OTHER SPECIFIED	1 vertillation	
1.F.7.C OTHER MEASURES	-	4
1.F.7.b COOLING MEASURES		က
1.F.7.8 WATER SAVING MEASURES		.
1.F.6 LIGHTING MEASURES	-	ıo
1.F.5 APPLIANCE REPLACE		•
1.F.4.b HOT WATER OTHER	-	N
1.F.4.b HOT WATER REPLACE		œ
1.F.4.8 HOT WATER REPAIR	-	o
		59
ST ,UTILITY COMPANY NAME	City of Wilson Caas County EC Cincinnati Gas & Electric Cleveland Elec Illuminating Columbia Gas of Ohio Columbia Gas of Ohio Columbia Gas Co Ohio Edison Co South Central Power Evgene Vathar Power Consumers Power Eugene Water & Electric Columbia Gas of PA Peoples Natural Gas Philadelphia Gas Works Comm of Public Works Weshington Water Power City Gas Co Northern States Power Wil Electric Power Co Wisconsin Gas Co Bonneville Power	FAL
ST	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	N TOTAL

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

No. LIHHs AVG \$/LIHH TOTAL COST No. LIHHs AVG \$/LIHH TOTAL COST SST AVG \$/LIHH AVG \$/LIHH TOTAL COST SST AVG \$/LIHH AVG \$/LI	INIMOM NO. LOLAL	MINIMOM		į
No. Limits	ო	ო		o
AVG \$/LIHH \$0 \$ \$ <t< td=""><td></td><td>2</td><td>0</td><td></td></t<>		2	0	
TOTAL COST No. LIHH6 AVG \$/LIHH AVG \$/LIHH TOTAL COST No. LIHH6 AVG \$/LIHH6 AVG \$/LIH6 AVG \$/LIHH6 AVG \$/LIHH6 AVG \$/LIHH6 AVG \$/LIHH6 AVG \$/LIH6 AVG \$/LIHH6 AVG \$/LIH		-		
No. Limits	\$37		9	OTAL COST
No. Lithts S. 6,251 S. 6.55 S. 6.55		€0		
TOTAL COST AVG \$/LIHH TOTAL COST No. LIHH AVG \$/LIHH TOTAL COST No. LIHH TOTAL COST No. LIHH TOTAL COST No. LIHH TOTAL COST No. LIHH TOTAL COST AVG \$/LIHH AVG \$/LIHH TOTAL COST AVG \$/LIHH AVG \$/LIHH TOTAL COST AVG \$/LIHH AVG		4	6,251	
TOTAL COST COOLING SYSTEM TEST No. LIHH AVG \$/LIHH TOTAL COST AVG \$/LIHH TOTAL COST AVG \$/LIHH AVG \$/LIHH TOTAL COST AVG \$/LIHH AVG \$		83	ŭ	
COOLING SYSTEM TEST AVG \$/LIHH TOTAL COST H/C SYSTEM SAFETY TEST AVG \$/LIHH TOTAL COST NO. LIHHB TOTAL COST AVG \$/LIHH	95\$		\$78,710	OTAL COST
No. LithHe	-	-		-
AVG \$/LIHH	0	0	0	
HUC SYSTEM SAFETY TEST HUC SYSTEM SAFETY TEST AND SALLHHIS INDOOR AIR QUALITY TEST AND SALLHHIS AND SALL	0	0		
HUC SYSTEM SAFETY TEST No. LIHHs TOTAL COST No. LIHHs TOTAL COST No. LIHHs AVG \$/LIHH TOTAL COST AVG \$/LIHH TOTAL COST AVG \$/LIHH TOTAL COST AVG \$/LIHH TOTAL COST AVG \$/LIHH No. LIHHs No. LIHHs TOTAL COST ATTIC INSULATION No. LIHHs No. LIHHs TOTAL COST ATTIC INSULATION No. LIHHs AVG \$/LIHH TOTAL COST AVG \$/LIHH AVG \$/LIHH TOTAL COST AVG \$/LIHH AVG \$/LIHH TOTAL COST AVG \$/LIHH AV			9	TOTAL COST
No. LihHs	4	4		
AL COST \$0 1 \$ AL COST 2 3 3 No. LIHHS 1 \$675 \$25 1 No. LIHHS 0 0 \$675 \$25 1 No. LIHHS 1 \$6610 \$25 \$25 1 No. LIHHS 1 \$6610 \$25 \$25 1 No. LIHHS 0 0 0 0 0 No. LIHHS 0 0 0 0 0 0 No. LIHHS 0		n	008	No. LIHHs
## AL COST	-	-		
No. Lihths	\$15		Ş	
No. LIHHs 1 \$675 \$25 17 No. LIHHs 0 0 \$25 \$25 17 No. LIHHs 1 \$675 \$25 17 No. LIHHs 1 26,610 \$25 \$25 17 No. LIHHs 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		("	}	
No. LIHHS 1 \$675 \$25 1 TOTAL COST 3 \$675 \$25 1 No. LIHHS 0 0 \$225 \$25 1 TOTAL COST 8 8 8 No. LIHHS 1 26,610 \$25 \$25 1 TOTAL COST 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0) •	n •	ţ	
AVG \$/LIHH TOTAL COST No. LIHH AVG \$/LIHH TOTAL COST No. LIHH AVG \$/LIHH TOTAL COST SG \$25 \$25 1 COTAL COST SG \$25 \$25 1 COTAL COST SG \$25 \$25 1 COTAL COST No. LIHH TOTAL COST AVG \$/LIHH TOTAL COST SG \$25 \$25 1 TOTAL COST SG \$25 \$25	_			No. LIMMS
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No. LIHHH 0 0 \$25 \$25 1 TOTAL COST	••		\$675	OTAL COST
No. LIHH6 0 0 \$25 \$25 1 TOTAL COST \$0 0 0 TOTAL	o	0		r
AVG \$/LIHH\$ O \$25 \$25 1 TOTAL COST B No. LIHH\$ AVG \$/LIHH TOTAL COST 6 No. LIHH\$ O 0 AVG \$/LIHH TOTAL COST 6 No. LIHH\$ O 0 AVG \$/LIHH TOTAL COST AVG \$/LIHH	. (1	
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TOTAL COST \$0 No. LIHHs 1 26,610 \$25 \$25 1 TOTAL COST 6 0 0 0 AVG \$/LIHH\$ 0 0 0 0 0 AVG \$/LIHH\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		\$25	•	
No. LIHH6			Ş	FOTAL COST
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AVG \$/LIHH 1 \$0 \$25 \$25 1 TOTAL COST 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		•	06.610	
AVG \$/LIHH TOTAL COST 6 No. LIHH AVG \$/LIHH O AVG \$/LIHH	- ,			No. LINTE
TOTAL COST	\$25			AVG \$/LIHH
AVG \$/LIHH\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			\$	FOTAL COST
No. LIHH6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ဖ	9		
AVG \$/LIHH 0 1 50 1 1 1978	c	C	c	
# ## ### ### ### #####################	, .		ò	
TOTAL COST \$0 HEAT SYST REPAIR/TUNE UP 7 1,978 4 1,378	-	•		
HEAT SYST REPAIR/TUNEUP 7 1,978 4			O \$	TOTAL COST
No. LIMH9 4 1,978	60	60		
1		*	1 978	7001
	•	4		
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	N	0/4		
TOTAL COST \$371,898 \$75,590	\$ 75		\$371,898	TOTAL COST

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

						 	
1988 MINIMUM	\$20	\$	5 5	\$	\$1,265	\$945	\$65
1988 Maximum	\$538	\$ 35	\$5	\$326	\$1,265	\$945	\$
1988 TOTAL 7.629	\$1,462,395	\$63,255 0	\$0 6,915 \$17,500 0 \$0	10,164	9,336	5 \$4,725	6,046
1988 NO. 6	ა ი 0.4.	N NOO	vv ← 000	е и и — С	<u>5</u> α− α		∞ 4 ∪
1987 MINIMUM	\$50	9	\$32 \$25	\$30	65	0£	06 \$
1987 MAXIMUM	\$538	\$ 35	\$ 35	\$376	\$630	\$630	65
1987 TOTAL 1.301	\$273,308 3,500	\$63,500	\$0.4 4,075 \$17,500 9	77 \$28,952	7,869	\$48,510	1,030
N O O A A	e	0 - 0 0	40- 6	e - 2 =	- ณณ ๑	- N	r a -
BLOWER DOOR TEST NO. LIHINS	AVG \$/LIHH TOTAL COST HEATING SYSTEM TEST No. LIHHS	AVG \$/LIHH TOTAL COST COOLING SYSTEM TEST No. LIHH* AVG \$/LIHH	34 H/C SYSTEM SAFETY TEST No. LIHHS AVG \$/LIHH TOTAL COST 36 INDOOR AIR QUALITY TEST No. LIHHS AVG \$/LIHH TOTAL COST	31 LIGHTING No. LIHHB AVG \$/LIHH TOTAL COST S9 ATTIC INSULATION	4 0	NO. LIMMS AVG \$/LIMH TOTAL COST	HEAT SYST REPAIR/TUNEUP No. LIHHS AVG \$/LIHH TOTAL COST

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

		\$2.50 C	#0+'n00'0#			\$334,625			•	•			\$76,200				\$1,125				\$467,808			1	\$52,857			1	\$54,552				\$1,385,235
MINIMUM .		\$20			6\$				***			\$35								\$12				\$250				\$1,317				\$65	
1989 MAXIMUM		\$538			\$35							\$100	,							\$293				\$1,317				\$1,317				\$183	
1989 TOTAL	7,634		\$1,866,261	8.549		\$52,800		0	•	3	0	0,1,0	\$26.200		0		\$		21,021		\$315,392		က		\$1,817		-		\$1,317		6,031		\$427,747
0 N O N	۲ ۲	9	ç	ر ان	2	!	2	0	0	(ဖ •	4 C	j	8	0	0		Ŋ	က	8		=	~	8		o	-	-		12	9	4	
	38 BLOWER DOOR TEST No. LIHHS	AVG \$/LIHH		36 HEATING SYSTEM TEST NO LIMMS	HHIT SAY	TOTAL COST	3c COOLING SYSTEM TEST	No. LIHHS	AVG \$/LIHH		3d H/C SYSTEM SAFETY TEST	AVG \$/I IHH	TOTAL COST	36 INDOOR AIR QUALITY TEST	No. LIHHS	AVG \$/LIHH	TOTAL COST	31 LIGHTING		AVG \$/LIHH	TOTAL COST	3g ATTIC INSULATION	No. LIHH	AVG \$/LIHH	TOTAL COST	3h WALL INSULATION	No. LIHHS	AVG \$/LIHH	TOTAL COST	3i HEAT SYST REPAIR/TUNEUP	No. LIHHS	AVG \$/LIHH	TOTAL COST

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

	1978-85 NO.	1978-85 TOTAL	1978-85 MAXIMUM	1978-85 MINIMUM	1986 N.O.	1986 TOTAL	1986 MAXIMUM	1986 MINIMUM
3i HEAT SYST REPLACE	4				œ			
No. LIHHS	~ (251		•	(m	204		
TOTAL COST	N	\$415,380	999'1.	\$1,500	m	\$206.398	\$1,680	906
3K WATER HEATER REPAIR	ო				2			
No. LIHHS	-	175			0	530		
AVG \$/LIHH	0				-		\$30	€
TOTAL COST		&				\$15,000		
WINDOW REPLACEMENT	ო				4			
No. LIMHS	0	0			0	0		
AVG \$/LIHH	0				-		\$17	\$17
TOTAL COST		\$				\$		
STORM WINDOWS/DOOR	12				o			
No. LIHHS	-	83			0	0		
AVG \$/LIHH	-		\$25	\$25	-		\$500	\$500
TOTAL COST		Ş				\$		
	ß				7			
No. LIHHS	0	0			0	0		
AVG \$/LIHH	-		\$25	\$25	Q)		\$200	\$30
TOTAL COST		3				3		
30 CAULKWEATHERSTRIP	17				16			
No. LIHHS	ĸ	61,976			4	43,337		
AVG \$/LIHH	ო		\$50	%	4	•	\$250	3
TOTAL COST		\$2,710				\$554		
3p LOW COST/NO COST KIT	6				9			
No. LIHHS	^	26,004			9	13,876		
AVG \$/LIHH	2		8 \$	I	6		\$147	₽
TOTAL COST		\$124,565				\$1,100,833		
3q WATER SYSTEM WRAPUP	9				01			
No. LIHH	ო	8			9	2.206		
AVG S/LIHH	8		\$12	25	4		\$59	5
TOTAL COST	l	\$380	•		•1	\$119.518	}	;
	က				ო			
No. LIHH8	-	615			-	₹		
AVG \$/LIHH	0				_		83	820
TOTALCOCT		Ş				Ş		

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

	è Ö	1987 TOTAL	1987 MAXIMUM	1987 MINIMUM	± 888 .⊙	1968 TOTAL	1968 1968 MAXIMUM MINIMUM	1988 MINIMUM
HEAT SYST REPLACE	9 (1			Ξ'			
No. LIMHS	N 6	315	44 500	900\$	ı, u	1,846	•	1034
TOTAL COST	ı	\$309,150	3		•	\$2,494,721	3	
3K WATER HEATER REPAIR	5	-			g			
No. LIHHS	8	230			8	3,530		
AVG \$/LIHH	-		\$30	0E\$	5		\$45	\$30
TOTAL COST		\$15,000				\$157,500	•	
WINDOW BEP! ACEMENT	ır				ď			
NO. LIHHB	, c	C			-	175		
AVG \$/LIHH	· –	•	\$20	829	-	2	\$320	\$320
TOTALCOST		9		ļ		\$56,000		
STORM WINDOWS/DOOR	6	•			7			
No. LIHHS	0	0			0	0		
AVG \$/LIHH	-		\$500	\$500	0			
TOTAL COST		\$				\$		
HOME REPAIRS	7				2			
No. LIHHS	0	0			0	0		
AVG \$/LIHH	2		\$500	\$ 30	0			
TOTAL COST		9				\$		
CAULK/WEATHERSTRIP	91				18			
WHI ON	7	41 583			4	40 418		
AVG \$/LIHH	· ო	2	83	3	۰ ۵		\$	Z
F		\$4 22				\$154		
3p LOW COST/NO COST KIT	12				4			
No. LIHHS	6	15,565			=	16,633		
AVG \$/LIHH	თ		\$186	Z	2		\$182	I
TOTAL COST		\$944,740				\$1,315,856		
WATER SYSTEM WRAPUP	01				15			
No. LIHHS	4	2,431			7	4,502		
AVG \$/LIHH	4		\$59	6\$	7		\$490	6\$
TOTAL COST		\$124,000				\$156,697		
DUCT WRAPUP	ဖ				60			
No. LIHHS	-	44			-	6		
AVG \$/LIHH	-		02 \$	\$20	0			
TOTAL COST		S				8		

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

1989 1989	1978-1989 TOTAL \$			614 97E 141	414,070,14			\$309,380				\$56,000			\$	•			0\$,	\$20,988	•			¥4,521,538				\$641,642			\$620
1989 1989 1989 1989 NO. LIHHS 8 8,902 AVG \$/LIHH 7 810,949,502 AVG \$/LIHH 3 5,2,848 AVG \$/LIHH 3 5,2,848 AVG \$/LIHH 0 0 0	1989 MINIMUM			\$876			\$30				-				-							¥				Z				8			•	¥
1989 NO. LIHHS AVG \$/LIHH OTAL COST NO. LIHHS OTAL COST OTAL COST	1989 MAXIMUM			\$1,975			\$380															\$15				\$173				\$504			•	¥
No. LIHHS AVG \$/LIHH OTAL COST No. LIHHS OTAL COST No. LIHHS OTAL COST No. LIHHS OTAL COST	1989 TOTAL		8,902	40.040.500	700'6#6'0.I#	2,848		\$121,880		0		\$	c	•	\$		0		\$		34,160		\$17,148		13,971		\$835,344		5,771		\$241,047	,	S S S	\$620
40 40 40 40 45 45 45 45	N O .	12	6 0 I	_	o	S	ო		9	0	0	Ç	2 0	0	,	9	0	0		2	9	4		4	9	80		17	თ	60		= '	ο.	-
		HEAT SYST REPLACE	No. LIMHS	AVG \$/LIHH	3k WATER HEATER REPAIR		AVG \$/LIHH	TOTAL COST	31 WINDOW REPLACEMENT	No. LIHHS	AVG \$/LIHH		SI CHIM WINDOWS/DOCH	AVG \$/LIHH	TOTAL COST	3n HOME REPAIRS	No. LIHHS	AVG \$/LIHH	TOTAL COST	CAULKWEATHERSTRIP	No. LIHHS	AVG \$/LIHH	TOTAL COST		No. LIHHS	AVG \$/LIHH	ISIALCOSI	39 WATER SYSTEM WRAPUP		AVG \$/LIHH		DUCT WRAPUP	No. LIMMS	TOTAL COST

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

	Ö	TOTAL	MAXIMUM	MINIMOM	Ö	TOTAL	MAXIMUM	MINIMOM
CLIENT EDUC BY MAIL	15				15			
No. LIHHS	7	332,055			6	89,432		
AVG \$/LIHH	9		\$397.00	\$0.04	9		\$381.00	\$0.03
TOTAL COST		\$25,060				\$40,414		
31 CLIENT EDUC AT HOME	18	-			18	•		
No. LIHHs	10	21,542			=	5,247		
AVG \$/LIHH	8		\$150	\$10	6		\$166	\$30
TOTAL COST		\$1,849,850				\$414,094		
3u CLIENT EDUC AT CENTER	7				9			
No. LIHHS	Q	240			-	40		
AVG \$/LIHH	Q		\$100	\$10	-		\$100	\$100
TOTAL COST		\$6,000				\$40,000		
3V COOLING MEASURES	8				-			
		•			•	•		
NO. LIHHS AVG \$/LIHH	00	o			00	5		
TOTAL COST		3				₽		
MAJOR APPLIANCE REPLACEMENT	8				-			
No. LIHHS	0	0			0	0		
AVG \$/LIHH	0				0			
TOTAL COST		3				\$		
зх отнея	က				9			
	-	35			က	113		
AVG \$/LIHH	-		0E\$	\$30	က		\$	\$32
TOTAL COST		\$1,050				\$5,477		
PY TOTAL \$	•	\$2,876,278			•	\$2,126,953		

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

CLIENT EDUC BY MAIL No. LIHHS AVG \$/LIHH TOTAL COST 17 \$11,120 CLIENT EDUC AT HOME No. LIHHS AVG \$/LIHH B 7,631 TOTAL COST TOTAL COST	\$775.00		į	TOTAL	MAXIMUM	MINIMUM
9 7 7 8 8 8	\$775.00		17			
AVG \$/LIHH 7 TOTAL COST 17 No. LIHH6 8 AVG \$/LIHH 8	\$775.00		=	93.336		
TOTAL COST 17 No. LIHHs 8 AVG \$/LIHH 8		\$0.03	7		\$40.00	\$0.03
17 No. LIHHS B AVG \$/LIHH B				\$12.073	•	
60 60			18			
60			2	4.336		
	\$150	\$30	o	<u>}</u>	618 0	440
		•	ı	\$362,970	}	}
8			7			
No. LIMHs 2 690			· m	798		
8	\$100	\$93	(7)	3	\$180	4 03
TOTAL COST \$88,450)	\$122,310	3	}
3v COOLING MEASURES			¢			
			״			
No. LIHHs 0 0			-	3,372		
AVG \$/LIHH 0			-	1	**************************************	6550
TOTAL COST \$0				\$1,854,600	3	3
MAJOR APPLIANCE REPLACEMENT 2			4			
No. LIHHs 0				323		
0			· -	3	\$500	\$500
TOTAL COST \$0				\$85,700		
3x OTHER 6			ď			
No. LIHH			4	æ		
4	\$500	834	٠ (7	}	\$	4 35
TOTAL COST \$48,014			•	\$4,147		}
PY TOTAL \$ \$2.947.121			•	£8 716 597		

ENERGY CONSERVATION MEASURES PROVIDED BY UTILITIES AT NO CHARGE TO LOW INCOME HOUSEHOLDS 1978-1989

	N O O	1969 TOTAL	MAXIMUM	MINIMIM	TOTAL \$
CLIENT EDUC BY MAIL	18				
No. LIHHS	6	96,306			
AVG \$/LIHH	9		\$40.00	\$0.03	
TOTAL COST		\$10,573			\$99,240
31 CLIENT EDUC AT HOME	24				
No. LIHH	16	5,811			
AVG \$/LIHH	=		\$230	0E \$	
TOTAL COST		\$455,066			\$3,897,700
3u CLIENT EDUC AT CENTER	y				
No. LIHH	ო	1,322			
AVG \$/LIHH	ო		\$230	£ 63	
TOTAL COST		\$151,585			\$408,345
3V COOLING MEASURES	4				
ST CN	_	4.321			
AVG \$/LIHH	· -	<u>i</u>	\$550	\$550	
TOTAL COST		\$2,376,550			\$4,231,150
MAJOR APPLIANCE REPLACEMENT	9				
No. LIHHS	က	817			
AVG \$/LIHH	က		\$3,000	\$257	
TOTAL COST		\$1,007,985			\$1,093,685
	^				-
No. LIHH	9	437			
AVG \$/LIHH	ß		\$433	\$12	
TOTAL COST		\$33,774			\$92,462
PY TOTAL \$		\$18,892,608 GRAND TOTAL:	GRAND.	TOTAL:	\$35,559,557

C-7 UTILITY COMPANIES RI			C-8 STATES WITH UTILITY COMPANIES REPORTING
WEATHERIZATION EXPE	NUITURES IN	1978-85,	FULL SCALE WEATHERIZATION EXPENDITURES
1986, 1987, 1988, 1989			IN 1978-85, 1986, 1987, 1988, 1989
		[a]	[a
UTILITY COMPANY NAME	CTATE	No. of	No. c
UTILITY COMPANY NAME	STATE	PROGRAMS	STATE UTILITY COMPANY NAME PROGRAMS
AL Power Co	AL	2	ALABAMA
			AL Power Co
Blue Ridge Electric Corp	NC	1	CALIFORNIA
Bonneville Power Admin	WA/OR	5	Pacific Gas & Electric
			Southern Cal Gas Co
Central Maine Power Co	ME	1	COLORADO
Cincinnati Gas & Electric Co	ОН	3	Public Service Co of CO
City Gas Co	Wi	2	GEORGIA
City of Boulder City	NV	1	Greystone Power Co
City of Wilson	NC	1	Habersham EMC
Columbia Gas of Ohio	OH	4	Ocmulgee EMC
Columbia Gas of PA	PA	4	IOWA
Consumers Power	OR	4	lowa Power
			IDAHO
Detroit Edison	Mi	1	Idaho Power Co
		•	Washington Water Power Co
East Ohio Gas Co	ОН	3	ILLINOIS
Eugene Water & Electric	OR	5	Illinois Power Co
end of the control of the control	On	3	Northern IL GAs Co
Breystone Power Co	GA	2	I
neystone rower co	GA	2	LOUISIANA 4
Habersham EMC	GA	•	Louisiana Pow & Light Co
Tabersham EIVIC	GA	2	MARYLAND
daho Power Co	15	_	Southern MD EC
	ID ;;		MAINE
Ilinois Power Co	IL	5	Central Maine Power Co
owa Power	IA	3	MICHIGAN
			Detroit Edison
lersey Central Pow & Light	NJ	5	MI Consolidated Gas Co
			MINNESOTA
ouisiana Pow & Light Co	LA	4	Northern States Power
			MONTANA 3
MI Consolidated Gas Co	MI	2	Montana Power Co
flemphis Lght, Gas & Water Div	TN		NORTH CAROLINA 2
fontana Power Co	MT	2	Blue Ridge Electric Corp
Montana Power Co	MT	1	City of Wilson
			NEW JERSEY
liagara Mohawk Power Co	NY	3	Jersey Central Pow & Light
lorthern IL GAs Co	IL	2	NEW MEXICO
Northern States Power	MN	5	Public Service Co of NM
Northern States Power Co	WI	-	NEVADA 6
- · · ·	•••		City of Boulder City
			Southwest Gas Co
			Southwest Gas Co

[[]a] Number of programs in five time periods studied

WEATHERIZATION EXPEN	DITURES IN	19/0-05,	FULL SCALE WEATHERIZATION	EXI ENDITORIZE
1986, 1987, 1988, 1989			IN 1978-85, 1986, 1987, 1988, 19	
(continued)		[a]	(continued)	[a
		No. of		No d
UTILITY COMPANY NAME	STATE	PROGRAMS	STATE UTILITY COMPANY NAME	PROGRAM!
OK Gas & Electric Co	ОК	5		
Ocmulgee EMC	GA	3	NEW YORK	
Orange & Rockland Utility	NY	4	Niagara Mohawk Power Co Orange & Rockland Utility	
Pacific Gas & Electric	CA	5	Village of Endicott	
Peoples Natural Gas	PA	2	оню	1
Philadelphia Gas Works	PA	4	Cincinnati Gas & Electric Co	
Public Service Co of CO	CO	1	Columbia Gas of Ohio	
Public Service Co of NM	NM	1	East Ohio Gas Co	
Seattle City Light Dept	WA	5	OKLAHOMA	
Southern Cal Gas Co	CA	3	OK Gas & Electric Co	
Southern MD EC	MD	1	OREGON	
Southwest Gas Co	NV	5	Consumers Power	
Oddin Oct dae ee			Eugene Water & Electric	
TN Valley Authority	TN	4	PENNSYLVANIA	•
The valley reactionty			Columbia Gas of PA	
Village of Endicott	NY	1	Peoples Natural Gas	
Virginia Power	VA	2	Philadelphia Gas Works	
vinga. cc			TENNESSEE	
WI Electric Power Co	WI	4	Memphis Lght, Gas & Water Div	
Washington Water Power	WA	2	TN Valley Authority	
Washington Water Power Co	ID.	2	VIRGINIA	
Wisconsin Electric Power Co	WI	1	Virginia Power	
Wisconsin Gas Company	WI	5	WASHINGTON	
This condition day company			Seattle City Light Dept	
			Washington Water Power	
			WASHINGTON/OREGON	
			Bonneville Power Admin	
			WISCONSIN	
			City Gas Co	
			Northern States Power Co	
			WI Electric Power Co	
			Wisconsin Electric Power Co	
			Wisconsin Gas Company	
Number of Different Companies			Number of Different States	
Reporting at Least Once:		49	Appearing at Least Once:	

[[]a] Number of programs in five time periods studied

DOL UTILITY SURVEY TRACKING

Culity Name	Survey Sent to		Туре	ID#	Returned
formeville Pow. Auth		OR	Govt	10	
W Valley Authority W	illiam Campbell	TH	Govt	20	05-20-91
oe Wheeler EMC	Rosemary Mitchell	AL	Соор	101	03-18-91
Rugach Electric Assn Inc	Peter Poray	XX	Coop	102	03-14-91
Sulphur Springs Valley EC		AZ	Соор	103	
First Electric Coop Corp		AR	Соор	104	
Plumas-Sierra REC	Robert Marshall	CA	Соор	105	03-08-91
Intermountain Rural Elec		œ	Соор	106	
Delaware Electric Coop		DE	Coop	108	
Withlacoochee River EC		FL	Coop	109	
Amicalola EMC		GA	Соор	110	
Jackson EHC		GA	Coop	111	
Troup EMC		Gλ	Coop	112	
Cobb EMC		GA	Соор	113	
Washington EMC		GA	Соор	114	
Excelsion EMC		GA	Coop	115	
Carroll EMC	Karen Johnson	GA	Соор	116	04-02-91
Hart EHC	William Leard	GA	Coop	117	03-15-91
Ocmulges EHC	Robert Renterow	GA	Coop	118	03-04-91
Grady County EHC		GA	Coop	119	
Three Notch EHC		GA	Coop	120	
Mitchell EMC		Gλ	Coop	121	
Irwin County EMC		Gλ	Соор	122	
Little Ocasulgee EMC			Соор	123	
GreyStone Power Corp	Phil Landress	Gλ	Coop	124	03-11-91
Rayle EMC	-		Coop	125	
Oconse EHC Sumter EHC	Steve Moore		Coop	126	03-12-91
Planters EMC		GA GA	Coop	127 128	
abersham EMC	Lamar Mote	GA	Соор	129	04-03-91
Snapping Shoals DIC	Russell DeLong	GA	Соор	130	03-15-91
Colquitt EMC	Address Debuty	GA	Соор	131	03-13-91
Cowetta-Fayette INC		GA	Соор	132	
Kootenai Electric Coop		ID	Соор	134	
Northern Lights Inc		ID	Coop	135	
Southeastern IL Elec Coop		IL	Coop	136	
Horgan County REMC		IN	Соор	137	
Eastern IA Light&Pow Coop	Edward C. McQuillan		Coop	138	03-12-91
Hidwest Energy Inc	Pat Parke	KB	Coop	139	03-14-91
South Kentucky Rural ECC	Allen Anderson	KY	Соор	140	03-21-91
Southwest Louisiana EMC		LA	Соор	141	
Eastern Haine Elect Coop		ME	Соор	142	
Southern MD El Coop Inc	James Battaglia	MD	Соор	143	03-14-91
Top O'Hichigan Elect Co		MI	Соор	145	
\noka Electric Coop		Ю	Соор	146	
Southern Pine El Pow Assn		MS	Coop	147	
Cuivre River El Coop Inc		HO	Соор	148	
YellowstneVlly ElCoop Inc		HT	Соор	149	

	5 5 1 1 1 1 1 1 1 1 1 1	1797		450	03-12-91
	Sam Derickson	NE	Coop	150	03-12-91
Valley Electric Assn Inc		NV VV	Coop	151	
Mt Wheeler Power Inc	W. S	VV	Coop	152	03-12-91
NH Elec Coop Inc	Steve Nelson	NH	Соор	153	03-12-91
Sussex Rural El Coop Inc		NJ	-	154	
Jemez Hountains ElCoopInc		NM	Соор	155	
Steuben Rural ElCoop Inc		MY	Соор	156	
Delaware Cnty ElCoop Inc		NY	Coop	157	
Otsego Elec Coop Inc	Robert Murdock	MY	•	158	03-04-91
Oneida-Madison ElCoop Inc		NY	Coop	159	
Brunswick Elec Mem Corp		NC	Coop	160	
Blue Ridge Elec Hem Corp	Rand Smith	NC	Coop	161	03-14-91
Cass County Elec Coop Inc		ND	Coop	162	04-05-91
South Central Power Co	Edson Kindler	OH	Coop	163	03-18-91
Oklahoma Elec Coop Inc		OK	Coop	164	
Consumers Power Inc	R. Baumgartner	OR	Coop	165	03-25-91
Central Electric Coop Inc	Kenneth J. Clark	PA	Coop	166	03-26-91
Berkeley Elect Coop Inc		SC	Coop	167	
Sioux Valley Empire EAInc		SD	Coop	168	
Middle Tennessee EMC		TH	Coop	169	
Pedernales Elec Coop Inc		TX	Coop	170	
Moon Lake Elect Assn Inc		UT	Coop	171	
Vermont Electric Coop Inc		VT	Coop	172	
Northern VA Elec Coop	William M. Curtis	VA	Coop	173	03-12-91
Inland Power&Light Co		WA	Coop	174	
Harrison Rural El AssnInc		WV	Coop	175	
Adams-Columbia Elec Coop		WI	Coop	176	
Tri-County Elec Assn Inc	John Rogers	WY	Coop	177	03-18-91
Alabama Power Co	Daniel Calametti	AL	Invest	200	04-10-91
AK Elect. Light & Power	David Stone	AK	Invest	201	
AK Power & Telephone Co.		AK	Invest	202	03-08-91
Tuscon Elec. Power Co	Betsy Bolding	A2	Invest	203	
Arizona Public Service Co	-	AZ	Invest	204	
Ark. Power & Light Co	Al Thomas	AR	Invest	205	05-24-91
Pacific Gas & Elect	AI INOMAS	CA	Invest		** -:
Southern Cal Edison	Suzanne Hughes	CA			
	Joanne Reel	CA	Invest	208	
San Diego Gas & Elec		co	Invest		
Public Service Co. of Colo			Invest	210	
Connecticut Light & Power	Manager Buckey	CI		211.5	
Delmarva Power & Light	Martin Duffy	DE	Invest	212	
Potomac Electric Power Co	-	DC ***	Invest		03-18-91
lorida Power & Light	Kathy McDonald	FL	Invest		03-10-31
lorida Power Corp	Nancy E. Loehr	FL	Invest		02 20 04
eorgia Power Co	Jim E. Slaughter	GA	Invest		03-29-91
Hawaiian Electric Co, Inc		HI	Invest		
Idaho Power Co	Janine Mikesell	ID	Invest		03-25-91
Washington Water Power	Carole Heinen	ID	Invest		04-05-91
Central Illinois Light Co		IL	Invest	219	
Illinois Power Co	Raeann Semelka	IL	Invest		
Commonwealth Edison Co	Michael Brandt	IL	Invest	221	04-12-91
Indianapolis Power&Light	Thomas Steiner	IN	Invest	222	
Public Service Co of IN	Donna Kovaleski	IN	Invest	223	03-14-91
Sorthern IN Public Ser	Marlene Cohn	IN	Invest	224	
Indiana Michigan Power Co	R. W. Samuel	IN	Invest	225	03-25-91
Iowa Public Service Co	Lester Juon	IA	Invest	226	
Iowa Elec Light&Power	Robert Latham	IA	Invest	227.5	

Iowa-Illinois GastElec	Patsy L. Ramacitti	IA	Invest	228.5	
Iowa Power Inc	Jeff Newburn	IA	Invest	229	04-1-91
Kansas Power&Light Co	Carl J. Miller	KS	Invest	230.5	
Kansas Gas&Electric Co	Dianna Thurman	KS	Invest	231	
KS City Power&Light Co		KS	Invest	232	
Kentucky Power Co	Ronald G. Fannin	KY	Invest	233	03-12-91
Louisville Gas&Elec Co	Fredrick Wright	KY	Invest	234.5	
Kentucky Utilities Co	Lynwood Schrader	KY	Invest	235	
Gulf States Utilities Co		LA	Invest	236	
New Orleans Publ Svc Inc	Barbara J. Wells	LA	Invest	237	03-25-5-
ouisiana Power&Light Co	Michael Flemming	LA	Invest	238	
Central Maine Power Co	Geoffrey Green	ME	Invest	239	04-
Potomac Electric Power Co		MD	Invest	240	
Baltimore Gas&Electric Co	Michael Burton	MD	Invest	241.5	
Massachusetts Electric Co		MA	Invest	242	
Boston Edison Co	Kathleen Sullivan	HA	Invest	243	
Commonwealth Electric Co	Diane Owens	MA	Invest	244	
Detroit Edison Co	Larry Rippetoe	MI	Invest	245	04-16-91
Consumers Power Co	James Dunn	MI	Invest	246.5	
Northern States Power Co	Lou Howard	MN	Invest	247.5	
Mississippi Power Co	Timothy Foley	MS	Invest	248	
Mississippi Pow&Light Co	Joe Dove	HS	Invest	249	
Union Electric Co	Patricia Barrett	HO	Invest	250	05-30-91
Kansas City Pow&Light Co	Greg Bullington	но	Invest	251	04-02-91
Montana Power Co	Daniel Regan	HT	Invest	252	
Nevada Power Co	Keith Ashworth	NV	Invest	254	
Sierra Pacific Power Co	V. Ombudsman Aramini	иv	Invest	25 5.5	
Public Service Co of NH	Gerald Eaton	ΝН	Invest	256	
Jersey Cntrl Pow&Light Co	Philip Robinson	NJ	Invest	257	
Rockland Electric Co		нJ	Invest	258	
Public Svc Elec&Gas Co	Robert F. Darby	нJ	Invest	259	
Public Service Co of NM	Bill Cella	NM	Invest	260	03-27-91
Southwestern Publ Svc Co		нн	Invest	261	
Pennsylvania Elec Co		NY	Invest	262	
Consoldtd Edison Co-NYInc	Donna DeSimone	NY	Invest	263.5	04-02091
Cntrl Hudson Gas&El Corp	Timmian Massie	NY	Invest	264	
Rochester Gas&Elec Corp	Anne fenstermacher	NY	Invest	265	
Long Island Lighting Co	Stephen McCabe	NY	Invest	266	
Niagara Hohawk Pow Corp	Nancy Testani	NY	Invest	267.5	
NY State Elec&Gas Corp		NY	Invest	268	
Ctrl Vermont Pub Svc Corp		NY	Invest	26 9	
Orange&Rockland Utils Inc	Todd Lawless	ΝΥ	Invest	270	03-29-91
Fishers Island Elec Corp		NY	Invest	271	
Duke Power Co	Beryl Jackson	NC	Invest	272	04-08-91
Carolina Power&Light Co	Ernestine Ragan	NC	Invest	273	
Otter Tail Power Co		ND	Invest	274	
Montana-Dakota Util Co	Daniel Sharp	ND	Invest	275. 5	
Northern States Power Co	James Garness	MN	Invest	276	05-09-91
Ohio Power Co	Earl Hawkins	OH	Invest	2 7 7	
Cincinnati Gas&Elec Co	Jack C. Kelley	OH	Invest	278	03-25-91
Dayton Power&Light Co	Ethel Washington	OH	Invest	279	
Cleveland Elec Illum Co	Judith A. Foley	OH	Invest	280	03-26-91
Columbus Southern Pow Co	Hary Flint	OH	Invest	281	03-25-91
Ohio Edison Co	Mary Ann Lepp	OH	Invest	282	03-08-91
Public Svc Co of Oklahoma	Carole Huff Hicks	OK	Invest	283	
Oklahoma Gas&Flec Co	Rita Pangborn	OK	Invest	284	04-17-91

Pacific Power and Light		OR	Invest	285	
Idaho Power Co		OR	Invest	286	
Portland General Elec Co	Dorothy Rothrock	OR	Invest	287	
West Penn Power Co	Mr. Rhea Kepple	PA	Invest	288	
Duquesne Light Co		PA	Invest	289	
Philadelphia Electric Co		PA	Invest	29 0.5	
PA Power&Light Co	Timothy Dahl	PA	Invest	291	
Blackstone Valley Elec Co		RI	Invest	292	
Narragansett Electric Co	Daniel Stafford	RI	Invest	293	
Duke Power Co	Beryl M. Jackson	SC	Invest	294	04-08-91
South Carolina Elec&GasCo	Beth Braswell	SC	Invest	295.5	
Black Hills Corp	Mr. R. E. Furois	SD	Invest	296	
Northern States Power Co		SD	Invest	297	
Northwestern Pub Svc Co	Warren Lotabeg	SD	Invest	298	
Kingsport Power Co		TN	Invest	299	
Central Power&Light Co	Patricia Covington	TX	Invest	300	
Texas Utilities Elec Cc	Brenda Jackson	TX	Invest	301	
Houston Lighting&Power Co	Mary Wilson	TX	Invest	302	
Utah Power & Light Co.		UT	Invest	303	
Green Mountain Power Corp	Stephen Terry	VT	Invest	304	
Central VT Pub Serv Corp	Peter Farshay	VT	Invest	305	
Virginia Elec&Power Co	Virginia Board	VA	Invest	306	03-21-91
Puget Sound Pow&Light Co	Marjorie Qualla	WA	Invest	307	
Washington Water Power Co	Robert Fukai	WA	Invest	308	
Monongahela Power Co		WV	Invest	309	
Appalachian Power Co		WV	Invest	310	
Northern States Power Co	Pat M. Tarcotte	WI	Invest	311	03-29-91
Wisconsin Publ Serv Corp	Karl Johansson	WI	Invest	312	
Madison Gas&Elect Co	Larry Russell	WI	Invest	313	
Wisconsin Elec Power Co	Dr. Nancy Noeske	WI	Invest	314	
Wisconsin Power&Light Co	Mr. A. J. Amsto	MI	Invest	315.5	
Superior Wtr Light&Pow Co		WI	Invest	316	
Cheyenne Lt Fuel&Pwr Co	A J Carroccia	WY	GInves	317.5	03-08-91
2acifiCorp		WY	Invest	318	
Huntsville City of	Edward Cobb	AL	Public	401	
Florence City of	Howard McClanahan	AL	Public	402	
Anchorage City of	Thomas Stahr	AK	Public	403	
Salt River Proj I&P Dist	Gary Harper	AZ	Public	404	03-25-91
N. Little Rock City of	Catherine Wilkins	AR	Public	405	
Los Angeles City of	Daniel Waters	CA	Public	406	05-13-91
Colorado Springs City of	John Kelley	co	Public	407.5	03-25-91
Wallingford Town of	Raymond F. Smith	CT	Public	408	
Dover City of	Alisa Swain	DĒ	Public	409	
Jacksonville Electric Auth	Bruce Doueck	FL	Public	410	04-08-91
Moultrie City of		GA	Public	411	
Thomasville City of	William T. Berry	GA	Public	412	
Elberton City of		GA	Public	413	
Albany Water, Gas & Light	U.W. Rodemann	GA	Public	414	
Marietta Power	Ed Hoback	G A	Public	415	
Douglas City of		GA	Public	416	
La Grange City of	James Hanson	GΆ	Public	417	
East Point City of	Joseph Johnson	GA	Public	418	
Idaho Falls City of	Steve Harrison	ID	Public	419	03-08-91
Springfield City of	Lynn Frasco	IL	Public	420	
Anderson City of	Charles Myers	IN	Public	421	03-08-91

Ames City of	Merlin Hove	IA		422	
Kansas City City of	Terry Drake	KS		423	03-20-91
Owensboro City of	Robert M. Carper	KY	Public	424	
Lafayette City of	Don Dulchley	LA	Public	425	
ioulton Water Co		ME	Public	426	
lagerstown City of	William Renner	HD	Public	427	
launton City of	Joseph Blain	HA	Public	428	
Lansing City of	Joseph Pandy Jr.	MI	Public	429	
Rochester Publ Utilities	Robert Pawelski	HN	Public	430	
Tupelo City of	Charles Hutchison	MS	Public	431	
Springfield City of	Robert E. Roundtree	MO	Public	432.5	03-18-91
Omaha Public Power Dist	Fred Petersen	NE	Public	434	03-14-91
Dawson Cnty Publ Pwr Dist	Phillip Darby Jr.	NE	Public	435	03-18-91
Boulder City City of	Jeffrey Patlovich	ΝV	Public	436	03-26-91
Wolfeboro Town of		ИН	Public	437	
Vineland City of	Harry A. Maloney III	NJ	Public	438	
Farmington City of	William Statton	NH	Public	439	
Rockville Cntre Vllge of		NY	Public	440	
Boonville Village of		NY	Public	441	
Ilion Village of		МY	Public	442	
Lake Placid Village of		YИ	Public	443	
Spencerport Village of		NY	Public	444	
Bath Elec Gas&Water Sys		NY	Public	445	
Massena Town of		NY	Public	446	
Plattsburgh City of		NY	Public	447	
Greenport Village of		NY	Public	448	
Groton Village of		NY	Public	449	
Greene Village City of		NY	Public	450	
Freeport Village of Inc	William Cominos	NY	Public	451	
Frankfort Village of		NY	Public	452	
Arcade Village of		NY	Public	453	
Salamanca City of		NY	Public	454	
Zndicott Village of	Harry Andrews	NY	Public	455	03-19-91
Akron Village of	Raymond Carb	NY	Public	456	03-11-91
Penn Yan Village of		NY	Public	457	
Fairport Village of	Jon Sunde	NY	Public	458	
Wellsville Village of		NY	Public	459	
Solvay Village of		NY	Public	460	
Springville Village of		NY	Public	461	
Watkins Glen Village of		NY	Public	462	
Sherburne Village of		NY	Public	463	03-11-91
Hohawk Municipal Comm		NY	Public	464	
Sherrill City of		NY	Public	465	
Brocton City of		NY	Public	466	
Hamilton Village of		MY	Public	467	
Marathon Village of		NY	Public	468	
Green Island City of		NY	Public	469	
Philadelphia Village of		NY	Public	470	
Rouses Point Village of		NY	Public	471	
Angelica Village of		MY	Public	472	
Little Valley Village of		NY	Public	473	
Bergen Village of		NY	Public	474	
Richmondville Village of		NY	Public		
Castile Village of		NY	Public	476	
Churchville Village of	Sue A. Davis	ΝY	Public	477	03-03-91
Andover Village of		NY	Public	478	

Tupper Lake Village of	Donald Trudeau	NY	Public	479	03-26-91
Theresa City of		НY	Public	480	
Mayville Village of		NY	Public	481	
Silver Springs Village of	Allen Putney	NY	Public	-482	03-12-91
Jamestown City of	R. James Gronquist	NY	Public	483	05-13-91
Holley Village of		ΝΥ	Public	484	
Testfield Village of		NY	Public	485	
<pre><aneateles of<="" pre="" village=""></aneateles></pre>		NY	Public	486	
avetteville Pub Wks Comm	Timothy Wood	NC	Public	487	
	Wayne Nelson	ND	Public	488	03-12-91
alley City City of	George Pofok	OH	Public	489	
Sleveland City of	-	OK.	Public	490	03-08-91
Edmond City of	Nancy Nichols	OR	Public	491	04-05-91
Eugene City of	Marilynne Blakely	PA	Public	492.5	04 00 51
Chambersburg Borough of	****			493	
Puerto Rico Elec Pwr Auth	Jose A. DelValle	PR			
Fascoag Fire District		RI	Public	494	
Orangeburg Dept of Pub Uti	1	SC	Public	495	
Watertown City of		SD	Public	496	
Memphis City of	Larry Papasan	TN		497.5	
San Antonio City of	Pete M. Bernal	TX	Public	498	03-12-91
Provo City Corp	Ronald D. Rydman	UT		499	03-18-91
Burlington City of	Robert C. Young	VI	Public	500	
Danville City of	John Sweeney	VA	Public	501.5	
Seattle City of	Beverly Corwin	WA	Public	502	03-25-91
New Martinsville Mn El Ut		₩V	Public	503	
Manitowoc City of	Arlyn Libal	WI	Public	504	
Gillette City of	Karen Godfrey	WY	Public	505	04-15-91
Alabama Gas Corp	Susan Love	AL	GInves	601	03-13-91
Enstar Nat Gas Co		AK	GInves	602	
Southwest Gas Corp		AZ	GInves	603	
ARKLA Inc		AR	GInves	605	
Arkansas Western Gas Co		AR	GInves	606	
Southern CA Gas Co	Sharon Lee	CA	GInves	607	04-15-91
Pacific Gas&Elec Co	Bruce Matulich	CA	GInves	608.5	04-08-91
Greeley Gas Co		co	GInves	609	
Pub Svc Co of Colorado	Gerry Vurciaga	со	GInves	610.5	04-09-91
Southern CT Gas Co	00111	CT		611	
Connecticut Nat Gas Corp	Leslie Stophel	CT	GInves	612	03-13-91
•	Destie Scobuer	CT	GInves	613	00 20 72
Yankee Gas Svc Co		DE			
Delmarva Pwr & Lt Co	222	DC		615	04-08-91
ashington Gas Lt Co	????	FL			04-00-31
Florida Public Utilities	December D. Clark				03-20-91
Peoples Gas Sys Inc	Stephen B. Clark	FL	-		03-20-91
Atlanta Gas Lt Co		GA			
GASCO Inc	James M. Severson	HI			03-18-91
Intermountain Gas Co		ID			
Northern Illinois Gas Co	Shirley Moy-Lee	IL			06-04-91
Peoples Gas Lt&Coke Co		IL			
Illinois Pwr Co	Douglas Carolus	IL			04-15-91
Citizens Gas&Coke Util		IN		625	
Indiana Gas Co		IN	GInves	626	
Iowa Illinois Gas&Elec Co	George L. Phillips	IA	Ginves	628.5	03-25-91
Peoples Nat Gas Co		IA	GInves	630	
Iowa Pub Svc Co		IA	GInves	631	
Kansas Pwr≪ Co		KS	GInves	632.5	
United Cities Gas Co	Jerry Botts	KS	GInves	633	04-15-91

COLUMN TA GAS OF MANICUCKY		KI	Ginves	634	
Western Kentucky Gas Co		KY	GInves	635	
Louisville Gas&Elec Co	Don Thorn	KY	GInves	636.5	04-18-91
ARKLA Inc		LA	GInves	638	
Entex Div of ARKLA Inc		LA	GInves	639	
ouisiana Gas Svc Co		LA	GInves	640	
Forthern Util Inc		HE	GInves	641	
fashington Gas Lt Co		MD	GInves	642	
Baltimore Gas&Elec Co		MD	GInves	644.5	
Bay State Gas Co	Ronald J. Moreira	MA	GInves	645	03-25-91
Boston Gas Co		MA	GInves	646	
Commonwealth Gas Co		MA	GInves	647	
Fall River Gas Co		MA	GInves	648	
Consumers Pwr Co		MI	GInves	649.5	
Battle Creek Gas Co		HI	GInves	650	
fichcon Gas Co	Ron McGarvey	ΗI	GInves	651	04-02-91
HINNEGASCO Inc	Susan Nathan	MN	GInves	652	04-22-91
Northern States Pwr Co		MN	GInves	653.5	
Entex Div of ARKLA Inc	Douglas Palmer	HS	GInves	654	03~25-91
Mississippi Valley Gas Co		MS	GInves	655	
Kansas Pwr≪ Co		НО	GInves	657	
Laclede Gas Co		MO	GInves	658	
Montana Pwr Co	John Ralph	MT	GInves	659	03-12-91
Freat Falls Gas Co	Jim Ziegenhagel	MT	GInves	660	03-22-91
iontana Dakota Util		HT	GInves	661	
1INNEGASCO	Susan Nathan	NE	GInves	662	04-22-91
KN Energy Inc		NE	GInves	664	
Omaha Metropol Util Dist		NE	GInves	665	
Southwest Gas Corp	Wallace Kolberg	NV	GInves	666	04-02-91
Sierra Pacific Pwr Co		NV	GInves	667.5	
Energynorth Nat Gas Inc		NH	GInves	668	
New Jersey Nat Gas Co		NJ		669	
Gas Co of New Mexico	Bill Cella	NH	GInves	670	03-27-91
Syracuse Suburban Gas Co		NY	GInves		
Natl Fuel Gas Distr		NY	GInves	672	
Brooklyn Union Gas Co	David Ripple	NY	GInves	673	03-27-91
Con Edison Co of NY Inc		NY	GInves	674.5	
Niagara Hohawk Pwr Corp	Philip Chase	NY	GInves	675.5	03-26-91
'iedmont Nat Gas Co		NC	GInves	676	
ontana Dakota Util		ND	GInves	677.5	
olumbia Gas of Ohio Inc	W. Conn Sharp	OH	GInves	678	04-19-91
ist Ohio Gas Co	John B. Wilbur	OH	GInves	679	03-12-91
klahoma Nat Gas Co		OK	GInves	680	
orthwest Nat Gas Co		OR	GInves	681	
'eoples Nat Gas Co	Sadie Kroeck	PA	GInves	682	04-01-91
IGI Corp		PA	GInves	683	
hiladelphia Gas Wks	Bernadette Gant-Jones	PA	GInves	684	04-17-91
[quitable Gas Co		PA	GInves	685	
hiladelphia Elec Co		PA	GInves	686.5	
olumbia Gas of Penn Inc	W. Conn Sharp	PA	GInves	687	04-19-91
rovidence Gas Co		RI	GInves	688	
3C Elec&Gas Co		sc	GInves	689.5	
iedmont Nat Gas Co		SC		690	
Montana Dakota Util		SD	GInves	691	
IINNEGASCO Inc	Susan Nathan	SD		693	04-22-91
United Cities Gas Co		TN		694	
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Columbia Gas of Kentucky

C-75

KY GInves

634

Nashville Gas Co		TH	GInves	697	
Southern Union Gas Co		TX	GInves	698	
Entex Div of ARKLA Inc		TX	GInves	699	
Lone Star Gas Co		TX	GInves	701	
Mountain Fuel Sply Co		UT	GInves	702	
Vermont Gas Sys Inc		VT	GInves	703	
Commonwealth Gas Svc Inc		VA	GInves	704	
Virginia Nat Gas Inc		VA	GInves	705	
ashington Gas Lt Co	James T. Citido	٧A	GInves	706	03-25-91
Cascade Nat Gas Corp		WA	GInves	707	
Washington Nat Gas Co		WA	GInves	708	
Hope Gas Inc		₩V	GInves	709	
Lumberport Shinnston Gas		WV	GInves	710	
Hountaineer Gas Co		WV	GInves	711	
Wisconsin Nat Gas Co	Donald Johnston	WI	GInves	712	03-27-91
City Gas Co	Dan Jahuke	WI	GInves		
Wisconsin Gas Co	John F. Nelson	WI			03-14-91
Wisconsin Pwr≪ Co		11	GInves	715.5	
Mountain Fuel Sply Co			GInves		04-29-91
lody Gas Co		WY	GInves		
Montana Dakota Util		WY	GInves		
Northern Gas of Wyoming		ЖY	GInves		
City Gas Co of Florida	H. Randall Harris	FL	GInves	750	04-01-91
Mount Carmel Publ Util Co		IL	GInves	751	
Northern IN Pub Svc Co		IN	GInves		
New Orleans Pub Svc Inc		LA		753	
Northwestern Pub Svc Co		SD	GInves	754	
Wisconsin Pub Svc Corp		WI			
Huntsville Nat Gas Dept		AL	GPublic		
Hesa City of		λZ	GPub1	805	
Long Beach City of	Thomas Baeyens	CA		808	03-22-91
Colorado Springs City of	John Kelley		GPubl		03-25-91
Norwich Pub Util		CT		810	
Okaloosa Cty Gas Dist		FL		814	
Austell Nat Gas Sys			GPublic	815 819	
Linton City of		IN			
Cedar Falls Util		IA			
Winfield City of			GPubl	823	
Henderson Mun Gas Dept			GPublic		
Alexandria Gas Dept			GPublic GPublic		
Frederick Gas Co		HN			
Duluth City of		МО			
Springfield City Util	Paul C. Rogers		GPubl		04-08-91
	Paul C. Rogers	ns NJ			04 00 7.
rlizabethtown Gas Co. Las Cruces Mun Gas		NM			
Pub Svc Co of NC		NC			
Wilson City of	Rusty Owens	NC			03-25-91
Hastings Util	Rabel Owens	NE			
Hamilton City of		OH	GPubl	852	
Guymon Hun Gas Co		OK			
Chambersburg Borough of		PA			
Greenwood Comm of Pub Wks	Teresa Warner	sc	GPubl		03-14-91
Watertown Gas Dept		SD	GPublic		
Memphis Lt Gas&Wtr		TN			
Dyersburg Gas Dept		TH			
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Bay City Gas Co Danville City of Enumclaw City of

A. Harrison Gregory

TX GPublic 875

VA GPubl 878.5 04-02-91

WA GPubl 880

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APPENDIX D

RESOURCES FOR WAP MANAGERS: STATES & UTILITIES WITH EXPERIENCE IN EXTENDING THE SCOPE OF WAP RESOURCES

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APPENDIX D

Resources for WAP Managers States and Utilities with Experience in Extending the Scope of WAP Resources

PY 1989 State Programs

FL	Florida Fix	Ms. Hilda Frazier Division of Housing & Community Development Department of Community Affairs 2740 Centerview Drive Tallahassee, FL 32399-2100 (904)487-3481
GA	Stripper Well	Mr. Phil Whitlow Office of Energy Resources 270 Washington Street, SW Atlanta, GA 30334-8502 (404) 656-5176
ID	Housing Preservation	Ms. Robyn Carlson State Economic Opportunity Office 450 W. State Street, 7th Floor Boise, ID 83720 (208) 334-5730
IL	Landlord Contribution	Mr. Randy Bennett Energy Specialist 620 E. Adams, 4-B Springfield, IL 62701 (217) 785-6203
KS	CDBG; Landlord, Tenant & Public Contribution	Mr. Joe Dermid City of Wichita Energy Office 1602 S. McLean Blvd. Wichita, KS 67213 (316) 268-4093

ME	Repair and Heating System	Mr. George Bates Maine State Housing Authority 295 Water Street P.O. Box 2669 Augusta, ME 04338 (207) 626-4600
MI	Home Repair/WAP	Ms. Connie Zanger Bureau of Community Services P.O. Box 30015 Lansing, MI 48909 (517) 335-5981
NY	Landlord Contribution, CDBG, and DSS	Mr. Rick Gerardi Weatherization Director Division of Economic Opportunity 162 Washington, Ave., 7th Floor Albany, NY 12231 (518) 474-5700
NC	Housing Partnership, CDBG, and FmHA	Mr. Robert Niegelsky North Carolina Housing Partnership 3300 Drake Circle Ste 200 Raleigh, NC 27607-3300 (919) 781-6115
		Mr. Bob Chandler 1307 Glenwood Ave Raleigh, NC 27605-3255 (919) 733-2850
ОН	Fuel Oil and Gas Retrofits	Mr. Bob Garrick Office of Energy Conservation 77 S. High Street P.O. Box 1001 Columbus, OH 43266-0101 (614) 466-6797
OK	CDBG	Mr. Sherwood Washington Division of Community Affairs and Development Oklahoma Department of Commerce P.O. Box 26980 Oklahoma City, OK 73126-0980 (405) 841-9326

OR Rural Housing Preservation Mr. Bill Knutson Housing and Community Services Department 1600 State Street Salem, OR 97310 (503) 378-4729 RI CDBG Mr. Patrick Woods Warwick Community Action 195 Buttonwoods Ave Warwick, RI 02886 (401) 732-4660 WA SLIAG/WAP Ms. Kathy Kreiter Housing Division Department of Community Development MS-GH-51 9th and Columbia Building Olympia, WA 98504-4151 (206) 586-6459 FmHA, Exxon, Business/WAP WY Ms. Jan Stiles Department of Family Services Hathaway Building Room 373 Cheyenne, WY 82002

(307) 777-6137

PY 1989 Utility Contacts

AL	Alagasco	Ms. Susan Love, Project Director Alagasco 2101 6th Avenue N. Birmingham, AL 35203 (205) 326-9212
AK	Chugach Electric Assoc.	Mr. Peter Poray, Business Development Manager Chugach Electric Association P.O. Box 196300 Anchorage, AK 99519-6300 (907) 762-4788
CA	Pacific Gas & Electric	Mr. Archie Murray Supervisor Energy Efficiency Pacific Gas & Electric 123 Mission Street San Francisco, CA 94106 (415) 973-4856
CA	Plumas Sierra Rural Electric Cooperative	Mr. Robert Marshall Membership Services Director Plumas Sierra REC P.O. Box 2000 Portola, CA 96122 (916) 832-4261
CA	Southern California Gas Company	Ms. Karen Franssen Direct Assistance Program Southern California Gas Co. 10375 Slusher Drive Santa Fe Springs, CA 90670 (213) 946-5366
СО	Public Service Company of Colorado	Mr. Gerry Vurciaga, Supervisor Public Service Co. of Colorado 550 15th Street Room 420 Denver, CO 80202 (303) 571-7176

CT Connecticut Natural Gas Ms. Leslie Stophel, Manager Connecticut Natural Gas 100 Columbus Blvd. P.O. Box 1500 Hartford, CT 06144-1500 (203) 727-3458 Mr. Johnathan Broadnax DC District of Columbia DC Natural Gas Natural Gas 1100 H Street, NW Washington, DC 20080 (202) 624-6349 Jacksonville Electric Mr. Bruce Doueck, Division Chief FL Jacksonville Electric Authority Authority 21 W. Church Street Jacksonville, FL 32202 (904) 632-6231 GA Carroll EMC Ms. Karen Johnson, Membership Service Representative Carroll EMC P.O. Box 629 Carrollton, GA 30117 (404) 832-3552 Mr. Jim E. Slaughter, Manager GA Georgia Power Company Georgia Power Company P.O. Box 4545 Atlanta, GA 30302 (404) 526-7313 GA Greystone Power Corporation Mr. Phil Landress, Dept. Manager Greystone Power Corporation P.O. Box 897 Douglasville, GA 30133 (404) 942-6576 Mr. Lamar Mote, Manager GA Habersham EMC Habersham EMC P.O. Box 25 Clarkesville, GA 30523 (912) 754-2114

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NJ Jersey Central Power & Mr. Philip Robinson Light Company Jersey Central Power & Light Marketing Department 310 Madison Ave Morristown, NJ 07960 (201) 455-8200 Public Service Company of NM Mr. Rafael Tapia, Supervisor New Mexico Public Service Co. of New Mexico Alvarado Square Albuquerque, NM 87158 (505) 848-4681 NY Great Falls Gas Company Mr. Jim Ziegenhagel, Supervisor Great Falls Gas Company P.O. Box 2229 Great Falls, NY 59403 (406) 791-7500 NY Niagra Mohawk Power Mr. Philip Chase, Jr., Manager Corporation Niagra Mohawk Power Corp. 300 Erie Blvd. West Syracuse, NY 13202 (315) 428-6732 NY Orange & Rockland Utilities Mr. Todd Lawless, Representative Orange & Rockland Utilities One Blue Hill Plaza Pearl River, NY 10965 (914) 577-2668 NY Villiage of Endicott Mr. Harry Andrews, Light Superintendent Villiage of Endicott 1009 East Main Street Endicott, NY 13760 (607) 757-2455 NC City of Wilson Mr. Rusty Owens, Coordinator City of Wilson P.O. Box 10 Wilson, NC 27894

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Ms. Sharon Doggett, Wx Manager Bonneville Power Administration

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