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Marketing and Design of Residential Energy Conservation Programs for the Elderly

Linda Berry
Martin Schweitzer
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ENERGY DIVISION

**MARKETING AND DESIGN OF
RESIDENTIAL ENERGY CONSERVATION PROGRAMS
FOR THE ELDERLY**

**LINDA BERRY
MARTIN SCHWEITZER
EMILY FREEMAN**

February 1988

Research sponsored by the Residential and Commercial Conservation Program of the Office of State and Local Assistance Programs.

OAK RIDGE NATIONAL LABORATORY
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Dear Colleague:

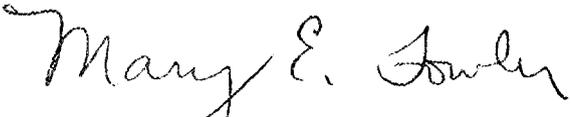
The Residential and Commercial Conservation Program has identified elderly homeowners who are not eligible for weatherization assistance as an underserved market segment for energy conservation services. To help those program implementers who are planning or may be considering activities directed toward this market, a brief study was done to document the experience of several programs targetted toward the elderly. The resulting report, entitled: Marketing and Design of Residential Energy Conservation Programs for the Elderly, is enclosed for your review and consideration.

This study describes 39 voluntary programs sponsored by public and private agencies which provide audits, financing, weatherization, and other energy-related services for elderly customers. The main purpose of this report is to describe the organizational features and marketing approaches which the managers of these energy conservation programs have found to be effective.

The report found that the elderly use energy less efficiently, are less likely to participate in general programs, and spend more of their income on energy than other groups. A large and rapidly growing share of the population, the elderly constitute 12 percent of all residential energy use.

The draft report was reviewed by a number of people with expertise on one aspect or another of energy program delivery. Their comments suggest that two significant barriers to adoption of energy conserving technologies or behaviors are a short planning horizon and the question of trust. One reviewer felt attitudinal variables might be more important to consider than demographics in designing programs for this market segment, and that another approach which could possibly overcome several barriers would be to target the children of elderly homeowners.

The report presents descriptions of the programs that focus on the elderly, as well as a contact point. If you are interested in setting up a program for the elderly, we hope you will be able to use this information to select program features that best meet your clients' needs.


Mary E. Fowler, Chief
Residential and Commercial
Conservation Branch
Office of State and Local
Assistance Programs
Conservation and Renewable Energy

Enclosure

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EXECUTIVE SUMMARY

After the energy shortages of 1973-74, many utilities developed programs to encourage the conservation of residential energy. Residential Conservation Service (RCS) audit programs were the most commonly implemented type of program because the National Energy Conservation Policy Act of 1978 required all major gas and electric utilities to offer on-site home energy audits to residential customers. As experience with and evaluations of RCS programs accumulated, it became apparent that various segments of the residential market respond differently to RCS offerings. Typical RCS participants have higher incomes and more education than the average utility customer. In addition, they are more likely to be middle-aged, single-family homeowners. Low-income, elderly, multifamily and renter segments of the residential market participate in RCS programs at much lower rates than would be expected from their representation in the general population. Thus, the elderly are one of several underserved market segments in standard RCS programs. This report grew out of the U.S. Department of Energy's interest in these underserved segments.

Because the elderly tend not to respond to standard RCS audit programs, different program structures and marketing approaches are needed to serve the elderly segment adequately. The main purpose of this report is to describe the organizational features and marketing approaches which managers of energy conservation programs targeted to the elderly have found to be effective.

SIGNIFICANCE OF THE ELDERLY SEGMENT AS A MARKET FOR RESIDENTIAL ENERGY CONSERVATION PROGRAMS

Although the elderly use residential energy more inefficiently than the nonelderly, they are less likely to participate in conservation programs than is the population at large. The size of this largely untapped segment of the market makes it too significant to ignore. In 1983, people age 65 and over represented almost 12% of the U.S. population and just over 20% of all households. The elderly consumed about 21% of all energy in the residential sector. Because the elderly are the most rapidly growing age segment of the population, their importance is likely to increase dramatically in the decades ahead.

The elderly have a number of characteristics that make them an important segment of the market for energy conservation programs. In general, they spend a higher proportion of their income on residential energy use, live in older, less energy-efficient homes, and engage in fewer conservation behaviors. They are also more susceptible to harm from extremes of heat or cold.

The opportunities for energy conservation in the elderly market segment are countered by a number of barriers to the adoption of energy-efficiency measures. These include lack of awareness of effective energy saving actions, diminished physical abilities, a shortened planning horizon for the amortization of investments, lack of trust in the promoters of energy conservation programs, an unwillingness to accept what might be perceived as charity, a lack of perceived need for energy-efficiency improvements, and a concern with the costs of conservation measures.

While the above characteristics apply to the elderly population in general, they certainly do not apply to all members of this group, which is quite heterogeneous. In fact, the elderly population can be divided into several distinct subgroups. These

include the low-income elderly, younger seniors (ages 60-70), women living alone or with nonrelatives, and older renters.

FINDINGS

This study examined 39 programs designed to serve the energy-related needs of the elderly, with an emphasis on programs that either finance or directly perform the installation of energy-efficiency measures. This focus was chosen for two reasons. First, marketing efforts tend to be more varied and extensive for programs of this type. Second, programs that install conservation measures are likely to have a greater, and more easily measured, impact on energy consumption than other program types. None of the programs have conducted evaluations of their energy savings impacts. Major reasons for the lack of measurement of energy savings include the small scale and recent beginnings (most have been operating for one to three years) of the programs. In addition, studies of energy saving impacts are quite expensive and take several years to complete. Conducting impact evaluations was beyond the scope and budget of this report. Nevertheless, as programs for the elderly expand, evaluations of their energy savings impacts will become more important. The accurate determination of impacts is more feasible for programs that install conservation measures.

Important findings emerged in the areas of program marketing, barriers to conservation activities by the elderly, and interagency cooperation. Findings in each of these areas are summarized below.

Program Marketing

Program marketing includes the processes of locating elderly customers and of informing them about and persuading them to use program services. Nearly two-thirds of the programs for the elderly rely on interagency networking, presentations and agency referrals to locate, inform and persuade potential clients to participate. Nearly half of the programs use direct mail and bill inserts to advertise program services, and about one-third use television, radio, and various printed materials. A smaller number of programs advertise in newspapers and use telemarketing. In addition, word-of-mouth advertising by satisfied clients was mentioned by many program managers as the best means of locating new clients and persuading them to participate.

There has been little systematic study of the relative effectiveness of various marketing techniques, due in part to the recent origin of most of these programs. Still, many program managers seem to believe that the use of specific marketing techniques, such as direct mail or bill inserts, is probably less important to the process of optimizing participation than the amount of trust potential clients have in the sponsoring organization(s) and the ability of the sponsor to use the resources of other federal, state, and local agencies effectively.

Barriers to Conservation Activities

Most of the common barriers to conservation action by the elderly are addressed by current programs targeted to this sector. The reluctance to invest in conservation is removed in most of the programs studied by offering free weatherization services. Most of the programs also address the difficulty of selecting and installing weatherization materials by providing or arranging for installation. The problem of lack of trust is typically handled by using existing communication channels and already trusted networks, including various community groups and agencies.

On the negative side, most of the programs studied do not deal with the issue of pride or independence as a barrier to accepting free services. An even more critical barrier which most programs do not address is the lack of perceived need for conservation activity. A recent study found this factor to be the dominant reason for inaction in response to conservation opportunities.

Interagency Cooperation

Interagency cooperation of one kind or another was a part of every elderly conservation program studied. In over 60% of the programs, the lead agency receives substantial assistance from another organization or organizations. In the remaining cases, some lesser amount of interagency communication or collaboration was involved between lead agencies and an extensive array of government and voluntary organizations.

Programs that make extensive use of interagency cooperation were compared with those that do not. This comparison suggests that agencies experiencing resource limitations can increase their ability to provide services through interagency cooperation. In fact, the pervasiveness of interagency cooperation suggests that this type of interaction offers important advantages to large numbers of those agencies involved in operating conservation programs for the elderly.

IMPLICATIONS FOR PROGRAM DESIGN

Based on the findings of this study, a number of recommendations can be offered to conservation program managers and policymakers:

- Be Familiar with a Range of Programs
Managers should become familiar with existing programs for the elderly, both nationwide and in their own local area. This familiarity can help managers select those program features that will serve their clients most effectively.
- Address Barrier of Client Pride
Client pride may prevent them from accepting free services. Techniques that may help address the pride barrier include involving clients in decision making and stressing the long-term benefits of conservation to society as a whole.
- Educate Clients About Benefits
A lack of awareness of the benefits of energy-efficiency improvements is a major barrier to participation in many programs. Educational efforts are needed to build an awareness of these benefits.
- Develop Interagency Cooperation
The lead agency for any given elderly conservation program should secure cooperation and resources from other compatible organizations. The type and amount of assistance sought should be determined by the lead agency's need for additional resources and the opportunities available for cooperation with other appropriate agencies.
- Develop Client Trust
Designers and managers of programs for the elderly should focus on the development and enhancement of trust as a vital component of their mission. Specific techniques that can be used include the utilization of already-trusted

networks and community groups, the employment of empathic service personnel, and the development of a reputation for good customer relations and complaint resolution.

Target Programs to Specific Segments

The specific needs of particular segments of the elderly population should be identified and specific programs designed to address these needs. Likely segments to target are women living alone or with nonrelatives, elderly renters, and middle-income elderly households.

ACKNOWLEDGEMENTS

This report was funded by the U.S. Department of Energy's Office of State and Local Assistance Programs, Residential and Commercial Conservation Branch. It is part of a series of reports initiated by DOE which analyzes utility energy efficiency programs. The series was initiated by DOE in an effort to evaluate selected conservation and load management activities of utilities in terms of their effectiveness as alternatives to the Residential Conservation Service audit program.

The assistance of several people has contributed significantly to the successful completion of this project. Edna Jones, the DOE project manager, was particularly helpful in reviewing the progress of our research throughout its various stages. We also appreciate the comments of those who reviewed drafts of this report including Marilyn Brown, Eric Hirst, and Terry Vineyard of ORNL; Bryan Mohler of Battelle; Edna Jones, Harry Lane, Sarah Kirchen and Mary Fowler of DOE. We are especially grateful to all of the utility and agency personnel we contacted for contributing their time and their understanding of the programs.

ABSTRACT

This report describes barriers to energy conservation by the elderly. Because of these barriers, they have a greater need for programs that assist with the installation of energy-efficiency improvements. In response to this need, a number of specialized programs are operated for the elderly. This report contains descriptions of 39 energy conservation programs for the elderly. Telephone interviews were conducted with the managers of these programs to identify marketing techniques and organizational structures.

Interagency networking, presentations and referrals are the most common methods of recruiting clients. Other marketing techniques in order of the frequency of use are: direct mail, bill inserts, television, radio, printed materials, and telemarketing. Many managers consider word-of-mouth advertising from satisfied clients the most effective form of marketing.

Interagency networking and support (financial, structural and in-kind) can offer real advantages in the operation of conservation programs for the elderly. The use of specific marketing techniques is probably less important to success in recruiting clients than the degree of trust potential clients have in the sponsoring organization(s).

1.0 INTRODUCTION

After the energy shortages of 1973-74, many utilities developed programs to encourage the conservation of residential energy. Residential Conservation Service (RCS) audit programs were the most commonly implemented type of program because the National Energy Conservation Policy Act of 1978 required all major gas and electric utilities to offer on-site home energy audits to residential customers. As experience with and evaluations of RCS programs accumulated, it became apparent that various segments of the residential market respond differently to RCS offerings. Typical RCS participants have higher incomes and more education than the average utility customer. In addition, they are more likely to be single-family homeowners. Low-income, elderly, multifamily and renter segments of the residential market participate in RCS programs at much lower rates than would be expected from their representation in the general population. Thus, the elderly market is one of several underserved segments in standard RCS programs.

Because the elderly tend not to respond to standard RCS audit programs, different program structures and marketing approaches are needed to induce the elderly segment to respond. The main purpose of this report is to describe the organizational features and marketing approaches which managers of energy conservation programs targeted to the elderly have found to be effective. To accomplish this objective, a search for programs designed specifically to meet the needs of elderly consumers was conducted. Thirty-nine such programs and their marketing approaches are described in Appendices A and B. Appendix A contains descriptions of utility-sponsored programs that have little or no state agency involvement. Appendix B contains descriptions of state energy offices and of joint state/utility efforts. The topics covered in the program descriptions include:

- the program name and the name(s) of the sponsoring utility and/or agency;
- the name, address and telephone number of the contact person;
- program eligibility requirements and incentive terms;
- a description of the conservation measures offered;
- discussions of program history and design; and
- descriptions of the types of marketing techniques used.

This report begins by describing the significance of the elderly as a market segment for conservation programs. The growing size of this age group, its distinctiveness in factors related to energy demand, and the inefficiency of its energy use all suggest that more attention to the needs of the elderly is warranted (Section 2). Although the potential for energy efficiency improvements in elderly households is great, so are the barriers to implementation. Section 3 reviews barriers to energy efficiency improvements among elderly households. Section 4 summarizes the marketing approaches that are used by the programs described in the Appendices. Section 5 discusses the organizational structure of interagency efforts and describes how the various actors work together to deliver conservation services to the elderly. Section 6 contains a summary, conclusions and a discussion of implications for program management.

2.0 SIGNIFICANCE OF THE ELDERLY SEGMENT AS A MARKET FOR RESIDENTIAL CONSERVATION PROGRAMS

The elderly form a significant segment of the market for residential conservation programs for several reasons. First, the elderly are a large, and rapidly growing, part of the U.S. population. Secondly, their housing stock and energy use patterns show that they have a somewhat higher than average potential for energy efficiency improvements. Thirdly, although the income status of the elderly has improved in recent years, many still are unable, or unwilling, to make conservation investments. Finally, the elderly are themselves a diverse group with several subsegments that have specialized energy-related needs. Each of these factors (demographics, housing stock and energy use patterns, income status, and further market segmentation) is discussed below.

DEMOGRAPHICS

In terms of sheer size, the older population is significant and will become even more so. The elderly (i.e., those 65 years of age and older) numbered 27.4 million in 1983, representing 11.7% of the U.S. population. During the last decade, the number of older people increased almost four times as rapidly (23.5%) as the under-65 age group (6.3%) (Edison Electric Institute 1986). Over the next fifty years, the proportion of the population which is elderly is projected to double as average life expectancies increase and birth rates decline. The elderly are the most rapidly-growing age segment of the population. The most dramatic increase is expected between the years 2010 and 2030, as the baby boom generation reaches age 65 and over. By the year 2000, the elderly will represent 13% of the population, and by 2040 a rise to over 22% is forecast (Fig. 1) (American Association of Retired Persons, 1984; U.S. Department of Health and Human Services 1985).

HOUSING STOCK AND ENERGY USE

The housing of older Americans is generally older and less adequate than the balance of the nation's housing. About 40% of homes owned by older persons in 1980 were built prior to 1940 (22% for younger owners) and 9% were classified as inadequate in 1981 (compared with 6% for younger owners) (American Association of Retired Persons 1984). Homes occupied by older households have less insulation and older heating and cooling equipment, indicating a greater than average need for energy efficiency improvements (Smiley 1979; Jackson 1980; Brown and Rollinson 1985).

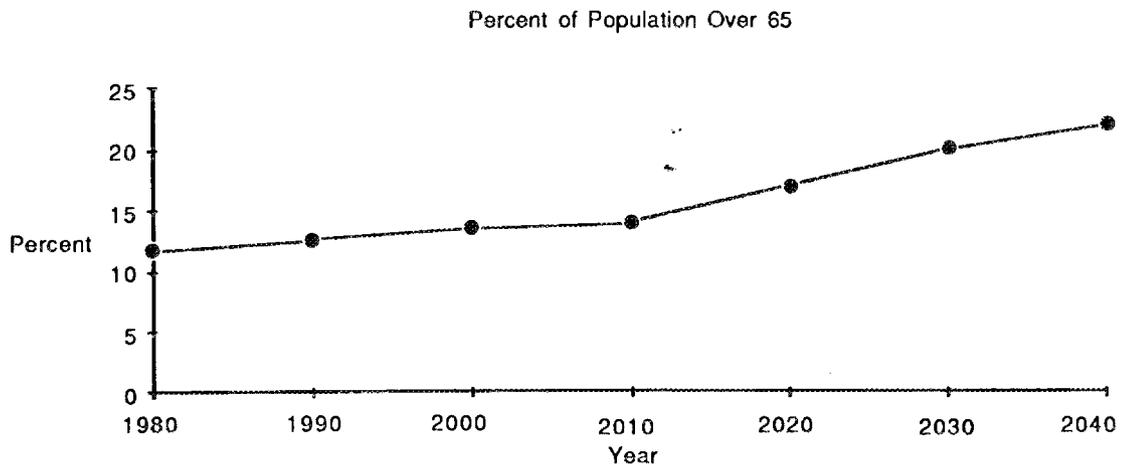


Fig. 1. Actual (1980) and projected percentage of population over 65 years of age. Source: 1985 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors and Disability Insurance Trust Funds, Table A1, p. 77.

Because the elderly tend to have fewer members in each household (average of 1.5 members vs. 2.7 members for all age groups), they form a greater proportion of the total households (and housing units) in the United States than they do of the total population. Although elderly persons comprise about 12% of the total population, elderly households account for over 20% of all households. Elderly households consume about 21% of the total residential energy used annually. They consume less than 20% of the residential electricity, however, because fewer heat with electricity and those with electric heat consume fewer kWh per household (Energy Information Administration 1982).

Although the elderly consume about the same total energy per household as the nonelderly, measures of efficiency in energy usage - such as energy consumption per capita and per square foot of occupied space - show that seniors have greater than average potential for energy efficiency improvements (Brown and Rollinson 1985; Warriner 1981). This greater potential occurs both because homes occupied by older households have fewer conservation measures in place and because the elderly engage in fewer conservation behaviors (Brown and Rollinson 1985; Hutton and McNeill 1984).

The fact that three-fourths of the elderly are homeowners means that most of this group have considerable control over their in-home energy use and therefore can potentially change it. In addition, because elderly households spend a higher proportion of their income on residential energy than the average household (8.1% vs. 5.3%), they have at least one factor motivating them to improve their household energy efficiency (Berry and Brown 1988).

INCOME STATUS

The income status of the elderly has improved considerably in the past thirty years. Until recently the elderly were much more likely to be poor than younger persons. Only in the mid-1980s have poverty rates among the elderly declined to levels comparable to those among the general population (Fig. 2).

Even though most of the elderly are no longer classified as victims of poverty, they are much more likely to have incomes of less than \$10,000 per year (Fig. 3). Thus, to paraphrase The Villers Foundation (1987) report on the economics of aging, although slightly smaller proportions of the elderly are below official poverty lines, more are "near poor" with incomes that are only marginally above federally-defined poverty levels. Census data show that the degree of inequality in the dispersion of incomes among the elderly is greater than among the nonelderly. A few of the elderly are wealthy: 5.6% had incomes over \$50,000 in 1985. Many more, about 42%, are either poor or "near poor" (U.S. Department of Commerce 1986). Therefore, a majority of elderly households with sufficient income to raise them above poverty levels may still have little extra income that they are willing to spend on conservation.

Statistics on financial assets show that, on the average, elderly households have considerably more holdings than other age groups. Of all the financial assets held by U.S. families, 37% are held by households in the 50-65 age group and an additional 40% by those over age 65. Financial assets increase with age, reach a peak level at ages 65-75, and decline rather sharply after age 75. The sharp decline after age 75 suggests that with advancing age, people must use their assets to meet ongoing living expenses (The Conference Board 1985). As is true of income, the distribution of assets among the elderly is quite polarized; there is a clustering of wealthy households at one end of the economic scale and a large number of asset-poor households at the other (The Conference Board 1985). For many elderly households, most financial assets are in the form of home ownership with a paid-off mortgage. Assets in this form are not useful for meeting routine expenses.

Percentage of incomes below poverty level for all persons vs. over 65

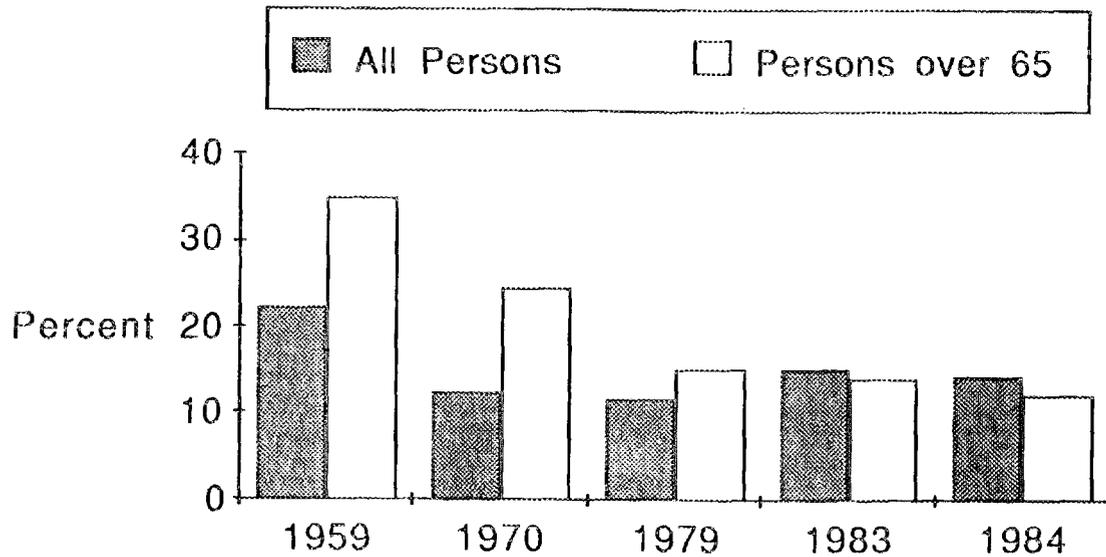


Fig. 2. Percentage of incomes below poverty level for all persons vs persons over 65. Source: U. S. Bureau of the Census, Statistical Abstract of the United States: 1986 (106th edition) Washington, D.C., 1985, pp. 457-459.

Income distribution in 1984 for all households vs. households over 65

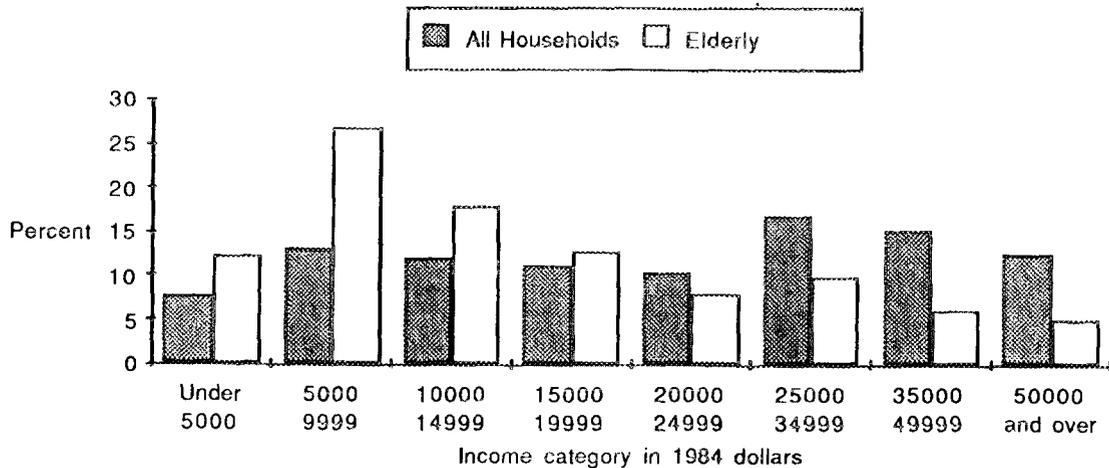


Fig. 3. Income distribution for all households vs households over 65. Source: U. S. Bureau of the Census, Statistical Abstract of the United States: 1986 (106th edition) Washington, D.C., 1985, p. 446.

While many elderly have adequate incomes at the time of retirement, the purchasing power of their incomes is steadily eroded over time. Rapidly rising energy costs would be particularly hard on many elderly because an increasingly large share of their total income would have to be spent for fuel. The elderly are more susceptible to harm from extremes of hot or cold weather and require more carefully-controlled temperatures for comfort and health (Minnesota Department of Energy and Economic Development 1983). The proportion of income spent on residential energy increases with advancing age, largely because real income also declines with advancing age (Fig. 4). High energy costs may force elderly persons to spend less on other essentials such as food and medical care. Many utility personnel who work with elderly customers report that these customers often will pay their utility bills even if it means doing without food or other essentials.

FURTHER MARKET SEGMENTATION

Many utility conservation programs have been designed to meet the unique needs of low-income elderly households, but few efforts have been made to target the other subsegments. One of the key outcomes of a 1986 Symposium on Energy and the Aging, sponsored by the U.S. Departments of Energy and of Health and Human Services, was the conclusion that the elderly are a heterogeneous group and that its essence can only be captured by further differentiation. People in their 60s, 70s, or 80s are no more "all alike" than teenagers or people in their 30s or 40s. Some of the potentially important subgroups of the elderly include:

- Low-income elderly. Approximately 12.4% of all persons 65 years of age or older have incomes below the poverty level (compared with the 14.4% national average in 1984). Because poor seniors typically live on fixed incomes, their financial barriers to investments in retrofit activities are greater than those of many other poor households. At the same time, their need for such investments is greater because low-income seniors spend a higher percentage of their total expenditures on energy than do nonelderly households (Clark and Erickson 1985).
- Younger seniors. One market research study found that younger seniors (ages 60-70) are more aware of conservation and more receptive to conservation messages - suggesting that they would be a more fruitful segment than older seniors (Minnesota Department of Energy and Economic Development 1983). In addition, recent retirees may be more inclined to make home improvements.
- Women living alone or with nonrelatives. This segment represents 41% of older women, who themselves are a majority of the elderly. Nearly one-third of the noninstitutionalized elderly live alone and by a ratio of almost 2.5 to one, those living alone are elderly women. These women are forced to deal

with problems that were traditionally handled by men, including major home repairs such as the installation of insulation.

- Older renters. A disproportionate number of the elderly who rent live in publicly-owned or subsidized housing - 22% versus 9% of younger renters. Because occupants of public housing will not take conservation action themselves, agencies operating such housing complexes must be given incentives for conservation investment if it is to take place.
- Elderly with adequate incomes. Financial barriers to investment may be less important to this group, but they are still unlikely to engage in extensive conservation activity.
- Physically impaired. Nearly a fifth of the elderly suffer from health conditions that limit their mobility. Without special assistance, they will not install do-it-yourself measures.

Percent of median income spent on fuel by age of household head

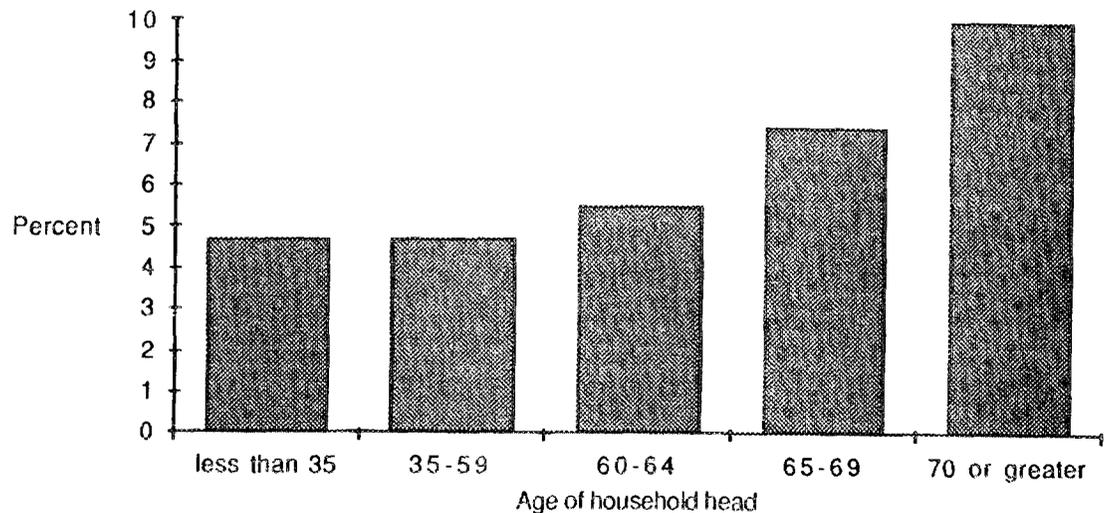


Fig. 4 Percentage of income spent on fuel by age of household head. Source: Energy Information Administration, Office of Energy Markets and End Use, Energy Use Division, Residential Energy Consumption Survey, 1982, unpublished data.

3.0 BARRIERS TO ENERGY-EFFICIENCY INVESTMENTS

Although the homes of the elderly have a greater than average potential for energy-efficiency improvements, and many elderly have a strong desire to reduce their fuel bills, the elderly are less likely to participate in conservation programs. In general, age has a curvilinear relationship with conservation behavior, as young and elderly households take fewer actions than those in their middle years (Frey and LaBay 1983; Hirst and Goeltz 1982). The underrepresentation of the elderly among conservation program participants is typical of programs that have not developed delivery mechanisms specifically designed to reach this group (Wirtshafter 1985).

EFFORT

The "effort" barrier to conservation is particularly significant for the elderly. One reason is because of their diminished physical ability. Nearly 20% of people over 65 have health problems that limit their mobility, and over 75% suffer one or more chronic health conditions (Macey 1985). Also, the elderly have fewer years of formal education than younger age groups and are less aware of effective energy saving actions (Brown and Rollinson 1985; Minnesota Department of Energy and Economic Development 1983). A large majority of the elderly are females, whose role responsibilities and skills may not have included major home repairs.

UNCERTAIN PLANNING HORIZON

Another barrier to investment in conservation technologies is the savings orientation of older persons. Although seniors are frugal, they don't relate well to conservation's spend-now-to-save-later philosophy (Brown and Rollinson 1985; Minnesota Department of Energy and Economic Development 1983). The elderly also are uncertain about financial solvency and the length of time they will be able to live independently, which contributes to a shorter than average planning horizon for the amortization of investments (Minnesota Department of Energy and Economic Development 1983). As shown by Davies (1981), spending by the elderly is depressed by the uncertainty associated with the length of life remaining.

LACK OF TRUST

Lack of trust in the promoters of conservation activity is another major barrier to elderly investment in energy efficiency. The elderly are disproportionately victimized

by consumer fraud as well as other crimes. As a result, they tend to be less trusting of the motives of utilities and other organizations that promote conservation. Several utility program managers reported that elderly customers feared that accepting a zero-interest loan for conservation measures might cause them to lose their homes if they did not repay on time.

PRIDE

Another common reason for elderly nonparticipation is an unwillingness to accept charity or handouts. After a lifetime of paying their own way, pride is a significant barrier to the acceptance of free weatherization.

LACK OF PERCEIVED NEED AND EXPENSE

The elderly share several barriers to conservation activity with the general population. Macey (1985) compared relative rankings of the reasons for the adoption/nonadoption of conservation measures such as attic insulation, caulking and weatherstripping, and nighttime thermostat setback among the elderly and among the general population. She found that the adoption/nonadoption of measures were linked to perceived need, desired comfort, and expected savings among both groups. Both the elderly and the nonelderly tend to underestimate their need for conservation measures and to believe their homes are already completely weatherized. In rankings of reasons for nonadoption, the lack of perceived need was placed first by both the elderly and the general population. Both groups also are motivated to adopt conservation measures mainly to save money. In Macey's study, the elderly differed from the general population in only one major respect: assigning a high rank to the expense of measures as a reason for nonadoption. The general public gave less importance to expense as a barrier.

4.0 MARKETING STRATEGIES OF PROGRAMS DESIGNED TO REACH THE ELDERLY

RANGE OF PROGRAM TYPES

Because many utilities and government agencies recognize that the elderly may need special services, a wide range of program types has been developed for this target group. Some of the program types include energy information and educational efforts, workshops, financial assistance with bills and rate discounts, special bill paying arrangements, third-party notification of possible disconnection, counseling and referrals to social service agencies, and the direct installation of free weatherization measures. Descriptions of special bill-paying arrangements, third-party notification, and other information and referral services are presented in Appendix C. Utilities in most states offer some programs of these types.

In Florida, which has the highest percentage of elderly population of any state, utilities offer extensive information and referral services, special bill-paying arrangements, third-party notification, gatekeeper programs (which are defined below), a speaker's bureau, a special newspaper for elderly customers, and support to senior service organizations such as Area Agencies on Aging. Florida utility programs for the elderly differ from most programs described in Appendices A and B in that little special attention is given to energy-efficiency improvements. The focus is on services related to a wide range of needs, such as nutrition, medical care, housing, transportation, and loneliness. Because of a Florida state regulatory commission policy of not allowing special rates, discounts, or weatherization services to be offered only to the elderly, all Florida utilities offer their energy conservation programs to customers of all ages.

Gatekeeper programs - which train utility staff, such as meter readers, service technicians, and customer service representatives, to be alert to and seek assistance for problems of the elderly that come to their attention during their routine duties - have been instituted by many utilities. The idea of the gatekeeper program is to refer customers with problems to social service agencies that can provide appropriate assistance or to contact the agencies directly so that they can work with the person in need. The National Association of State Units on Aging (NASUA)* has developed a Gatekeeper Program start-up kit that is available from state offices on aging.

*NASUA's address is: 2033 K St., NW, Suite 304, Washington, DC 20006.

Another training program for utility staff, designed to sensitize them to the needs of the elderly, has been developed jointly by the Edison Electric Institute, the American Association of Retired Persons, and the Center for the Study of Aging at North Texas State University. These organizations prepared a four-hour training program which develops staff skills for communicating with the elderly more effectively and teaches staff how to provide resources for helping older customers. By January of 1986, more than 90 utilities had purchased this training program for their employees. Information on the program can be obtained from the Edison Electric Institute in Washington, D.C.

METHODS OF LOCATING PROGRAMS

To obtain an understanding of the range of programs targeted specifically to the elderly, we asked experts for their nominations of successful energy conservation programs for the elderly. Researchers known for their work on conservation issues were contacted at Oak Ridge National Laboratory, Lawrence Berkeley Laboratory, the American Council for an Energy-Efficient Economy, the National Research Council and the Alliance to Save Energy and asked to name successful programs. Representatives of research and trade associations such as the Electric Power Research Institute (EPRI), Edison Electric Institute (EEI), the American Gas Association (AGA), the National Rural Electrical Cooperative Association, and the American Public Power Association also were asked to list the programs that they believed were especially successful in reaching the elderly. EPRI and AGA surveys of demand-side activities helped us locate some programs. Representatives of the National Association of Regulatory Utility Commissioners and of the California Energy Commission were asked to give their recommendations, too. In addition, a recent survey of state Public Utility Commissions (PUCs) identifies 14 states that require utilities to provide special conservation services for the elderly (Markowitz 1985). To obtain an overview of programs in these states, we contacted the PUCs with such mandates.

After identifying as many energy conservation programs for the elderly as we could, we contacted utility or state agency staff to obtain information about program history, design, operations and marketing. The program managers we contacted were asked to identify additional programs offering services to the elderly. Detailed descriptions of the programs identified by these methods are in Appendices A and B. Each of the program descriptions was sent to the program manager for review and their additions and/or corrections were incorporated.

In deciding which programs to include in Appendices A and B, we chose to focus mainly on programs that either finance or directly perform the installation of energy-efficiency improvements. This focus was chosen for two reasons. First, marketing efforts tend to be more varied and extensive for programs of this type. Second, programs that install conservation measures are likely to have a greater, and more easily measured, impact on energy consumption than other program types. None of the programs have conducted evaluations of their energy savings impacts. Major reasons for the lack of measurements of energy savings include the small scale and recent beginnings of the programs. In addition, studies of energy saving impacts are quite expensive and take several years to complete. Nevertheless, as programs for the elderly expand, evaluations of their energy savings impacts will become more important. The accurate determination of impacts is more feasible for programs that install conservation measures.

Most of the programs described in Appendices A and B are direct weatherization programs which install energy-efficiency measures for elderly customers. The reader should be aware, however, that other types of energy-related services such as Gatekeeper programs and those discussed in Appendix C may be equally, if not more, common. Some descriptions of programs that provide conservation information and other services, but not direct installation of measures, are included in Appendices A and B to illustrate these program types. The Duke Power, Georgia Office of Energy Resources, North Dakota Office of Intergovernmental Assistance, Southern California Edison, and Wisconsin Power and Light programs, for example, provide only information and counseling. The Iowa Public Service program provides a range of services including furnace safety checks, weatherization workshops and a do-it-yourself kit, but does not install weatherization materials.

REVIEW OF MARKETING STRATEGIES

The 39 programs described in Appendices A and B used a wide range of marketing techniques including bill inserts, direct mail, telemarketing, newspaper ads, senior newsletters, television public service announcements and talk shows, radio ads, mobile exhibits, expositions, posters, brochures, workshops and presentations at senior centers. The most commonly used methods of recruiting clients are interagency networking, presentations and referrals. All of the programs we studied coordinate their activities with social service agencies and community groups to some degree. Brochures and posters describing program services are often distributed at agency or community group

locations. Presentations to groups at agencies, such as senior centers and nutrition sites, also are common. In several cases, interagency networking and referrals supply nearly all of the customers and little other marketing is conducted.

In addition to the central role of interagency networking, referrals and presentations, a variety of other marketing techniques are often used. Word-of-mouth advertising by satisfied clients was mentioned by many program managers as the best means of recruiting more clients. Nearly half of the programs use direct mail and bill inserts to advertise program services. About one-third of the programs use television, radio and a variety of printed materials. A smaller number of programs advertise in newspapers and use telemarketing.

In part because of the recent origin of the programs (most have been operating for less than three years), there has been little systematic study of the relative effectiveness of various marketing techniques. However, many program managers seem to feel that the use of specific marketing techniques is probably less important to program success than the degree of trust potential clients have in the sponsoring organization(s) and the ability of the organization(s) to optimize use of the available resources.

In the sections below, the frequency of use and program managers' impressions of the efficacy of various techniques are summarized. The marketing techniques discussed include bill inserts, direct mail, telemarketing, newspapers and newsletters, television and radio, interagency networking, referrals and word-of-mouth, and senior centers. Some additional program features such as program origins, income eligibility requirements, values of benefits, types of program staff and funding sources also are reviewed.

Bill Inserts

Many of the programs used bill inserts at least occasionally (Tables 1 and 2). Most program managers who used bill inserts reported low customer response. There were two exceptions, however: Northern Illinois Gas and Iowa Public Service both considered bill inserts an important method of program recruitment. Northern Illinois Gas included program information and a response postcard in each month's bill. Iowa Public Service included a postage-free return postcard that could be used to request enrollment in the Gold Courtesy Service (GCS) program.

Direct Mail

Direct mail also was used to distribute GCS program information and response postcards. The GCS postcards were returned by over 70% of the eligible households. This is the highest response rate reported for any program on which we

Table 1. Marketing & recruitment strategies

Sponsoring utility/ agency (program type ^a)	Bill inserts	Direct mail	Telemar- keting	Mass media				Agency networking		Other remarks
				T.V.	Radio	Print		Presenta- tions	Refer- rals	
						Daily	Other			
Arizona Energy Office and Southwest Gas Corp. (L)	X			X	X		X	X	Hardware store discounts arranged	
California Energy Extension Service, California Assoc. of Homes for the Aging, Pacific Gas and Electric Co., Environmental Intern Program (M)		X								
California Energy Extension Service, City of Riverside (L)	X	X						X	Used energy game shows and direct contacts at Senior nutrition sites and mobile home park functions	
Carolina Power & Light Co. (L)								X		
Carroll Electric Membership Corp. (M)		X						X		
Columbia Gas of Pennsylvania (L)				x ^b	x ^b	X		X	Ads in elderly yellow pages were not effective	
Commonwealth Gas Co. (L)		X					X	X	Senior advisory group	
Duke Power Co. (I)								X	Customer service referrals	
Georgia Office of Energy Resources (I)					X		X	X	Home visits with other service providers	

Table 1. Marketing & recruitment strategies (cont.)

Sponsoring utility/ agency	Bill inserts	Direct mail	Telemar- keting	Mass media				Agency networking		Other remarks	
				T.V.	Radio	Print		Presenta- tions	Refer- rals		
						Daily	Other				
Georgia Power Co. (L)	X ^b			X	X ^b	X			X	Customer service referrals	
Houston Lighting & Power Co. (L)		X		X						X ^b	Customer service referrals
Indiana Depart- ment of Com- merce, Division of Energy Policy (L)								X			
Iowa Public Service Co. (L)	X	X						X			Senior advisory Group
Jersey Central Power & Light Co. (M)		X	X								X
Louisiana Asso- ciation of Councils on Ag- ing Energy Fund (M)	X			X	X	X	X				X
Louisiana De- partment of Nat- ural Resources, Energy Division (I)								X			X
Louisville Gas & Electric (L)		X		X	X	X	X				X
Memphis Light, Gas & Water (M)	X ^b							X			X
Minnesota Dept. of Public Ser- vice, Energy Division and Peoples Natural Gas (L)	X			X	X	X		X			X

Table 1. Marketing & recruitment strategies (cont.)

Sponsoring utility/ agency	Bill inserts	Direct mail	Telemar- keting	Mass media				Agency networking		Other remarks
				T.V.	Radio	Print		Presenta- tions	Refer- rals	
						Daily	Other			
Nashville Elec- tric Service (M)		X							X	
New York State Electric & Gas Co. (L)				X	X	X	X	X	X	Property tax records of senior discounts used to identify households
New York State Energy Office and Utilities (M)	X								X	
Niagara Mohawk Power Co. (Suspended M)		X						X	X	
North Dakota Office of Intergovernment- al Assistance (I)		X	X					X		
Northern Illinois Gas Co. (M)	X				X		X	X	X	
Oklahoma Gas & Electric Co. (M)	x ^b							X	X	
Philadelphia Electric Co. (L)		X	X				X	X	X	
Potomac Electric Power Co. (L)	X	X					X	X		Customer service re- ferrals; brochures distributed to pharmacies
Public Service Electric & Gas Co. (L)		X	X					X		Mobile-home conser- vation exhibit tra- vels to fairs, sen- ior centers, etc.

Table 1. Marketing & recruitment strategies (cont.)

Sponsoring utility/agency	Bill inserts	Direct mail	Telemarketing	Mass media				Agency networking		Other remarks
				T.V.	Radio	Print		Presentations	Referrals	
						Daily	Other			
Puget Sound Power & Light (M)		X		X			X		X	Senior advisory groups used
Savannah Electric & Power Co. (L)	X			X	X	X			X	
Seattle City Light (M)	X	X		X	X	X		X		Customer service referrals
Southern California Edison Co. (I)								X		
Southern Union Gas (M)	X			X	X	X			X	Customer service referrals
West Penn Power Co. (M)	X								X ^b	Meter readers can code potential customer accounts for future contact
Wheeling Electric Co. (L)									X	
Wisconsin Electric Power Co. (I)	X						X	X		Educational place-mats distributed at senior meal sites
Wisconsin Bureau of Aging, and Wisconsin Power & Light Co. (I)							X	X	X	
Wisconsin Public Service Corp. (M)		X						X	X	

^aProgram types are coded as follows: I = information, L = low-cost weatherization or services, M = major weatherization.

^bInfrequently used.

Table 2. Percent of all programs using various marketing techniques

Technique	% of all programs ^a (N=39)	% of Utility Programs ^a (N=28)	% of State Programs ^a (N=11)
Agency Referrals	66%	64%	72%
Agency Presentations	61%	57%	72%
Direct Mail	44%	50%	27%
Bill inserts	41%	39%	45%
Print (other than daily news)	33%	32%	36%
TV	31%	32%	27%
Radio	31%	29%	36%
Daily Newspaper	23%	25%	18%
Telemarketing	10%	11%	9%

^aTotals are more than 100% because most programs use a number of different marketing techniques.

information. The program manager attributed the high response rate to GCS more to a history of good public relations than to any specific features of their marketing efforts. Senior citizens have very favorable attitudes toward Iowa Public Service and the company is service-oriented, especially for the elderly. Extensive efforts are typically made to resolve customer problems.

Because returning the postcard simply enrolls householders in the GCS program (which includes furnace safety checks, priority service, a walk-through audit, kits of materials and information workshops), further action is needed to receive specific services. When invitations for energy audit and furnace checks are mailed, about 70% of households respond. The workshops and information programs, which are marketed to senior centers and other senior organizations, generally receive about a 30% response rate.

Nearly half of the programs used direct mail to advertise their services (Tables 1 and 2). Examples of some direct mail material are shown in Appendix D. Several of the mailings included response postcards that could be used to request services. Typically, the direct mail materials were sent only to households that previously had been identified as elderly and/or income eligible. Mailing lists consisted of recipients of Low Income Home Energy Assistance Program (LIHEAP) payments, of users of special lifeline rates, and of users of deferred billing arrangements designed to make sure that the bills arrived after the receipt of Social Security checks. Mailing lists maintained by local Councils on Aging were used by Commonwealth Gas. In developing its mailing list, New York State Electric and Gas used property tax rolls to find recipients of senior citizen tax discounts. Seattle City Light and the Arizona Energy Office sent direct mailings to zip code areas that had high proportions of elderly residents.

The impression of most managers is that direct mail is very effective. Puget Sound Power and Light is beginning an experimental study designed to determine the amount of increased activity that results from a direct mail effort. In this experiment, residents of one county in the service area will receive mailings. The other counties in the area will serve as a control group. If there is enough increase in activity, the direct mail effort will be expanded to other parts of the service territory. Senior focus groups provided input to Puget Sound Power and Light concerning the format and content of the direct mail material. Because of the common problem of reduced visual acuity, using large type and lots of open space is clearly important in designing printed materials.

Telemarketing

Several programs used telemarketing as a follow-on to direct mail (Tables 1 and 2). Philadelphia Electric sent the names of nonrespondents to a direct mail offer to social service agencies for telephone contact. Public Service Electric and Gas followed direct mail with a telemarketing campaign that was very effective in encouraging participation. In 1986, their telemarketing efforts achieved a 22% response rate. Jersey Central Power and Light had good response to telemarketing that followed direct mailings to all elderly lifeline customers. West Penn Power has meter readers enter a code on the consumption record that identifies elderly households eligible for services. Based on the meter readers' recommendations, customer service representatives conduct phone calls offering program services.

Newspapers and Newsletters

Both the Arizona Energy Office/Southwest Gas and the Puget Power programs placed ads in newspapers designed for and circulated to seniors. The Arizona senior newspaper was circulated throughout the state. Press releases and public service ads were placed in mass-circulation newspapers by many programs. Project Warm, which is funded by Louisville Gas and Electric, runs public service ads three times weekly. Community newspapers also were used by several programs.

Newsletters are developed, published and distributed by some programs. Both Commonwealth Gas and Wisconsin Electric Power publish a special newsletter for the elderly. Northern Illinois Gas includes information on elderly programs in a consumer newsletter sent to all customers as a bill insert. Several programs also publish information in senior newsletters distributed by other agencies such as local Offices of Aging. Examples of newspaper and newsletter materials are shown in Appendix D.

Television and Radio

Appearances on television talk shows and public service announcements are used fairly often. Two program managers arranged television coverage of weatherization crews actually at work. Extensive media coverage is sometimes obtained for special events, such as the Arizona Governor's declaration of June as Senior's Energy Savings month.

All but one of the users of television reported that it was very effective. Seattle City Light reported a very high cost per response to television publicity. Houston Lighting and Power, in contrast, reported that their best customer response came from television spots. In Houston, efforts are focused on the stations and programs with large numbers of low-income and elderly viewers. A media campaign is held in May and June in preparation for summer work. Program information often is featured during community affairs shows aired in the early morning and early evening hours. A local news personality, widely known as an advocate for the poor, generates strong response when he features information about the weatherization program. Houston Lighting and Power relies on the credibility of a station and its personnel to encourage participation.

A Puget Power focus group of low-income elderly customers also recommended television as a very effective method, saying that the program's target group watched television often. Market research has shown that the elderly watch television more than the general population. Puget Power has found that nonprime time is effective

and not too expensive. Radio is used about as often as television (Tables 1 and 2). In most cases, however, radio was not considered to be particularly effective.

Agency Networking, Referrals and Word-of-Mouth

All of the programs coordinate their activities with social service agencies and community groups to some degree. In several cases, interagency networking and referrals supply nearly all of the customers, and little other marketing is conducted. A few programs supply grants or subcontracts to existing community groups which then deliver all of the services. Nonprofit agencies also have been formed for the purpose of delivering services.

Agency and community group involvement occurs at all stages of program development and delivery. Sometimes agency personnel and community group representatives serve on planning boards and advisory committees in the initial program development stage, as well as in an ongoing capacity. Supplying lists of eligible households and referrals is a common activity. Volunteer workers who actually install measures also may come from the same groups involved in planning or referral activities.

An extensive range of agencies and community groups work with the programs. The local staff of the federal Weatherization Assistance Program, Community Action Program, and Low Income Home Energy Assistance Program often have some involvement. Other participating organizations include senior centers, churches, schools, hospitals, public libraries, local Area Councils on Aging, the Visiting Nurses Association, the American Association of Retired Persons, the Retired Seniors Volunteer Program, Green Thumb, the Grey Panthers, the YWCA and the United Way. Brochures and posters describing program services are often distributed at agency or community group locations. Examples of these materials are shown in Appendix D.

Private businesses sometimes provide resources to programs, too. In Arizona, hardware stores offered discounts to seniors during Senior Energy Month. Pharmacies have distributed brochures and made referrals of Medicare recipients. Weatherization and heating contractors have donated labor and materials.

Programs that rely mainly on interagency networking for their customers, and often for their volunteer labor, must design marketing efforts that recruit these resources. Agency and community group resources are recruited through letters, phone calls, personal contacts and speaking engagements. Usually interagency cooperation is conducted without the transfer of funds. One exception is the Puget Power program, which pays a \$50.00 fee to social service agencies for each household referred to their

program. Previously, a \$15.00 fee was offered, but as a higher response was desired, the fee has recently been increased.

Several program managers commented that word-of-mouth is the best and most effective form of marketing. Once a group of satisfied customers receives services, their recommendations to friends, neighbors and acquaintances bring many more households into the programs.

Senior Centers

Many programs work closely with senior centers to publicize their services. Speeches and workshops are often presented at senior centers and printed materials are frequently distributed there. The first senior centers were established in the 1940s and 1950s. At the start, recreation and social activities such as parties, music, and card games were the primary services. Recent emphasis has added information and referral services, homemaker and nutrition services, medical assistance and education. The emphasis at senior centers is usually on arranging for services because the centers typically do not have enough staff or budget to provide services directly. Title III of the Older Americans Act of 1965 aided senior centers. The nationwide network of centers still is funded, in part, by the Area Agencies on Aging which were mandated under the Older Americans Act. The Area Agencies on Aging are supported by the Department of Health and Human Services.

Senior centers are open to anyone over 60 years of age, regardless of income. Typically, every county in a state will have at least one senior center, and urban areas with large populations may have several centers. In general, the centers do not reach large proportions of the elderly population (Butler 1975). In some locations, however, as much as 15-25% of the elderly population may use senior center services. Thus, senior centers can be an important means of marketing program services, especially when staff are well-known and trusted and the power of word-of-mouth advertising from peers can be tapped.

ADDITIONAL PROGRAM FEATURES

Origin of Programs

The programs for the elderly identified in this project are of very recent origin. All but one of the programs began after 1980. Over fifty percent began after 1984 and about one-third began in the last two years (1985-1987). The pioneering nature of the

program efforts means that an understanding of how to structure them most effectively is just beginning to develop.

In three states, programs began in response to state-level mandates. A 1982 Wisconsin state mandate required Class A utilities to develop weatherization assistance programs. A 1984 Minnesota law requires larger utilities to implement locally-based conservation programs. Utility program resources are combined at the local level with grants from the Minnesota state energy office. In 1983, the Illinois Commerce Commission directed utilities to develop conservation programs for all classes of customers.

Income Eligibility for Services

As is shown in Table 3, most of the weatherization programs that install high-cost measures such as insulation, storm windows or replacement furnaces, have low-income eligibility requirements for services. These requirements are usually tied to federal poverty guidelines. Typically, eligibility is determined by a social service agency or by federal low-income weatherization or fuel assistance program staff. Only one program, sponsored by the Arizona Energy Office and Southwest Gas, is designed to reach households with moderate incomes. This program's income eligibility requirements set a lower limit at one dollar more than the level that defines eligibility for federal low-income programs, and an upper limit at annual incomes of less than \$22,000. Information, audit and referral programs, and programs which install only low-cost measures are less likely to have income eligibility requirements (Table 4).

Value of Benefits

The value of program benefits is closely associated with the presence or absence of income eligibility requirements (Tables 3 and 4). Programs with low-income eligibility requirements typically offer services worth more than programs without such requirements. Most of the low-income programs offer benefits worth more than \$200, and several install major packages of energy efficiency measures worth \$2,000-5,000. The programs that have no income eligibility requirements, in contrast, typically offer information and/or low-cost/no-cost measures. The highest value of measures installed, without charge to single-family residential customers, by programs without income requirements is \$225.

Types of Program Staff

Several programs employ senior energy advisors or counselors and teams of weatherization installers who are elderly (Table 5). Using elderly program workers is believed to produce better rapport, trust and willingness to adopt conservation measures

Table 3. Residential conservation programs with income eligibility requirements

Sponsoring utility/agency	Income eligibility requirements	Maximum (or average) costs of weatherization services	Program services
Arizona Energy Office and Southwest Gas Corp.	moderate income; above low-income up to \$22,000 for family of two	\$ 25	Low-cost measures
Carroll Electric Membership Corp.	less than \$15,000	\$3,000 (loan)	Insulation, heating sources, storm windows, low-cost measures
Houston Lighting & Power Co.	low-fixed income	\$100-200 (average)	Low-cost measures
Jersey Central Power & Light Co.	less than 185% of federal poverty standard	\$ 700	Insulation, storm windows, low-cost measures
Louisiana Association of Councils on Aging Energy Fund	local agencies set eligibility	\$ 200	Grants for energy - related expenses
Louisville Gas & Electric	recipients of food stamps and/or Social Security benefits	\$35-60 (average)	Low-cost measures
Memphis Light, Gas & Water	low-income	\$1-5,000 by need	Insulation, window treatment, low cost measures, home repairs, gas/heat pump replacement, educational & bill assistance
Nashville Electric Service	low-income	\$5,000	Insulation, storm windows, low cost measures
New York State Energy Office and Utilities	HEAP-eligible	\$2,500	Insulation, furnaces, storm windows, low-cost measures, home repair
Niagara Mohawk Power Co. (suspended)	HEAP-eligible	\$2,500	Ceiling insulation, furnace replacements
Oklahoma Gas & Electric Co.	financially disadvantaged	\$ 500	Low-cost measures, minor home repair

Table 3. Residential conservation programs with income eligibility requirements (cont.)

Sponsoring utility/agency	Income eligibility requirements	Maximum (or average) costs of weatherization services	Program services
Philadelphia Electric Co.	less than 250% of federal poverty standard	\$ 160	Low-cost measures
Potomac Electric Power Co.	local agencies determine	\$2,500	Low-cost measures and home repairs, ramps for handicapped
Public Service Electric & Gas Co.	low income level set by state	\$ 200	Insulation, low-cost measures
Puget Sound Power & Light	low income	\$1,800 ^a (average)	Insulation, storm windows, low-cost measures, maintenance check
Seattle City Light	less than 70% of state median income	\$3,000	Furnace replacement, insulation, low-cost measures
Southern Union Gas	less than 125% federal poverty standard	\$1,600 (average)	Insulation, low-cost, minor home repair, safety inspections
West Penn Power	less than 150% federal poverty standard	\$1,000	Insulation, storm windows, low-cost measures
Wheeling Electric Co.	low-income	\$ 30 (average)	Low-cost measures
Wisconsin Public Service Corp.	less than 150% of federal poverty standard	\$1,250 (average)	Insulation, furnace replacements & retrofits, low-cost measures

^aAmount spent is based on estimate of how much energy (in kWh) will be saved.

Table 4. Programs without income guidelines

Sponsoring utility/agency	Maximum (or average) cost of weatherization	Services provided
Carolina Power and Light Co.	\$30-50 (average)	Low-cost measures
California Energy Extension Service, California Assoc. of Homes for the Aging, Pacific Gas and Electric Environmental Intern Program	\$15,000 for three demonstration buildings (loan)	Insulation, weatherstripping, caulking, water heater blankets, pipe insulation and a database describing senior housing facilities
California Energy Extension Service, City of Riverside	\$126 (average)	Audits and low-cost measures
Columbia Gas of Pennsylvania	Customer pays weatherization costs	Home audit, at-home discount shopping service
Commonwealth Gas Co.	\$50	Low-cost measures
Duke Power Co.	-	Educational program
Georgia Office of Energy Resources	-	Educational program
Georgia Power Co.	\$125	Low-cost measures, minor home repair, smoke alarm installation
Indiana Department of Commerce, Division of Energy Policy	-	Audit and safety check, educational program
Iowa Public Service Co.	-	Customer services and referrals
Louisiana Department of Natural Resources, Energy Division	-	Educational program
Minnesota Dept. of Public Service, Energy Division, and Peoples Natural Gas	\$225	Low-cost measures
New York State Electric & Gas Co.	\$150 (average)	Low-cost measures

Table 4. Programs without income guidelines (cont.)

Sponsoring utility/agency	Maximum (or average) cost of weatherization	Services provided
North Dakota Office of Intergovernmental Assistance	-	Senior Energy Counselors, educational programs
Northern Illinois Gas Co.	\$1000 (loan)	Ceiling insulation
Savannah Electric & Power Co.	\$20 (average)	Audit and low-cost measures
Southern California Edison Co.	-	Customer information services and referrals
Wisconsin Electric Power Co.	-	Information and counseling
Wisconsin Bureau of Aging and Wisconsin Power & Light Co.	-	Senior Energy Aide educational program

among elderly householders. The elderly workers are sometimes volunteers, who are paid mileage and expenses, and sometimes salaried part-time workers. At least one senior employment program, Green Thumb, sponsored by the U.S. Department of Labor, has been utilized to deliver energy conservation services. Green Thumb workers, who are recruited from among the low-income elderly, are typically hired at minimum wage to complete community service projects such as planting trees, building parks and rest areas, reconstructing historical sites, and beautifying highways. Several Tennessee Valley Authority distributors have used Green Thumb workers to install conservation measures in elderly households.

As the Edison Electric Institute paper (1986) on the energy needs of older customers reports, the Senior Community Service Employment Program (funded through Title V of the Older Americans Act) provides part-time employment to low-income persons over 55 years of age in many states. As energy conservation is one of the stated

Table 5. Program type and personnel

Sponsoring utility/agency	Program delivery personnel					
	Regular staff	Contractor	Community group	Senior installer	Senior counselor	Other
<u>Major weatherization (i.e., insulation, furnaces, heat pumps, etc.)</u>						
Carroll Electric Membership Corp.		X				
Jersey Central Power & Light Co.	X (audits)	X				
Memphis Light, Gas & Water	X	X	X			Summer youth employment
Nashville Electric Service	X (audits)			X		Summer youth employment
New York State Energy Office and Utilities		X				
Niagara Mohawk Power Co. (suspended)	X (audits)	X	X			
Northern Illinois Gas Co.		X				
Oklahoma Gas & Electric Co.				X		
Puget Sound Power & Light	X (audits)			(retired utility employees)		
Seattle City Light		X				
West Penn Power Co.	X (audits)	X				
Southern Union Gas	X	X				Safety inspections
West Penn Power Co.	X	X				Customers
Wisconsin Public Service Co.	X (audits)	X				

Table 5. Program type and personnel (cont.)

Sponsoring utility/agency	Program delivery personnel					
	Regular staff	Contractor	Community group	Senior installer	Senior counselor	Other
<u>Low-cost weatherization & minor home repair</u>						
Arizona Energy Office & Southwest Gas Corp.				X		
California Energy Extension Service, City of Riverside					X	
Carolina Power & Light Co.			X			Employee volunteer groups
Columbia Gas of Pennsylvania		X				
Commonwealth Gas Co.		X				
Georgia Power Co.		X		X		
Houston Lighting & Power Co.	X					Vocational high school students
Louisiana Association of Councils on Aging Energy Fund		X	X			
Louisville Gas & Electric			X			
New York State Electric & Gas Co.				X		
Minnesota Dept of Public Service, Energy Division, and Peoples Natural Gas				X		
Philadelphia Electric Co.			X			
Potomac Electric Power Co.			X			

Table 5. Program type and personnel (cont.)

Sponsoring utility/agency	Program delivery personnel					
	Regular staff	Contractor	Community group	Senior installer	Senior counselor	Other
<u>Low-cost weatherization & minor home repair (cont.)</u>						
Public Service Electric & Gas Co.		X				
Savannah Electric & Power Co.			X	X		
Wheeling Electric Co.	X					Jr. High School students & teachers
<u>Information, education, demonstration and customer service</u>						
California Energy Extension Service, California Assoc. of Homes for the Aging, Pacific Gas and Electric Co., Environmental Intern Program		X				Students, building maintenance workers, and statewide trade organizations
Duke Power Co.	X					
Georgia Office of Energy Resources	X					
Indiana Department of Commerce, Division of Energy Policy	X					
Iowa Public Service Co.	X					
Louisiana Department of Natural Resources, Energy Division	X					
North Dakota Office of Intergovernmental Assistance					X	
Southern California Edison Co.						Retired utility employees

Table 5. Program type and personnel (cont.)

Sponsoring utility/agency	Program delivery personnel					
	Regular staff	Con-tractor	Com-munity group	Senior installer	Senior counselor	Other
<u>Information, education, demonstration and customer service</u>						
Wisconsin Electric Power Co.	X					
Wisconsin Bureau of Aging, and Wisconsin Power & Light Co.					X	

priorities of this program, utility companies may be interested in using this resource (EEI 1986).

While the use of elderly program workers is common, many other types of workers are also found (Table 5). Summer youth employment programs, as well as vocational education programs and scout or church groups, may provide workers. Junior high, high school and college students and VISTA workers have been employed by various programs. Volunteers may be recruited from all age groups. In addition, many utilities hire their own full-time installers or employ independent contractors to do the installations. Generally, programs that install high-cost measures tend to use contractors to do the installations. Generally, programs that install high-cost measures tend to use professional contractors, while low-cost and information programs are more likely to use volunteers.

Funding Sources

Funding arrangements are quite diverse. Some utilities pay all program expenses themselves. Some utilities pay for labor and materials while administrative costs are absorbed by other organizations. Federal, state and local government funds, as well as private donations, are used in various combinations to support programs. Federal Solar Bank and Exxon overcharge funds provide support for several programs. Other types of support such as organizational help or in-kind assistance are sometimes provided. Section 5 describes the various types of interagency cooperation found among the programs studied.

5.0 INTERAGENCY COOPERATION

Over 60% of the programs described in the preceding sections involve substantial amounts of interagency cooperation in their operations. These interagency efforts, which go beyond the simple networking utilized by virtually every program studied, can be grouped into four general categories. They are: 1) federal-state-local weatherization assistance programs; 2) utility-federal programs; 3) state-utility programs; and 4) other multiagency programs, generally involving utilities and some public or private local organization. Each of the major types of programs involving substantial interagency cooperation is described in more detail below. Following this, the characteristics of single agency programs are described, and these are compared to the characteristics of interagency efforts.

FEDERAL-STATE-LOCAL WEATHERIZATION ASSISTANCE PROGRAMS

Two large federally-funded programs currently weatherize the homes of low-income families and individuals throughout the country. The oldest of these is the U.S. Department of Energy's Weatherization Assistance Program (WAP), which has been installing major energy conservation measures such as insulation and storm windows in low-income dwellings since 1976. The other large program is the U.S. Department of Health and Human Services' Low Income Home Energy Assistance Program (LIHEAP). Since late 1981, LIHEAP has gone beyond its original mission of helping low-income households pay their fuel bills and has allowed up to 15% of program funds to be used for home weatherizations similar to those performed under WAP. In recent years, many states have used oil overcharge monies to help finance WAP and LIHEAP. Both WAP and LIHEAP programs see serving the elderly as a high priority, provided they meet income-determined eligibility requirements.

While WAP and LIHEAP are federally-funded, with considerable assistance provided by oil overcharge monies, the implementation of both programs involves all levels of government. Program oversight and the allocation of federal funds to state agencies is the responsibility of the federal government. State governments, in turn, distribute monies to selected local agencies, most frequently nonprofit Community Action Programs. These local agencies then provide weatherization services to eligible households, and their performance is monitored by the states.

Both WAP and LIHEAP provide the same type of services as do many of the utility and state programs studied here. Since WAP and LIHEAP alone are not expected to

meet the full need for such services in the foreseeable future, a strong need remains for continuing utility and state low-income weatherization efforts. According to the U.S. General Accounting Office, only about 10% of the eligible households were served by WAP during its first decade of operations. It is estimated that, at current funding levels, WAP could not complete the weatherization of all eligible dwellings for over 60 years (GAO 1985).

None of the programs examined during this study (and described in Appendices A and B) are funded by WAP or LIHEAP, but several operate in cooperation with these programs. Such cooperative efforts are discussed below under Utility-Federal Programs, since WAP and LIHEAP, while intergovernmentally implemented, are federally-funded. This report does not describe typical WAP or LIHEAP operations because of the existence of ample descriptive data elsewhere on these programs (Schweitzer et al. 1987; Dogette et al. 1981).

UTILITY-FEDERAL PROGRAMS

Eight programs were studied that involve substantial utility and federal cooperation. In all cases, the utility is the lead agency, exercising primary organizational responsibilities.

A number of different federal programs assist utilities in providing conservation services to the elderly. For the eight utility-federal efforts studied, the most frequent sources of support were federally-funded weatherization programs (WAP and LIHEAP). The heavy reliance on assistance from these sources is consistent with the types of services provided by the eight utility-federal programs studied; three-quarters of them offered major weatherization services. Other frequently-mentioned sources of federal assistance were the Solar Bank and the Tennessee Valley Authority's Zero-Interest Loan Program.

Three general types of support are provided by federal programs: financial, structural, and in-kind. Table 6 shows the type of support provided by each federal program involved in the utility-federal efforts studied.

Financial assistance, which involves the direct transfer of funds from one agency to another, was found in three of the eight utility-federal programs studied. An example of this type of assistance is Wisconsin Public Service Corporation's Hands-On Weatherization Program, in which federal Solar Bank contributions supplement utility funds used to weatherize the homes of low-income customers. Another example of

Table 6. Description of utility-federal programs

Utility	Program name	Federal program	Type of services provided	Type of federal support
Carroll Electric Membership Corp.	Conservation Loan Programs	Rural Electric Administration, Solar Bank	Major weatherization	Financial
Jersey Central Power and Light Company	Weatherization Assistance Program Senior Save Promotion	WAP	Major weatherization	Structural
Memphis Light, Gas and Water Division	Project Max	TVA Zero Interest Loan Program	Major weatherization	Financial
Nashville Electric Service	Senior Citizens Peer Counseling Program	TVA Zero Interest Loan Program, WAP	Major weatherization	Structural
Niagara Mohawk Power Company	Community Conservation Grants	LIHEAP	Major weatherization	Structural
Philadelphia Electric Co.	T.L.C. (Tighten-up Low-cost)	LIHEAP, WAP	Low-cost weatherization	Structural
Savannah Electric and Power Co.	Project Score	VISTA	Low-cost weatherization	In-kind
Wisconsin Public Service Company	Hands-On Weatherization Program	Solar Bank	Major weatherization	Financial

federal financial assistance is Carroll Electric Membership Corporation's Conservation Loan Programs, in which funding has been provided over the years by the Rural Electric Administration and the Solar Bank.

Structural assistance is provided in those cases where one program utilizes the organizational framework or guidelines of another program in the delivery of services to elderly clients. Such structural assistance is found in four of our eight federal-utility programs. One such program is Philadelphia Electric Company's T.L.C. program,

in which clients are selected based on LIHEAP eligibility requirements and services are provided by existing organizations, such as Community Action Agencies, that are already involved in home weatherizations. Another effort of this type is Nashville Electric Service's Senior Citizens Peer Counseling Program, in which eligible clients are channeled into existing federal programs such as TVA's Zero-Interest Loan Program.

In-kind assistance occurs when people and/or materials are provided by one organization to aid another organization in its delivery of services to eligible clients. The only utility-federal program of this type studied here is Savannah Electric and Power Company's Project Score, in which VISTA volunteers are used to install low-cost weatherization measures.

STATE-UTILITY PROGRAMS

Seven programs were studied that involve state governments in cooperation with other organizations. The state plays the lead administrative role in many, but not all, of these programs.

In almost all cases, the organization assisting the state is a utility. In a few instances, however, the state is joined in its program operations by another type of organization. In the "We Care" program, for example, the California Energy Extension Service joined with the City of Riverside to provide low-cost weatherization measures for senior citizens. A complete list of state-utility programs, and all the states, utilities, and other organizations involved, is given in Table 7.

Four of the seven state-utility programs studied provide their clients with low-cost weatherization measures. Two programs provide information, education, demonstrations, or related services. Only one of the programs examined here installed major weatherization measures, such as insulation and storm windows.

The type of support provided by the participating utilities and other organizations was primarily financial in nature. Five of the seven programs studied received this type of assistance, either by itself or in conjunction with other kinds of support. In-kind assistance was also frequently provided to the state agencies; three of the seven state-utility programs received support of this kind. New York's State Energy Office, for example, was assisted in its Energy Conservation Bank Grant Program by nine area utility companies that perform energy audits, inspect completed weatherization jobs, and provide related services. Only one of the programs studied - the Louisiana Association of Councils on Aging's Energy Fund - involved the provision of structural

Table 7. Description of state-utility programs

State agency	Program name	Utility/ other	Type of services provided	Type of utility support
Arizona Energy Office	Central Arizona Senior Weather- ization Program	Southwest Gas Corp.	Low-cost weatherization	Financial
	Southern Arizona Seniors Program			
	Southern Nevada Seniors Program			
California Energy Extension Service	Energy Efficiency Project for Senior Housing	California Asso- ciation of Homes for the Aging, Pacific Gas and Electric Co., Environmental Intern Program	Information, education, demonstration, etc.	Financial, in-kind
California Energy Extension Service	"We Care" Program	City of River- side, California	Low-cost weatherization	Financial
Louisiana Association of Councils on Aging	Louisiana Associ- ation of Councils on Aging Energy Fund	Louisiana Power and Light; New Orleans Public Service, Inc; Central Louisiana Electric Co; Louisiana Gas Co.	Low-cost weatherization	Financial, structural
Minnesota Department of Public Service/ Energy Division	Community Based Conservation Program	Peoples' Natural Gas	Low-cost weatherization	Financial
New York State Energy Office	Energy Conserva- tion Bank Grant Program	Nine Utility com- panies (see Appendix A)	Major weather- ization	In-kind
Wisconsin Bureau of Aging	Senior Energy Aide Program	Wisconsin Power and Light Company	Information education, demonstra- tion, etc.	In-kind

assistance to a state agency; in that case, several participating utilities set guidelines for the disbursement of funds, as well as providing financial assistance.

OTHER MULTIAGENCY PROGRAMS

Nine programs were studied that involve substantial amounts of interaction between utilities and other organizations, generally at the local level (Table 8). In most cases the utility is the lead agency, having primary responsibility for program operations. Some of the other organizations involved in these programs are local councils on aging, senior citizens' groups, vocational high schools, local social service agencies, human resource departments, and community action programs.

The mix of services provided by these multiagency programs is very similar to those described for state-utility programs. Five of the programs deliver low-cost weatherization devices; two install major weatherization measures; and two others provide informational and educational services.

In-kind assistance is the type of support most frequently provided to the lead agency in these programs. Six of the nine programs studied receive such aid, most frequently in the form of weatherization crews that install energy conservation measures without charge to the program.

The remaining three programs receive structural assistance. An example of this is Seattle City Light's Senior Citizen Discounts and Weatherization Program, in which the provision of weatherization services is administered by the City Department of Human Resources.

SINGLE AGENCY PROGRAMS

Fifteen programs were studied that are operated by single agencies without substantial amounts of help from other organizations. Four of these are operated by state governments and the other eleven are run by utility companies (Table 9).

All four of the solo efforts run by state agencies provide information, education, and related services. In contrast, only 2 of the 11 programs operated by single utilities provide information, while four offer major weatherization services and five install low-cost weatherization measures.

Table 8. Description of other multi-agency programs

Utility	Program name	Other agency(ies)	Type of services provided	Type of assistance
Carolina Power and Light Co.	Senior Energy Team	Community groups	Low-cost weatherization	In-kind
Duke Power Co.	Independent Living Skills for Seniors	State and local councils on aging, senior citizens' groups	Information, education, demonstration, etc.	In-kind
Houston Lighting and Power Co.	Weatherization Assistance Program	Area vocational high schools	Low-cost weatherization	In-kind
Louisville Gas and Electric	Project Warm	Urban Shelter Associates	Low-cost weatherization	Structural
Oklahoma Gas and Electric Co.	Hand-in-Hand	Local community action programs	Major weatherization	Structural
Potomac Electric Power Company	Community Conservation Program	Washington, D.C. Office on Aging; community organizations	Low-cost weatherization	In-kind
Seattle City Light	Senior citizen discounts and weatherization programs	City Department of Human Resources	Major weatherization	Structural
Wheeling Electric Company	Operation Housewarming	Local social service agencies, local Jr. high school	Low-cost weatherization	In-kind
Wisconsin Electric Power Company	Wisconsin Energy and Older Adult Network	Senior citizens' and community groups	Information, education, demonstration, etc.	In-kind

Table 9. Description of single-agency programs

Agency name	Type of agency	Program name	Type of services provided
Columbia Gas of Pennsylvania	Utility	Project senior	Low-cost weatherization
Commonwealth Gas Co.	Utility	Gopher Gas Energy Conservation Program	Low-cost weatherization
Georgia Office of Energy Resources	State	Limited Income Energy Education Program	Information, education, demonstration, etc.
Georgia Power Co.	Utility	Senior Citizens Lending a Helping Hand	Low-cost weatherization
Indiana Department of Commerce, Division of Energy Policy	State	Hands-On-Energy Conservation Workshops	Information, education, demonstration, etc.
Iowa Public Service Co.	Utility	Gold Courtesy Service	Information, education, demonstration, etc.
Louisiana Department of Natural Resources, Energy Division	State	Limited Resources Residential Program	Information, education, demonstration, etc.
New York State Electric and Gas Co.	Utility	Seniors Lending a Hand	Low-cost weatherization
North Dakota Office of Inter-governmental Assistance	State	Seniors Helping Seniors	Information, education, demonstration, etc.
Northern Illinois Gas Co.	Utility	Energy Kits and Ceiling Insulation Program	Major weatherization
Public Service Electric and Gas Co.	Utility	Senior Save	Low-cost weatherization
Puget Sound Power and Light	Utility	Housewarming and Senior Weatherization Assistance Team	Major weatherization

Table 9. Description of single-agency programs (cont.)

Agency name	Type of agency	Program name	Type of services provided
Southern California Edison Co.	Utility	Senior Consumer Energy Program	Information, education, demonstration, etc.
Southern Union Gas	Utility	C.A.F.E. (Conservation Assistance for Everyone)	Major weatherization
West Penn Power Co.	Utility	Targeted Lifeline Conservation (TLC)	Major weatherization

COMPARISON OF INTERAGENCY AND SINGLE AGENCY EFFORTS

A comparison of the various types of interagency and single agency programs studied reveals some interesting patterns of similarities and differences. Key characteristics of all the major types of programs studied are shown in Table 10.

The mix of services provided by the state-utility programs studied was very similar to the services provided by "other" multiagency programs (generally involving utilities and various local organizations). Both of these types of programs were primarily providers of low-cost weatherization services, like caulking and weatherstripping. Single agency utility programs were also similar to these other two program types, except for involving a somewhat higher proportion of major weatherization efforts. All of these differ markedly from utility-federal programs, three-quarters of which were involved in major weatherization efforts, such as the installation of ceiling insulation and storm windows. A possible explanation for this lies with the significant managerial complexity and expense involved in installing major weatherization measures and the consequent need for assistance from federal agencies with substantial organizational and financial resources.

In contrast to the programs discussed above, all of the single agency state programs studied offered only information, education, demonstrations, and related services. The fact that far more single agency state programs provide these services than do any of the other types of programs may be due to the less expensive nature of these efforts

Table 10. Major characteristics of interagency and single-agency programs*

	Multi-agency programs			Single-agency programs	
	Utility-Federal (8)	State-Utility (7)	Other Multi-Agency (9)	State-Agency (4)	Utility (11)
<u>Type of Services Provided</u>					
Major Weatherization	75%	14%	22%	0%	36%
Low-Cost Weath. Info., Ed., Demo., Other	25%	57%	56%	0%	45%
	0%	29%	22%	100%	18%
<u>Type of Support Received by Lead Agency</u>					
Financial	38%	71%	0%	N.A.	N.A.
Structural	50%	14%	33%	N.A.	N.A.
In-Kind	13%	43%	67%	N.A.	N.A.
<u>Value of Services Provided</u>					
In-Kind Services	0%	25%	22%	100%	27%
Loans \$1000-5000	13%	13%	0%	0%	9%
Avg. Expend <\$250	13%	13%	44%	0%	9%
Max. Expend <\$250	13%	38%	0%	0%	27%
Max. Expend \$250-999	13%	0%	11%	0%	0%
Avg. Expend \$1000-2000	13%	0%	0%	0%	18%
Max. Expend \$1000-5000	38%	13%	22%	0%	9%

*Totals can exceed 100% where a single program falls into more than one category.

and the limited resources available to states that do not receive help from other organizations.

The type of support received by the lead agency varies among the different kinds of interagency programs. Utility-federal programs most frequently receive structural support from the federal agency involved, followed fairly closely by financial assistance. The support provided to the lead agency in state-utility programs is predominantly financial with a smaller, but still substantial, amount of in-kind assistance given. In other multiagency programs, the bulk of the assistance received is in-kind, with a smaller amount of structural support and no financial help.

The fact that structural and financial support are most frequently brought to utility-federal programs is reflective of the substantial organizational and fiscal resources residing in the federal government. In contrast, the local government and community groups supporting other multiagency programs frequently have greater human than monetary resources, and this is reflected in their emphasis on in-kind assistance. The nature of the resources brought by utilities to the state-utility programs studied may reflect the states' organizational strengths and their simultaneous need for financial and human resources to implement their programs.

Differences among the various types of programs also show up in terms of the value of services provided. Substantially more utility-federal programs provide services valued at \$1,000 or more than either state-utility, other multiagency, or single agency efforts. This is probably related to the substantial financial resources available at the federal level and the existence of well-established federally-funded major weatherization programs, like WAP and LIHEAP, that can provide much-needed structural assistance.

On the least expensive end of the scale, all of the single agency state programs studied provide only in-kind services, without any direct cash outlays. This emphasis on in-kind services is far greater than for any of the other program types, including programs run by state agencies in cooperation with utilities or other organizations. This seems indicative of resource limitations in the state programs that don't receive outside assistance, and suggests a genuine advantage to interagency cooperation for state agencies.

In fact, many different types of organizations are likely to benefit from inter-agency cooperation. In a recent article, Morgan (1987) suggests that utilities, government agencies, and community-based organizations can all further their organizational objectives by undertaking collaborative energy efficiency projects.

Based on this study of conservation programs for the elderly, we can identify those circumstances under which various participants might benefit most from inter-agency cooperation, and the type of agency with which they might best collaborate. Organizations wishing to provide simple, low-cost services, especially of an informational nature, may do best to work alone and avoid the increased organizational complexity that is likely to accompany collaborative undertakings. However, agencies with resource limitations and/or the ambition to offer more services than they can provide alone are likely to benefit substantially from the additional resources provided by cooperation.

Agencies seeking to provide expensive or complex services, like the installation of major weatherization measures, could benefit from the structural and financial assistance provided by the federal government. Collaboration with utilities can provide both financial and in-kind assistance, while the greatest strength of local governments and community groups appears to be the human resources they bring to joint projects.

6.0 SUMMARY AND CONCLUSIONS

This section summarizes the key information presented in previous sections of the report and presents conclusions concerning the design and operation of conservation programs for the elderly.

NEED FOR CONSERVATION ASSISTANCE

The elderly have a greater need for programs that assist with the installation of energy-efficiency improvements than the nonelderly population for several reasons: 1) they occupy older, less energy-efficient housing, 2) they often live on fixed incomes and spend higher than average proportions of their incomes on energy, and 3) they are less knowledgeable about and less likely to take conservation actions on their own than the nonelderly population.

MARKETING

The 39 programs for the elderly described in this report use a wide range of marketing techniques. The most commonly used methods of locating, informing and persuading clients to participate are interagency networking, presentations and referrals. All of the programs we studied coordinate their activities with social service agencies and community groups to some degree. Brochures and posters describing program services are often distributed at agency or community group locations. Presentations to groups at agencies, such as senior centers and nutrition sites, also are common. In several cases, interagency networking and referrals provide nearly all of the customers and little other marketing is conducted.

In addition to the central role of interagency networking, referrals and presentations, a variety of other marketing techniques are often used. Word-of-mouth advertising by satisfied clients was mentioned by many program managers as the best means of providing clients. Nearly half of the programs use direct mail and bill inserts to advertise program services. About one-third of the programs use television, radio and a variety of printed materials. A smaller number of programs advertise in newspapers and use telemarketing.

In part because of the recent origin of the programs (most have been operating for less than three years), the relative effectiveness of various marketing techniques has not been systematically established. However, many program managers believe that

the use of specific marketing techniques is probably less important to optimizing participation than the degree of trust potential clients have in the sponsoring organization(s) and the ability of the sponsor to use the resources of other federal, state and community organizations effectively.

BARRIERS

Current programs seem to recognize and address most of the typical barriers to conservation action by the elderly. The barriers related to a reluctance, or inability, to invest in conservation are removed in nearly all of the programs by offering weatherization services at no charge to the client. Barriers related to the effort required to select and install weatherization materials also are addressed by nearly all of the programs. All of the programs that offer high-cost measures either provide or arrange for installation. Many of the programs that offer low-cost measures also provide installation, often at the time of a home visit that provides information and counseling as well.

Trust-related barriers are typically handled by using existing communication channels and already trusted networks. The assistance of many community groups and agencies has been utilized in innovative ways in the outreach activities of the programs. Many organizations including senior centers, churches, schools, hospitals, public libraries, local Area Councils on Aging, the Visiting Nurses Association, the American Association of Retired Persons, the Retired Seniors Volunteer Program, the Gray Panthers, YWCA and the United Way, have participated in the processes of locating clients, informing them of services, and persuading them to participate.

Most of the programs do not deal with the issue of pride or independence as a barrier to accepting free services, although several program managers mentioned its importance. Some possible approaches to dealing with this barrier include: 1) using zero-interest loans as a part of the financing package so that customers will feel they are paying their own way, and 2) involving the customer in decision making about what package of measures will be installed, 3) emphasizing the long-term benefits of conservation to society as a whole, and depicting participation in weatherization programs as a civic-minded activity which benefits all ratepayers.

The main barrier which most programs do not seem to address is a lack of perceived need for conservation activity. Macey's study of reasons for the adoption/non-adoption of conservation measures found lack of perceived need to be the dominant

reason for inaction. Building an awareness of the benefits of conservation, such as lower fuel bills and increased comfort, among large segments of the elderly is not a major marketing goal among the programs studied. In part, this is due to the limited resources available to many programs. When resources allow only small proportions of eligible homes to receive services, there is little need to make large numbers of the elderly aware of the program's benefits. Current programs serve very small proportions of the elderly population and focus mainly on the low-income segment. Programs designed to serve larger numbers of the elderly, including those with adequate incomes, should give more attention to building an awareness of the benefits of energy-efficiency improvements.

INTERAGENCY COOPERATION

Interagency cooperation was a part of every elderly conservation program studied. In over 60% of the programs described earlier, the lead agency receives substantial financial, structural, or in-kind assistance from another organization or organizations. In the remaining cases, some lesser amount of interagency communication or collaboration was involved between lead agencies and an extensive array of government and voluntary organizations, such as local councils on aging and senior centers.

Agency and community group involvement occurs at all stages of program development and delivery. Sometimes agency personnel and community group representatives serve on planning boards and advisory committees in the initial program development stage, as well as in an ongoing capacity. Supplying lists of eligible households and referrals is a common activity. Volunteer workers who actually install measures also may come from the same groups involved in planning or referral activities.

A comparison of programs that make extensive use of interagency cooperation with those that do not suggests that agencies experiencing resource limitations can increase their ability to provide services through interagency cooperation. In fact, the pervasiveness of interagency cooperation suggests that this type of interaction offers important advantages to large numbers of the agencies involved in operating conservation programs for the elderly.

Agencies with resource limitations, and/or those that desire to offer more services than they can provide alone, are likely to benefit most from the additional resources provided by interagency cooperation. Agencies providing expensive or complex services, such as the installation of major weatherization measures, can benefit from the

structural and financial assistance provided by the federal government. Collaboration with utilities can provide both financial and in-kind assistance, while the greatest strength of local governments and community groups appears to be the human resources, such as volunteer labor and organizational skills, they bring to joint projects.

IMPLICATIONS FOR PROGRAM DESIGN

The information in this report should be useful to conservation program managers and policymakers by providing a familiarity with the range of existing programs nationwide. This familiarity can help managers in the selection of program designs that will serve their intended clients more effectively.

The two main barriers to participation which most current programs do not seem to address are a lack of perceived need for energy-efficiency improvements and the issue of pride or independence as a reason for refusing free services. Future programs should give more attention to building an awareness of the benefits of energy-efficiency improvements and to addressing the pride barrier. Educational efforts are required to build an awareness of a need for energy-efficiency improvements. Possibilities for overcoming the pride barrier include involving clients in decision making and stressing the long-term benefits of conservation to society as a whole.

The importance of interagency cooperation to conservation programs for the elderly has been discussed. In designing new programs, therefore, the lead agency should secure cooperation and appropriate resources from other compatible organizations whenever there is a need to augment in-house capabilities. For existing single agency programs, assistance from other agencies may be solicited as necessary. In all cases, the type and amount of assistance sought should be determined by the lead agency's need for additional resources and the opportunities available for cooperation with other appropriate agencies.

The amount of trust that potential clients have in a sponsoring organization is extremely important. Developers of new programs should keep this in mind from the beginning, and the managers of existing programs should focus on the development and enhancement of trust as a vital component of their mission. Specific techniques that can be used include the utilization of already-trusted networks and community groups, the employment of empathic service personnel (possibly from the same groups being served), and the development of a reputation for good customer relations and complaint resolution.

Although the development of trust may well be more important to the process of persuading clients to participate than the specific marketing techniques used, this does not mean that all marketing techniques will be equally successful under all circumstances. The efficacy of a technique will vary with the nature of the services provided and the specific segment of the elderly population that is targeted. As shown in a study of Florida Power and Light's five postaudit conservation incentive programs (Brown, Berry, White and Zeidler 1986), the match between household needs and the specific type of services and incentives a program offers is an important determinant of participation levels. The services most important to some segments of the elderly market may be rather unimportant to other segments. Thus, it is essential that the services and incentives provided meet the needs of the specific segment of the elderly population that is targeted.

Many of the 39 conservation programs have been designed to meet the unique needs of the low-income elderly. Only one of the programs studied targeted the moderate income elderly, despite the fact that older people with incomes above poverty levels are now in the majority. The elderly at all income levels share some significant barriers to conservation investments and activities, such as shorter planning horizons and diminished physical abilities. The specific needs of particular segments of the elderly population could be identified and specific programs designed to address these needs. Likely segments to target are women living alone or with nonrelatives, elderly renters, and middle-income elderly households.

REFERENCES

American Association of Retired Persons 1984. Profile of Older Americans: 1984, Washington, D.C.

Berry, L. and M. A. Brown 1988. "Participation of the Elderly in Residential Conservation Programs," Energy Policy, forthcoming.

Berry, L., M. Hubbard, and D. White 1986. A Review of Financial Incentive, Low-Income, Elderly, and Multifamily Residential Conservation Programs, ORNL/CON-206, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brown, M. A. and P. A. Rollinson 1985. "The Residential Energy Consumption of Low-Income and Elderly Households: How 'Non-Discretionary' Is It?," Energy Systems and Policy, 9 (3), 271-301.

Brown, M. A., L. G. Berry, D. L. White, and P. Zeidler 1986. The Role of Auditor Sales Effectiveness in Residential Conservation Incentive Programs: A Case Study at Florida Power and Light, ORNL/CON-201, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Butler, Robert N. 1975. Why Survive: Being Old in America, Harper and Row, N.Y.

Clark, R. L. and E. W. Erickson 1985. "Energy and Aging: Home Heating and Cooling," a paper presented at a Symposium on Energy and Aging sponsored by the U. S. Department of Energy and the U. S. Department of Health and Human Services, Washington, D.C., September, 1985.

The Conference Board 1985. Midlife and Beyond: The \$800 Billion Over Fifty Market, prepared by the Consumer Research Center, The Conference Board, sponsored by CBS/Broadcast Group, CBS Magazines, CBS Economics.

Davies, John B. 1981. "Uncertain Lifetime, Consumption and Dissaving in Retirement," Journal of Political Economy, 89 (31), 567-576.

Diamond, R. C. 1984. "Energy Use Among the Low-Income Elderly: A Closer Look," in Doing Better: Setting an Agenda for the Second Decade, ACEEE 1984 Summer Study on Energy Efficiency in Buildings, Vol. F, pp. 52-66, Washington, D.C., American Council for an Energy Efficient Economy.

Dogette, John R. et al. 1981. DOE's Weatherization Assistance Program: An Assessment of the Delivery System, Oak Ridge Associated Universities, Oak Ridge, Tenn.

Edison Electric Institute 1986. Responding to the Energy Needs of Older Americans, EEI Consumer Affairs Reference Paper, Washington, D.C.

Egel, Ken 1985. "Evaluation of an RCS Program Alternative: The Santa Monica Energy Fitness Program," pp. 191-200 in the proceedings of Energy Conservation Program Evaluation: Practical Methods, Useful Results, Vol. I, The Second National Conference held in Chicago, August 19-21, sponsored by Argonne National Laboratory, Bonneville Power Administration, Illinois Department of Energy and Natural Resources, U.S. Department of Energy.

Ellis, John W. 1985. "A Utility Considers Its Senior Customers," Public Utilities Fortnightly, December 26, pp. 13-16.

Energy Information Administration 1982. Office of Energy Markets and End Use, Energy Use Division, Residential Energy Consumption Survey, unpublished data.

Frey, C. and D. LaBay 1983. "A Comparative Study of Energy Consumption and Conservation Across Family Life Cycles," pp. 641-646 in R. P. Bagozzi and A. Tybout, eds., Advances in Consumer Research, Association for Consumer Research, Ann Arbor, Mich.

Fritzsche, D. J. 1981. "An Analysis of Energy Consumption Patterns by Stage of Family Life Cycle," Journal of Marketing Research, 18, 227-232.

Hirst, E. and R. Goeltz 1982. "Residential Energy Conservation Actions: Analysis of Disaggregate Data," Energy Systems and Policy, 6, 135-150.

Hirst, E., R. Goeltz and H. Manning 1982. Household Retrofit Expenditures and the Federal Residential Energy Conservation Tax Credit, ORNL/CON-95, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Hutton, R. B. and D. L. McNeill 1984. "Energy Conservation and Vulnerable Groups: Identifying Market Strategies for Home Energy Audits," in B. M. Morrison and W. Kempton, eds., Families and Energy: Coping with Uncertainty, Michigan State University.

Jackson, E. L. 1980. "Perceptions of Energy Problems and the Adoption of Conservation Practices in Edmonton and Calgary," Canadian Geographer, 24, 114-130.

Long, A. W. 1983. "Effect of Tax, Financing, and Operating-Cost Incentives on Retiree Homeowners' Current and Potential Decisions to Purchase Energy-Saving Improvements," unpublished Ph.D. dissertation, United States International University, San Diego, Calif.

Luckey, I. 1982. "Seniors Helping Seniors: Training Low-income Black Elderly to Cope with Cold-Weather Energy and Housing-Related Problems," unpublished Ph.D. dissertation, City University of New York.

Macey, Susan 1985. "Residential Energy Conservation Among the Elderly," in F. J. Calzonetti and B. D. Solomon, eds., Geographical Dimensions of Energy, pp. 353-371.

McNew, Beverly Martin 1979. "Impact of Energy Costs on Housing Related Decisions of Elderly Householders," Ed.D. dissertation, Oklahoma State University.

Market Trends, Inc. 1985. "Puget Sound Power and Light Disadvantaged Focus Groups: Summary of Findings," prepared for Puget Sound Power and Light, Bellevue, Wash.

Markowitz, Paul (survey coordinator) 1985. "Survey Results of Regulatory Utility Commissions' Electrical Resource Planning and Conservation Activities," prepared for Congresswoman Claudine Schneider's Office, Washington, D.C.

Merkley, Susan Lee 1981. "The Effect of Past Experience on Current Energy Consumption and Conservation Patterns: The Interaction of Historical Time, Social Time, and Life Time," Ph.D. dissertation, Michigan State University.

Minnesota Department of Energy and Economic Development 1983. "Energy Information for the Older Population: A Market Research Report," St. Paul, Minn.

Morgan, Stephen J. 1987. "The Welcome Triangle: Utility, Government and Community Partnerships," in Demand Side Management Strategies in Transition: Proceedings of the Third National Conference on Utility DSM Programs, pp. 8-1 to 8-13, Houston, Tex, June 16-18.

National Consumer Law Center 1984. Homes Without Heat: A Nationwide Study of Disconnected Natural Gas Users, Washington, D.C.

Robbins, A. E. and P. C. Roberts 1985. "The Economic Status of the Aged: Implications for Energy Policy," a paper presented at a Symposium on Energy and Aging sponsored by the Department of Energy and the Department of Health and Human Services, Washington, D.C., September, 1985.

Schweitzer, Martin et al. 1987. Weatherization Assistance for Low-Income Households: An Evaluation of Local Program Performance, ORNL-6337, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Smiley, R. 1979. "The Levels and Determinants of Household Insulation Activity," Energy, 4, 1087-1098.

Solano Paul L. and William J. Sparling 1985. "Energy Policy Options to Assist Needy Elderly Households," Marriage and Family Review, Vol. 9, No. 1 and 2, Fall, pp. 175-207.

Teotia, A. et al. 1984. "Evaluating the Effectiveness of Selected Residential Energy Conservation Strategies on Black, Elderly, and Poor Minority Population Groups," in the proceedings of Energy Conservation Program Evaluation: Practical Methods, Useful Results, Vol. I. The Second National Conference held in Chicago, August 19-21, sponsored by Argonne National Laboratory, Bonneville Power Administration, Illinois Department of Energy and Natural Resources, U.S. Department of Energy.

U.S. Department of Commerce 1986. Bureau of the Census, Money Income and Poverty Status of Families and Persons in the United States: 1985 (Advance data from the March 1986 Current Population Survey), Series P-60, No. 154, August.

U.S. Department of Energy 1980. Energy Implications of an Aging Population, prepared by George Washington University.

U.S. Department of Energy 1986. Residential Energy Consumption Survey: Housing Characteristics, 1984, DOE/EIA-0314(84) Energy Information Administration, Office of Energy Markets and End Use, Washington, D.C.

U.S. Department of Health and Human Services 1985. Proceedings of a Symposium on Energy Costs and the Elderly: The Next Twenty Years, Arlington, Va, September 27.

U.S. General Accounting Office 1985. Low-Income Weatherization--Better Way of Meeting Needs in View of Limited Funds, GAO/RCED-86-19, Washington, D.C.

United States Senate, Special Committee on Aging 1984. "Developments in Aging 1983," Senate Report 98-360, Vol. I. U.S. Government Printing Office, Washington, D.C.

The Villers Foundation 1987, On the Other Side of Easy Street: Myths and Facts About the Economics of Old Age, a report of The Villers Foundation, Washington, D.C.

Warriner, G. K. 1981. "Electricity Consumption by the Elderly: Policy Implications," Journal of Consumer Research, 8, 258-264.

Weier, B. E. 1983. "Utility Services for Seniors: One Example," Public Utilities Fortnightly, 112 (13), 35-38.

Wirtshafter, R. M. 1985. "Non-participants in Utility Conservation Programs," Energy Policy, 13 (2), 143-156.

APPENDIX A
UTILITY PROGRAMS

SENIOR ENERGY TEAM

UTILITY: Carolina Power and Light Company

CONTACT: Morris McClellion
Program Director
Carolina Power and Light Company
P. O. Box 1551, Suite 2061
Raleigh, North Carolina 27602
(919) 836-7824

ELIGIBILITY: Elderly customers age 60 and older in CP&L service area.

INCENTIVE TERMS:

\$30 - \$50 donation from CP&L to community groups for each weatherization kit installed in an elderly household.

CONSERVATION MEASURES:

Plastic window covering, door sweeps, water heater jackets, weatherstripping, caulking, receptacle/switchplate covers, water heater thermostat adjustments.

PROGRAM HISTORY

The program began in 1984, after a CP&L survey found that the elderly segment of utility customers was increasing faster than the overall rate. A related concern was the rising cost of energy for customers on fixed incomes. A pilot study was done in one area in 1984; the program expanded to a second area in 1985.

PROGRAM DESIGN

The Senior Energy Team is part of Carolina Power and Light's low-income assistance program, specially targeted to the elderly. Kits containing low-cost conservation measures are distributed to community and employee groups for installation in elderly households. Participating households or neighborhoods are selected by the installing group, screened by company representatives, and then given a walk-through audit to assess needs. In addition, educational materials and demonstrations are provided.

MARKETING

Information about the program is distributed entirely through participating community groups and social service agencies. Each division of the utility develops a program (e.g., the Senior Energy Team) for inclusion in a company-wide community affairs menu of services. A marketing manager is responsible for publicizing the programs, primarily through personal contacts within the community. In most cases, groups will approach the utility with interest in the Senior Energy Team as a public service/fund-raising project.

CONSERVATION LOAN PROGRAMS

UTILITY: Carroll Electric Membership Corporation

CONTACT: Jimmy Autry
Carroll Electric Membership Corporation
P. O. Box 629
Carrollton, Georgia 30117
(404) 832-3552

ELIGIBILITY: Customers of CEMC with incomes below \$15,000, with special targeting to senior citizens.

INCENTIVE TERMS:

Low interest loans and grants up to \$3000. Interest rates up to 5%, payable over 5 years.

CONSERVATION MEASURES:

Weatherstripping, insulation, storm windows, heating sources (such as heat pumps), water-heater wraps (installed as a regular practice during home audits).

PROGRAM HISTORY

Funds have been available since 1985 through the Rural Electric Administration, Section 12 loan program, and since 1986 through the Georgia Residential Finance Authority (GRFA). GRFA funding first came from Solar Bank reserves but currently comes from oil overcharge dollars. As a non-profit corporation, the utility has been committed to conservation measures and cutting excess expenses to its members. Through the Section 12 program, 179 units have been completed since April 1985. In the GRFA program, 69 homes have been weatherized, 45 of them elderly.

PROGRAM DESIGN

Energy audits are a regular service of the utility. Auditors provide information about available programs to eligible customers. The utility administers the loan or grant and supervises the work of the installing contractor.

MARKETING

Special efforts are made to target senior citizens.

Direct mail. Program information is sent directly to elderly customers identified through a special billing program for Social Security recipients.

Interagency networking. Referrals are made to local Community Action Programs for emergency weatherization assistance. Strong relationships are maintained with AARP chapters. The endorsement of the programs by church leaders has been an effective way to encourage senior citizen participation.

PROJECT SENIOR

UTILITY: Columbia Gas of Pennsylvania

CONTACT: Melanie Popovich
Columbia Gas of Pennsylvania
1405 McFarland Road
Pittsburgh, Pennsylvania 15216
(412) 344-9800, Ext 229

ELIGIBILITY: Columbia Gas customers age 65 and older.

INCENTIVE TERMS:

Free energy audits, home shopping for weatherization materials with same day installation available.

CONSERVATION MEASURES:

Low-cost infiltration measures; water flow controls; insulation for water heaters, pipes, air ducts, foundation rim joists and attic entrances; radiator reflectors.

PROGRAM HISTORY

Project Senior began as a part of the utility's low-income weatherization program. Through that program, the utility discovered that many elderly customers did not know who to call for basic low-cost weatherization services. Project Senior was developed in 1985 to target elderly customers for weatherization assistance, regardless of income. Response has been slow but is increasing. To date, approximately 330 households have participated with a project goal of 2,000.

PROGRAM DESIGN

Columbia Gas receives requests for the home energy audit and provides those names to a subcontracted firm for the delivery of program services. A technician completes the home audit and recommends appropriate conservation materials. The customers can then choose to purchase items from a list of 19 products. Materials have been purchased in bulk by the contractor and are offered at substantial savings. On-the-spot installation is offered at no extra charge. There is no obligation to buy materials after the audit; in some cases, the customer will postpone or even reject the shopping service.

MARKETING

Mass Media. Several newspaper ads with returnable coupons have been used effectively. Radio and TV public service announcements were used infrequently.

In 1985, an advertisement was run in The Silver Pages, a publication listing and describing the region's services for elderly residents. While 94,000 copies of The Silver Pages were ordered in Pittsburgh alone, response to the Project Senior ad was disappointing and the ad was discontinued.

Interagency networking. Special mailings were sent to 100 social service agencies, senior centers, and community organizations. Program information and contacts were also provided to the Better Business Bureau and the Chamber of Commerce.

The most productive marketing strategy has been through presentations at senior citizen centers and advocacy group meetings. Representatives from the utility and the sub-contractor discuss home energy conservation and describe the program in detail.

GOPHER GAS ENERGY CONSERVATION PROGRAM

UTILITY: Commonwealth Gas Company

CONTACT: Carl Erickson
Energy Conservation Department
COMGas
157 Cordaville Road
Southborough, Massachusetts 01722
(617) 481-7900

ELIGIBILITY: COMGas customers aged 60 and over.

INCENTIVE TERMS: Free materials and installation worth \$50.

CONSERVATION MEASURES:

Water heater wraps, pipe and duct insulation, water flow restrictors, weatherstripping, and outlet gaskets.

PROGRAM HISTORY

The program was initiated in December 1986. From previous conservation projects, the utility determined that the elderly were drastically underserved by assistance programs. COMGas withdrew from MASSAVE, the non-profit utility-sponsored program offering home audits and weatherization, in order to target the elderly more effectively on the local level.

PROGRAM DESIGN

Requests for assistance are called in through a toll-free line to a contractor, DMC Energy. DMC employees are responsible for scheduling jobs, completing a home audit and installing appropriate measures, and making referrals to other energy related programs.

MARKETING

Marketing strategies were developed with the assistance of the utility's Senior Citizen Advisory Board.

Direct Mail. Program brochures and response cards were sent to senior citizens on the mailing lists of local Councils on Aging. In addition, the Advisory Board has developed a senior citizens newsletter, "Senior Pipeline," with circulation of 13,000 copies.

Interagency networking. Presentations to senior citizen groups and contacts with agency staff have been the most effective marketing strategy. Personal contacts by utility personnel have helped to gain the trust and encourage the participation of seniors wary of accepting "charity."

The utility recently sponsored an Elderly Energy Exposition for personnel from local aging offices and about 450 senior citizens. The Exposition presented a wide range of energy related topics and discussed the federal, state, and local energy programs available to seniors.

INDEPENDENT LIVING SKILLS FOR SENIORS SERIES

UTILITY: Duke Power Company

CONTACT: Beryl Jackson
Community Assistance Specialist
Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
(704) 373-7168

PROGRAM HISTORY

The utility's Community Assistance Program arose out of concern for identifying and meeting the needs of elderly and low income customers. While state regulations discourage special treatment or targeting of any segment of a utility's customers, an outreach/education program was developed in 1981 to work through community organizations.

PROGRAM DESIGN

The Independent Living Skills For Seniors Series is a three-part educational program for senior citizens. Part One focuses on energy management awareness in the home. Two other parts deal with economical meals and housing options. Approximately 24 field representatives are available to present the information to senior citizen groups. The programs are presented in a manner that encourages audience participation. Brochures and other handouts are also available. The series may continue with nonenergy related topics, but future directions are still being planned.

MARKETING

Outreach. The Community Assistance Specialist maintains close contact with state and local Councils on Aging and other elderly organizations. Energy Management education is provided to the staff of participating organizations. In addition, personnel training is provided for customer service representatives to sensitize them to the needs of elderly and handicapped customers. Local business offices of the utility are relied on for referrals of senior citizens needing assistance.

SENIOR CITIZENS LENDING A HELPING HAND

UTILITY: Georgia Power Company

CONTACT: David Kee
Georgia Power Company
270 Peachtree
Atlanta, Georgia 30303
(404) 526-7323

ELIGIBILITY: Homeowners 60 years and older, and handicapped homeowners, regardless of age, in Georgia Power service area.

INCENTIVE TERMS:

Free weatherization services to the homeowner.

CONSERVATION MEASURES:

The focus is on infiltration measures such as caulking, weatherstripping, door sweeps, and vinyl interior window insulation. Insulating jackets are installed on electric water heaters. Necessary infiltration repair work also may be done. As an added feature of the program, smoke alarms are installed.

PROGRAM HISTORY

The program began in 1982. Between 1982 and 1987, 36,000 homes have been weatherized. Development of the program was motivated by the utility's recognition that existing assistance programs were not reaching senior citizens, particularly those slightly above the poverty level. Offering relief from rate increases to customers on fixed incomes was another motivation for Georgia Power's involvement. Basically, a decision was made at the Chief Executive Officer level to take on a social responsibility toward the elderly and handicapped.

PROGRAM DESIGN

Eligible households are identified by Georgia Power. An outside firm is contracted to hire senior citizens to schedule jobs and deliver program services. About 155 seniors are employed on a part-time basis. In teams of two, installation crews deliver the appropriate services. Georgia Power purchases the materials and supplies them to the contractor.

MARKETING

Mass media. Initially, news releases for each local and district power company office announced the program. In the past, radio spots were used infrequently.

Bill inserts. Bill inserts were mailed out once in 1984.

Interagency networking. Beginning in 1982, efforts were made to coordinate services with the State Energy Office, the Weatherization Assistance Program and 26 local Community Action Programs. In some cases, WAP agencies provide names to Georgia Power of people who need assistance but are ineligible for WAP. All area CAPs are aware of the Georgia Power program, but relatively few referrals have resulted. In other cases, Georgia Power or the contractor will notify the local CAP office of people with greater needs. Often Georgia Power does its standard weatherization work, then refers the customer to the CAP for installation of insulation and other measures.

Outreach. Power company offices have placed printed response cards on counters to encourage customer enrollment in the program. Often, the program is introduced to customers contacting Customer Service Centers and hotlines. A majority of eligible customers are identified and enrolled by contractor crews themselves or by other clients. When crews are working at a home, they obtain leads on neighboring homes, and are frequently approached by interested neighbors. This word-of-mouth marketing has been especially important in popularizing the program.

WEATHERIZATION ASSISTANCE PROGRAM

UTILITY: Houston Lighting and Power Company

CONTACT: Sandra Dodd
 Program Coordinator
 Weatherization Assistance Program
 Houston Light and Power Company
 P. O. Box 1700
 Houston, Texas 77097-2063
 (713) 660-3834

ELIGIBILITY: Senior citizens aged 55 and over on low fixed incomes, disabled residents, and customers of any age on a fixed income. Customers with someone living in their home who falls in any of the above categories are also eligible. Income guidelines are approximately the same as for food assistance programs.

INCENTIVE TERMS:

Free materials and installation.

CONSERVATION MEASURES:

Caulking, weatherstripping, water heater wraps, ductwork taping, air conditioner filters, and outlet gaskets.

PROGRAM HISTORY

The program began in 1983. Previously, the company only offered weatherization related programs for customers who could afford to hire a contractor. The new program was developed with flexible eligibility guidelines to provide a community service to the greatest number of needy households.

PROGRAM DESIGN

Requests are received by the program coordinator, and a home audit is performed to identify appropriate measures. Five crews, consisting of a supervisor and area vocational high school students, complete the installation work. Additional appointments may be scheduled for window glazing. General conservation information is provided during the visit.

MARKETING

Direct mail. Program information was sent to customers enrolled in a deferred billing program for senior citizens.

Mass Media. Television has been the best marketing resource. Efforts are focused on the stations and programs shown to have larger numbers of lower-income and elderly viewers. A media campaign is held in May and June in preparation for summer work. Program information often is featured during community affairs shows aired in the early

morning and early evening hours. A local news personality, widely known as an advocate for the poor, generates strong response when he features information about the weatherization program. The utility relies on the credibility of a station and its personnel to encourage participation.

Interagency networking. Installation crews provide referrals for major weatherizations and repairs through city agencies and community organizations. Referrals for medical or other services are given, also. Referrals from other agencies have been infrequent.

GOLD COURTESY SERVICE*

UTILITY: Iowa Public Service Co.

CONTACT: Robert Barger
Iowa Public Service Co.
P.O. Box 778
Sioux City, Iowa 51101
(712) 277-7554

ELIGIBILITY: Any householder who is over 62 years of age.

INCENTIVE TERMS:

There is no charge for any of the services.

CONSERVATION MEASURES:

The Gold Courtesy Service (GCS) Program consists of five components: (1) "courtesy service" which means that the GCS customer will be next served unless an emergency situation exists for another customer. When a waiting list develops for furnace pilot light-ups in the fall, for example, GCS customers will be placed at the top of the list as they call in, (2) a walk-through audit, (3) a furnace check which is designed to detect potential safety hazards and to instruct the customer on measures to enhance efficiency, (4) low-cost/no-cost weatherization workshops, which provide two hours of hands-on instruction plus a do-it-yourself packet of weatherization materials, and (5) information programs for senior organizations that cover topics such as hypothermia and reading energy meters and bills.

PROGRAM HISTORY:

Planning and preparation for the program began in June 1982 with the appointment of a program coordinator. Subsequent appointments included an advisory board made up of company officers and representatives of customer groups. The board members who were representatives of customer groups actively participated in program development. Preliminary work included solicitation of company employees, company retirees, and senior citizen customers for ideas and suggestions. All ideas and suggestions were evaluated with reference to their feasibility, cost impact, manpower requirements, and compatibility with program goals. A refined list of potential program components was then prioritized and submitted for management consideration and approval in September 1982. Five services, as listed above under the Conservation Measures heading, were approved.

In October 1982, a bill insert was sent to all customers announcing the program and soliciting enrollment in the program by those current customers aged sixty-two and over. The months of November and December 1982, were given to completing customer enrollment. By the end of 1983, enrollment in the program exceeded 15,000 households out of the approximately 20,000 that were eligible.

PROGRAM DESIGN:

Enrollment is accomplished when the customer sends back a postage-free return postcard included in a mailing. Each senior citizen customer who enrolls receives a personalized laminated GCS identification card and a letter from the company president welcoming the customer to the program. Application for specific services, such as audits or furnace inspections, is accomplished with a similar postage-free return postcard. When such a postcard is received, company employees call the householder to set up an appointment for the service. When invitations for energy audit and furnace check services are mailed out, about 70% of the households respond. The workshops and information programs, which are marketed to senior centers and other senior organizations, generally receive about a 30% response.

MARKETING:

Bill inserts and direct mail are the main forms of marketing. The mailings include invitations to accept services and postage-free, easy-to-fill-out, return postcards. Announcement flyers, brochures and posters are distributed to senior centers to advertise the availability of services. The very high response rate to the GCS program (over 70% of eligible households enrolled) is probably due more to a history of good public relations than to specific features of the marketing efforts. Senior citizens are very supportive of Iowa Public Service Co., and the company is service-oriented, especially for the elderly. Extensive efforts are typically made to resolve customer problems.

* Much of the above program description was taken directly from the following source: Bruce E. Weier, "Utility Services for Seniors: One Example," *Public Utilities Fortnightly*, Vol. 112, No. 13, December 22, 1983.

WEATHERIZATION ASSISTANCE PROGRAM
SENIOR SAVE PROMOTION

UTILITY: Jersey Central Power and Light Company

CONTACT: Philip Robinson
Jersey Central Power and Light
310 Madison Avenue
Morristown, New Jersey 07960
(201) 455-8580

ELIGIBILITY: Senior Save participants must be recipients of Lifeline benefits, available through the New Jersey Department of Human Services. To qualify for Lifeline, the customer must be 65 years of age or older, or disabled and receiving social security benefits, and have an annual income of less than \$13,650.

INCENTIVE TERMS:

Free weatherization work up to \$700.

CONSERVATION MEASURES:

Water heater wraps, low flow shower heads, faucet aerators, attic insulation, caulking, weatherstripping, pipe, duct and rim joist insulation, air conditioner covers, kitchen exhaust fan covers, outlet gaskets.

PROGRAM HISTORY

The program was initiated in 1984 when the utility presented a plan to the State Board of Utilities. In 1986, a total of 2,927 units received weatherization work; of these, 2,000 were elderly Lifeline customers. The utility considers the program to be cost-effective and will continue to offer it.

PROGRAM DESIGN

Jersey Central provides a home energy audit to identify conservation measures needed. Scheduling and installation is done by a contractor.

MARKETING

The Senior Save marketing promotion was successful in 1986. Information was sent to 29,000 Lifeline customers. A follow-up telemarketing campaign helped to enroll about 2,000 of these customers.

Interagency networking. A "Direct Grant Weatherization Program" provides utility funding to local community action agencies. The Direct Grant Program is administered by the Community Action Program Executive Directors Administration, which allocates funds to local agencies. Local agencies, in turn, offer additional weatherization services worth up to \$700 to income-qualified residents. Services are delivered by agency crews or by subcontractors.

Through the WAP and Direct Grant programs, eligible customers can receive up to \$1,400.00 worth of weatherization work. The community action agencies can also tap into state and federal funding for additional weatherization and structural repairs.

PROJECT WARM

UTILITY: Louisville Gas and Electric/Urban Shelter Associates

CONTACT: Jim Walsh
Urban Shelter Associates
1252 South Shelby St.
Louisville, Kentucky 40203
(502) 635-7928

ELIGIBILITY: Sixty years and older or physically handicapped with low incomes. Income guidelines are basically those applied to food stamp recipients, and the majority of clients usually receive only social security payments.

INCENTIVE TERMS:

All materials and labor are free to qualified clients.

CONSERVATION MEASURES:

Generally, four-mil polyethylene sheets are taped to the inside of window frames (and removed in the spring). Copper friction weatherstripping or aluminum/rubber weatherstripping is applied to door frames. Doorsweeps are applied to exterior doors and other doors leading to unconditioned areas. Vinyl v-strip is selectively placed on double-hung window frames. Backer-rod, a spongy polyethylene rope, is used with siliconized acrylic caulk in exterior applications. Glazing putty also is used on windows when required. Rigid insulation board is used to block air infiltration from large holes in walls and as temporary coverings for crawl space vents, attic access openings, and glass replacement. Other weatherization techniques are also used where required. A typical weatherization involves \$35-\$60 worth of materials per house, applied through 12-18 hours of volunteer labor.

PROGRAM HISTORY:

Project Warm is operated by Urban Shelter Associates, Inc., a nonprofit organization founded in 1981, for the purpose of organizing and training volunteers to weatherize homes of low-income elderly and handicapped with the combined assistance of Louisville Gas and Electric Company and state and local governments. The Project's basic objectives are to mesh public and private sectors with the concept of volunteers providing "Neighbor to Neighbor" free services that result in more comfort and lower heating bills for recipients.

Each year Louisville Gas and Electric Company has provided a grant of about \$25,000 for the purchase of weatherization materials. Salaries for the paid staff are provided by federal funds through the Kentucky Human Resources Cabinet and ultimately by local government. The director's salary is provided by the City of Louisville Community Development Cabinet. Office space and overhead are paid for by the City and Jefferson County. Government monies received have been as high as \$135,000 per year. Private sources, such as banks, churches and United Way, provide about 30% of total funding.

PROGRAM DESIGN:

The main work force of installers consists of volunteers derived from several sources: churches, civic organizations, schools, and potential recipients seeking weatherization services. Individuals who are retired and people looking for some way to serve on a community project also respond to the various forms of publicity that promote Project Warm activities.

The training classes, which consist of two hours of classroom instruction and eight hours of hands-on training, motivate volunteers to learn weatherization techniques. An added incentive is that if they work on three client homes they are eligible to receive free materials for their own house. About half the volunteers utilize this incentive.

Volunteers range in age from 15 to 72 years, are male and female, and represent various ethnic backgrounds. When they enter the program they may possess skills that vary from nonexistent to considerable adeptness. Some volunteers are retired, some work full-time and some are not employed. At any given time, several hundred volunteers are listed in the active file. To date, about 1500 persons have taken training and about half have completed their quota of recipient houses.

A group of five to seven persons, under the leadership of a director, provide the administrative functions. This includes training of new volunteers, screening recipients, preparing work plans for each recipient, organizing work crews, scheduling activities, and handling incoming calls for volunteers and recipients. Additional duties include quality inspection of the weatherization work and compiling before-and-after energy usage studies.

Client services begin with an audit visit, followed by an installation visit. Homes also are revisited in subsequent years to reinstall the plastic window coverings.

MARKETING:

Staff leaders must continually solicit additional clients and volunteers through training sessions, direct mail, media publicity, speaking engagements, agency referrals, and word-of-mouth. About 10% of recipients come into the program through social service agency referrals and the rest request services for themselves. Word-of-mouth advertising from satisfied clients to potential clients is the most effective means of recruitment. TV advertising is also very effective.

Mass media. Volunteers and recipients are recruited with newspaper advertising, TV ads and talk shows. Public service newspaper ads are run three times weekly from September 1 to the end of March. These ads explain what Project Warm does, and for whom. A request for volunteers and the dates, times and places of training sessions are in the ads, also. Public service TV spots, which often film weatherization crews at work and interview volunteers, clients and staff persons, provide very effective publicity. The Director of Project Warm makes frequent appearances on local talk shows to publicize the program. Public radio stations make announcements of training times and locations. Louisville Gas and Electric publishes a booklet describing the Project in some detail.

Interagency networking. Cooperation among local and state governments, a utility and numerous community groups is the key to Project Warm's success. Public libraries provide rooms for training sessions. Churches and social service agencies provide referrals and volunteers.

Outreach and referrals. Most clients (about 90%) call in themselves to request services. Word-of-mouth recommendations are the usual reason for seeking services. The approximately 10% of clients who are referred may be located by churches, hospitals, the Visiting Nurses Association or other social service agencies.

PROJECT MAX

UTILITY: Memphis Light, Gas and Water Division (MLGW)
Memphis, Tennessee

CONTACT: R. E. Beanblossom
Supervisor, Energy Services
Memphis Light, Gas and Water Division
P. O. Box 430
Memphis, Tennessee 38101-0430
(901) 528-4011

ELIGIBILITY: Customers of MLGW who qualify for any of several weatherization or bill assistance grant programs. Low income, elderly customers in owner-occupied homes are a prime target of this program, but all low income customers and some rental units also qualify. Project MAX seeks to assist those households living in energy inefficient but structurally sound housing stock.

INCENTIVE TERMS:

Assistance varies directly with need, with actual values ranging from \$1000 to \$5000 to date, although no high or low limits have been set. Weatherization grants from existing publicly and privately funded programs are combined with additional funding, donated materials and volunteer labor from a variety of churches, organizations and individuals to tailor an effective long-lasting weatherization package for each customer. A small zero-interest MLGW/TVA Energy Package loan is included to help foster customer participation in the decision-making process and to help boost self-esteem by allowing the customer to help pay for the improvements. The specific package of improvements and financing is unique to each customer.

CONSERVATION MEASURES:

Project MAX includes six components. The selection of appropriate components depends upon individual customer need and available resources. The components are:

1. Weatherization. Essentially, this is the typical program with each agency bringing its own variations to the table. In general, caulking, weatherstripping, insulation, ground cover, ventilation, and some window treatments are included in this component.
2. Handy Man. This picks up where weatherization stops; it makes those repairs necessary to assure that weatherization can be effective. It can include roofing, patching walls, ceilings and floors, repairing external siding, etc.
3. Gas Man. This provides for improvements in safety and efficiency of home gas heating systems including repair or replacement.
4. Heat Pump Financing Program. Part of the Energy Package program, this provides for the replacement of electric resistance heat with a heat pump.

5. Education. This provides a foundation of energy-related information for MAX customers to help them develop proper usage habits and make good budgetary decisions.
6. Bill Assistance. This provides funds to relieve any outstanding financial obligations at the completion of MAX assistance.

PROGRAM HISTORY

Project MAX, initiated in 1984, is an integrated weatherization program that combines the resources of several agencies and local organizations. Project MAX coordinates and combines the limited resources of a variety of existing public and private weatherization grant programs, private funding and volunteer labor sources with a Tennessee Valley Authority (TVA) zero-interest loan program. Because no one agency could solve the energy-related problems of many households alone, MAX was developed to coordinate efforts in a more complete and comprehensive way. It includes the resources of TVA programs, federal Weatherization Assistance Programs, and a variety of local churches, agencies and neighborhood groups. Through a joint effort, each group's resources can be used to complement the resources of other organizations. To support MAX, churches have provided volunteer labor and paint, weatherization contractors have donated materials, heating and air-conditioning contractors have repaired heating systems, summer youth employment programs have supplied workers and senior citizens have been recruited to supervise the young workers. MAX is an example of a creative effort to build a conservation service delivery team with both traditional and nontraditional players. By building a team that includes nontraditional players, more and better services could be provided.

MAX, the Maximum Assistance eXperiment, has become MAX, the Maximum Assistance eXample, by consistently providing a high level of personalized effective weatherization assistance while expanding the types of services incorporated. It is designed to help assure the financial independence of low-income and elderly customers in the MLGW service area by reducing utility bills through effective weatherization.

The energy bills of the low income and elderly are often disproportionately high for the size of their homes due to inter-related factors which lead to a cycle of deteriorating housing conditions and rising operating costs. Once begun, it becomes increasingly difficult for these customers to meet all of their needs with severely limited incomes. Housing maintenance is one of the first costs to be eliminated. During this process, the customer becomes dependent upon available bill assistance programs which provide short-term symptomatic relief without addressing the cause. Customers with the greatest need cannot be helped by traditional weatherization programs due to limited funds per residence and requirements beyond the "rehabilitation" measures allowed. MAX goes beyond these to provide permanent repairs and effective energy-use and budget planning to help return the customer to self-sufficiency.

Expenditures for permanent improvements not traditionally addressed by weatherization programs provide long-term financial benefit to the customer in reduced utility costs and to the utility/community in reduced need for bill assistance funds and decreasing charge-off rates.

MAX solves pre-weatherization problems which normally prevent the traditional weatherization from being effective. It also addresses energy wasting problems such as water leaks. In a systems sense, each of these areas is related to energy cost and energy waste.

Project MAX has an ongoing goal to help develop and maintain the financial independence of the poor and aging customers of its community by improving the energy efficiency of the housing stock while educating the customer to recognize and control energy-consuming devices in their homes to meet both personal comfort and budgetary needs. MAX endeavors to apply scarce resources to those applications which provide the maximum benefit, in life-cycle terms, to the individual customer, the utility and the community.

Over one hundred homes have been improved through Project MAX. Within this group, the amount of bill assistance requested has decreased along with the average energy consumption. This is a small number when compared with statistics indicating that over 30 thousand families in this service area live with incomes below poverty level. But MAX is growing. It is attracting attention--and financial support--from an increasing diversity of sources, both private and public, which believe that it is time to attack this problem at its source.

Project MAX expresses a recognition of the individuality of each low-income and elderly customer and the value of each as independent, self-sufficient neighbors, in the urban setting. It also recognizes the individuality and worth of existing private and public programs and projects which address the energy and housing needs of this group. MAX accentuates the positive aspects of all players, bringing needs and solutions together in cost-effective applications. MAX serves the distinctly practical purpose of preserving owner-occupied housing and decreasing private dependence on public funds.

MARKETING

Since Project MAX is a program of programs, marketing must identify and recruit both resources and recipients. These goals are complimentary and self-feeding since the agencies, groups and individuals supplying MAX's resources also supply customers who have needs beyond individual resources. In inverse form, needy customers can often identify additional sources of assistance, such as their church or club, which is interested in helping their "own."

Mass Media. Mass media is not used by Project MAX, except to recognize those sources who have not requested that their partnership remain confidential. Participating agencies utilize some newspaper, newsletter, bus bench and billboard advertising to promote individual programs. Project MAX receives referrals from these agencies.

Bill Insert and Direct Mail. The MLGW/TVA Energy Package receives attention in utility bill inserts from time-to-time, but there are no plans to use any mass means to secure customers.

Interagency Networking. This is the main source of Project MAX customers. Participating agencies refer qualified customers who need help beyond the capability of that agency to MAX. The Project MAX coordinator, who maintains an active operating knowledge of current agency resources and needs, is the information link among resources and recipients.

Outreach and Referrals. Word-of-mouth, agency referrals and speaking engagements account for most of the MAX outreach. Additional resources are developed as needs dictate. Project MAX, recognizing its own limits, also refers customers to social services, health services or housing agencies when appropriate. This cooperation further extends the effective networking and cross-referral process to help maximize the effective use of all available resources.

Senior Citizens Peer Counseling Program

UTILITY: Nashville Electric Service (NES)

CONTACT: Jim Perkins
Nashville Electric Service
Room 291
1214 Church St.
Nashville, Tennessee 37203
(615) 747-3665

ELIGIBILITY: Verification of income eligibility for services is done by the Senior Citizens Peer Counselor at the time of the first home visit.

INCENTIVE TERMS:

Information, counseling and referral services, energy audits, weatherization materials and installations are available at no cost to qualified customers.

CONSERVATION MEASURES:

Air infiltration measures, attic insulation and storm windows are provided.

PROGRAM HISTORY:

The program began in 1980 as a demonstration project funded by a Tennessee Valley Authority (TVA) grant. TVA funding continued for the second year of program operation. The success of the demonstration and a desire to fulfill community service, as well as public relations functions, led to an NES decision to support the program from 1982 to the present at a level of about \$100,000 per year.

An important factor in the success of the program was a strong effort to obtain community support, political support from local government and support from the media. Early in the program's development an Advisory Committee was formed with representatives from the mayor's office, senior citizens groups, the school system and other community groups. Assistance from community leaders allowed NES to stay in the background, providing technical and financial support. This arrangement made the program much more acceptable to the public than it could have been with only utility sponsorship.

When the program first began in 1980, energy workshops were organized which offered an incentive of a free package of conservation materials to participants who completed all three of the three-hour sessions. The package of materials included caulking and weatherstripping materials, a caulking gun, and door sweeps. Followup visits to the households receiving the package of materials soon revealed that many of the workshop participants never installed the measures. Often the householders were unable to do the installations. After this problem was identified, the program was restructured to use volunteers to do installations. Volunteers were recruited from churches and colleges to install materials supplied by NES and TVA in the Basin County Volunteer Weatherization Program. The volunteers often did the work on Saturdays and afternoons. From

1981-82 demand for services grew so rapidly it became more and more difficult to recruit enough volunteers to supply them. In the winter of 1983 a decision was made to hire students to install weatherization. In a pilot effort, which lasted two weeks, six students and one supervisor completed more installations than the volunteers had in several months. The good results from the student employees led to Project 2000, which provides summer employment for approximately 30 youths and which has weatherized over 1500 homes.

PROGRAM DESIGN:

The Senior Citizens Peer Counselors are a paid staff of nine people who live near the communities they serve. The counselors receive an extensive training program covering how to interview and counsel clients and how to explain technical energy terms clearly. The program is designed to impact clients' total lifestyle by providing assistance with obtaining many services such as food stamps, subsidies for medicines, and help for physical disabilities. Energy needs are not treated in isolation, but as a part of a total system of support services. The program philosophy is that improving the comfort and energy efficiency of the home is insufficient if other basic needs are not met. In addition, if assistance can be provided in obtaining social security benefits or food stamps, for example, more income will be available to pay energy bills.

Senior citizens can request services by calling a Help Line for Seniors which is a telephone hotline offering assistance with a wide range of problems. When an individual calls the hotline a senior counselor home visit is arranged. This visit by the counselor is the first step in the provision of weatherization services. The next step is a visit by an energy auditor to determine conservation needs. Then the senior counselor visits the home again, explains the audit results and arranges for installation. Installation of weatherization measures may be provided in several ways. Project 2000 workers install air infiltration measures. The Project 2000 measures may be combined with Weatherization Assistance Program measures, such as attic insulation or storm windows. The TVA loan program, which provides loans of up to \$1200 at no interest and of up to \$5000 at 9% interest, also may be used to finance measures. The method of providing weatherization services depends on the household income and needs. After weatherization installations are completed, counselors continue to visit the home on a yearly basis.

MARKETING

Bill inserts and direct mail. Every year a form letter is sent to all elderly NES customers. The customer is asked to fill out and return the form which identifies their needs for services.

Interagency networking. As described in the sections on program history and design, there is extensive interagency cooperation. The federal Weatherization Assistance Program, the Social Security Administration, local government, schools, churches, senior centers, hospitals and other agencies and community groups have some involvement. The program is designed to provide comprehensive referral services in order to meet the full range of elderly needs.

Outreach and referrals. About two-thirds of the program participants call to request services. The remaining third may be called to the attention of the program by neighbors, relatives, churches, hospitals or social service agencies. If a third-party indicates the need for services, a senior counselor is sent to investigate the situation.

SENIORS LENDING A HAND

UTILITY: New York State Electric and Gas Company

CONTACT: Bill Tabbert/Cathy Hughto-Delzer
Consumer Affairs Department
New York State Electric and Gas Company
Binghamton, New York 13903
(607) 729-2551

ELIGIBILITY: Senior citizens age 60 years and over in the utility's service area. Individuals also must have received emergency services from a local agency, be referred by an agency or customer service representative, or have an energy emergency.

INCENTIVE TERMS:

Free weatherization materials and installation.

CONSERVATION MEASURES:

Caulking and weatherstripping, door sweeps, window repair and storm windows, water heater wraps, thermostat reductions.

PROGRAM HISTORY

During the pilot study for a generic low-income weatherization program, the utility discovered that senior citizens often would refuse to let volunteers inside their homes. In 1983, the utility began to research other programs which enjoyed improved access and communication with elderly customers (the Georgia Power program was one example). In addition, the company sought to design a program that would fill a gap in the locally available energy assistance programs by providing services to seniors regardless of income.

PROGRAM DESIGN

The program operates in ten districts of the service area. Three senior citizens are hired. One functions as a coordinator, handling promotion, applications, and scheduling. A team of two seniors perform the weatherization. An effort is made to pair contractors with complementary skills in communication and technical expertise in order to effect successful rapport with and efficient service to customers.

MARKETING

Mass media. Radio news spots and a television talk show featured the program. Daily newspapers and special senior citizens publications covered the program extensively.

Interagency networking and outreach. From the start, the program was developed in close cooperation with human service agencies to prevent duplication of existing programs. The coordinator met with representatives from community action agencies, The Red Cross, the state Office for the Aging, and other groups to encourage referrals between the various programs. Area churches were also informed of the program.

The district coordinators visit senior citizen groups to promote the program. Another local strategy in small towns and rural areas takes advantage of property tax rolls in the town clerk's office. As the state has a property tax discount for seniors, a list of those households can be obtained and contacted with program information. However, word-of-mouth has generated most publicity for the program.

COMMUNITY CONSERVATION GRANTS

UTILITY: Niagara Mohawk Power Company

CONTACT: Nancy Hughes
Conservation Activities Department
Niagara Mohawk Power Company
300 Erie Boulevard West
Syracuse, New York 13202

ELIGIBILITY: Senior citizens age 60 years and over who are eligible for Home Energy Assistance Program funds. Single parents and disabled residents were also included as HEAP-eligible participants.

INCENTIVE TERMS:

Free ceiling insulation and furnace replacement.

CONSERVATION MEASURES:

Ceiling insulation and furnaces.

PROGRAM HISTORY

The program began by awarding grants to community organizations to hire disadvantaged youth for low-cost weatherization assistance for senior citizens. However, quality control questions and the lack of public perception of the utility's sponsorship led the company to reorganize the program in order to take a more active and visible role in coordination from 1985 to early 1987. Currently, an austerity program has led to the project's suspension.

PROGRAM DESIGN

Eligible households were identified through HEAP applications. The utility would do home energy audits and write work orders. Utility approved contractors would bid on contracts and then install materials. After customer approval and an inspection, the contractor would be paid. Community action agencies could, with approval, act as contractors as well.

MARKETING

Interagency networking and outreach. Liaisons with county aging offices were a main mechanism for program marketing. Face-to-face contact was important to encourage referrals from local personnel with numerous other program responsibilities.

Local aging offices mailed program information to lists of HEAP participants and channeled responses back to the utility.

In addition, the utility's consumer affairs office offers an educational presentation in a "BINGO" format, with energy-related questions and prizes. The presentation is made at senior centers. Information on the utility's other programs also is provided.

ENERGY KITS AND CEILING INSULATION PROGRAM

UTILITY: Northern Illinois Gas Company

CONTACT: Jack Stokes
Northern Illinois Gas Company
P. O. Box 190
Aurora, Illinois 60507
(312) 983-8888

ELIGIBILITY: Energy kits are available to senior citizens (age 60 years and older), low income and disabled residents. The ceiling insulation program is available to all gas customers, with incentives for senior citizens age 65 years and older.

INCENTIVE TERMS:

The insulation program offers installation financing at 14% interest with a three-year term and \$1,000 loan limit. In addition, participating senior citizens are eligible for a \$50 gas bill credit.

CONSERVATION MEASURES:

Energy kits contain low cost anti-infiltration measures, as well as water heater wraps. In the ceiling insulation program, the average home receives insulation of an R-19 value.

PROGRAM HISTORY

In 1983, the Illinois Commerce Commission ordered utilities to develop conservation programs for all classes of customers. Special attention was to be paid to low-income and elderly residential customers. Distribution of energy kits began in July 1984. To date, approximately 1500 kits have been given out with the majority going to senior citizens. The ceiling insulation program was initiated in February 1984, and the senior citizen credit was added in May 1985. In two years, 7,000 units were completed with 1300 seniors receiving the bill credit.

PROGRAM DESIGN

Energy kits are distributed at conservation workshops held at community and senior citizen centers. A one-hour seminar is offered, and a contractor demonstrates installation procedures.

In the insulation program, interested customers are identified by the utility and contacted by a subcontractor. The subcontractor performs an inspection and recommends any insulation and ventilation improvements. Customers pay for any work, with financing available through the utility.

MARKETING

Bill inserts. Program information and response cards are included with bills twice a year. This is the primary means of program enrollment. Response cards are sent to a

participating subcontractor. In addition, a regular consumer newsletter sent with bills features senior citizen news and information.

Mass media. News releases announced the start of the programs. Other promotional work is done by community groups that sponsor seminars and energy-kit distribution.

Interagency networking. Working relationships are maintained with community and senior citizen groups. Some of these groups are community action agencies. A few referrals may come from these contacts. No formal coordination exists with local Weatherization Assistance Program agencies, with regard to these particular programs, but Northern Illinois Gas Company does participate with Weatherization Assistance Program agencies in a conservation program for low income customers.

HAND IN HAND

UTILITY: Oklahoma Gas and Electric Company

CONTACT: Richard Banks
Senior Energy Management Consultant

or

Karey Barnes
Oklahoma Gas and Electric Company
P. O. Box 321
Oklahoma City, Oklahoma 73101
(405) 272-3580

ELIGIBILITY: Homeowners age 65 and over who are Oklahoma Gas and Electric customers and are financially or physically disadvantaged.

INCENTIVE TERMS:

Free materials and installation up to \$500 per home.

CONSERVATION MEASURES:

Caulking, weatherstripping, ceiling insulation, reglazing and repair of primary windows. Some minor repair work also may be provided.

PROGRAM HISTORY

The program was developed to reach senior citizens not affected by Oklahoma Gas and Electric Company conservation incentive programs involving high efficiency appliance purchases, peak-load reduction, etc. The company researched programs for seniors at other utilities, especially Georgia Power, and developed a similar program to suit its needs. The program began in July 1983. By April 1987, 4525 homes had been weatherized. A 1986 survey of homes receiving insulation and weatherization found a 20% average reduction in the household utility bill. The program has been a very successful community service project for the company and is likely to continue in spite of a substantial reorganization and retirement program at the utility.

PROGRAM DESIGN

The utility contracts with senior citizens (62 and over) as contractors to install weatherization materials. Contractors work in pairs, earning an hourly wage plus mileage. The utility provides materials and lists of eligible households. At the home, an energy audit is completed and measures are recommended and installed. Approximately 50 contractors are available on a part-time basis, providing an average value of \$236 of weatherization services per household.

MARKETING

Bill inserts. Bill inserts were used once or twice to announce the program.

Mass media. Some publicity was generated after the program had begun. No media campaign was mounted by the utility.

Interagency networking. Brochures were sent to social service agencies and senior citizen groups. Further efforts were made to provide detailed information to all agencies in the utility's service area. Some agencies have worked closely with the utility by providing referrals; others have not been heard from. In the past, the program has been coordinated with local Community Action Weatherization Programs which sponsored additional work in needy homes over the \$500 household limit.

Outreach and referrals. Word-of-mouth has been the most effective mode of outreach. Contractors often bring in their own referrals and often are approached by neighbors while visiting a home. The utility has not marketed the program strongly, but it remains very popular.

T.L.C.
TIGHTEN-UP LOW-COST

UTILITY: Philadelphia Electric Company

CONTACT: Mark J. Thompson
PECO
Technical Services S19-1
2301 Market Street
Philadelphia, Pennsylvania 19101
(215) 841-5594

ELIGIBILITY: Customers using PECO fuels for heating and/or hot water, who qualify for LIHEAP. Additionally, members of PE Cares, the utility's program for seniors over 60 using PECO fuels, are eligible under a sliding income scale from \$13,125 for one person to \$35,625 for a six-person household.

INCENTIVE TERMS:

Free weatherization materials and installation up to \$160.

CONSERVATION MEASURES:

Low cost anti-infiltration measures, such as caulking, weatherstripping, door sweeps, and outlet gaskets.

PROGRAM HISTORY

The T.L.C. program began in 1984. Preliminary information from the utility's RCS program indicated that large numbers of elderly and low income residents did not participate. To extend services to these groups, the utility took the basic RCS program and offered it at no cost in conjunction with community groups. To date, over 6,000 homes have been weatherized.

PROGRAM DESIGN

Community groups are contracted to provide materials and installation. Participating groups include community development corporations, community action agencies, and others already involved in weatherization program delivery. Eligible households are identified by the utility as well as the contracted group. The group schedules jobs; the type of work crew varies with each group. Groups are paid a flat fee for labor, and purchase orders for materials are negotiated with the utility.

MARKETING

Direct mail. Initially, program information was mailed to all LIHEAP recipients. A second mailing was sent to senior citizens enrolled in the utility's "PE Cares" customer assistance program, with higher income guidelines to attract more senior citizens. Lists of nonrespondents often are forwarded to a community group for a telephone follow-up.

Interagency networking and referrals. The utility works with community groups to gain legitimacy and to connect with the larger social service network. Some contracted groups are primary clearing houses for their area, with extensive referral networks in place. To publicize the T.L.C. program, utility representatives meet with staff members of other social service groups. Good referral rates have followed initial meetings, but the utility has found that periodic reinforcement contacts are necessary to maintain any response. In addition, presentations, including give-away energy kits, are made to audiences at senior centers.

Contracted groups are encouraged to make referrals to other programs for major weatherization and general home repair. Installers will try to note household characteristics and services needed while at the home in order to make appropriate referrals.

COMMUNITY CONSERVATION PROGRAM
JOINT PROGRAM WITH THE DISTRICT OF COLUMBIA
OFFICE ON AGING

UTILITY: Potomac Electric Power Company (PEPCO)

CONTACT: Duane Gautier
Manager, Conservation Department (202) 872-3589
Nancy McElreath
Consumer Affairs Department (202) 872-2785
Potomac Electric Power Company
1900 Pennsylvania Avenue NW
Washington, D. C. 20068

ELIGIBILITY: Community-based organizations serving the elderly (55 and older) in PEPCO's service area.

INCENTIVE TERMS:

Grants made to community groups for weatherization assistance.

CONSERVATION MEASURES:

Low cost and major weatherization, such as caulking, weatherstripping, insulation and window covering. Handicapped access ramps and minor repairs are also provided.

PROGRAM HISTORY

In 1984, PEPCO approached community-based groups about providing service programs for the elderly. Generic low-income weatherization assistance was already in place with the Community Conservation program. A special effort was made to target the elderly due to PEPCO's awareness of the growing number of elderly homeowners in the utility's service area.

PROGRAM DESIGN

Grants are made to community organizations who submit proposals. The most active group has recently received \$70,000, funded by PEPCO and the Washington, D.C., Office of Aging. Eligible households are identified by the Office of Aging. The organizations themselves do energy audits, write work orders, and subcontract for installation. PEPCO provides energy conservation and audit training to the organizations.

MARKETING

The program is marketed mainly through community groups. PEPCO conducts some outreach activity through the D.C. Council of Churches. Church groups and personal contacts with ministers have been extremely important mechanisms for reaching the elderly in the D.C. area.

Bill inserts and printed materials. Bill inserts are regularly used for all utility assistance programs. In addition, brochures are sent to pharmacies for distribution to Medicare clients. Posters are located in laundromats. PEPCO calendars are sent to a mailing list of senior citizen organizations and individuals compiled by the Office of Aging.

Outreach and referrals. In addition to the cooperative program with the Office of Aging, PEPCO has a Consumer Liaison program. The program is staffed by eight community activists, hired especially for their networking skills. Referrals to the program are often made to elderly customers.

SENIOR SAVE

UTILITY: Public Service Electric and Gas Company

CONTACT: Rosanne Huhn
Energy Conservation Specialist
PSE&G
Energy Conservation Center
80 Park Plaza, 22-D
P. O. Box 1258
Newark, New Jersey 07101
(201) 430-5821

ELIGIBILITY: Recipients of New Jersey Lifeline Program benefits who must be age 65 years or older and meet disability and/or low income guidelines set by the state. Eligible seniors also must be gas or electric heating customers, or living in a building with gas or electric heat.

INCENTIVE TERMS:

Free materials and installation up to \$200.

CONSERVATION MEASURES:

Twenty-two measures are available, including water heater wraps, caulking, weatherstripping, water flow restrictors, interior storm windows, attic entrance insulation, duct insulation, air conditioner covers, faucet aerators, outlet gaskets, pipe insulation (measures are prioritized approximately in this order).

PROGRAM HISTORY

Senior Save was initiated in 1985, and was developed out of the Customer Seal-Up Service Program in order to more effectively target senior citizens for participation.

PROGRAM DESIGN

The utility receives requests and verifies eligibility. Requests are forwarded to one of four contractors, each of whom is responsible for one geographic area. The contractor schedules the work. After a home energy audit, weatherization measures are installed following a prioritized list until the \$200 maximum is reached or until all needed measures are installed.

MARKETING

Direct mail. Program brochures are sent to the more than 100,000 state Lifeline enrollees in the utility's service area. A toll-free number is provided for responses. A telemarketing campaign follows the direct mailing and has been very effective in encouraging participation. In 1986, telemarketing efforts achieved a 22% response rate

Interagency networking. Weatherization workshops are conducted at senior centers, with demonstrations and starter kits provided to participants. Senior Save program information is also presented.

Beginning in 1986, a joint venture with the Essex County Retired Senior Volunteer Program provided knitted hats which are distributed to seniors at hypothermia seminars conducted by the consumer advisors. In 1987, the program has gone statewide. Literature on the Senior Save program is distributed along with the hats.

HOUSEWARMING AND SENIOR WEATHERIZATION ASSISTANCE TEAM

UTILITY: Puget Sound Power and Light

CONTACT: Linda Austin
 Conservation Coordinator
 Puget Sound Power and Light
 OBC-08N
 P.O. Box 97304
 Bellevue, Washington 98009-9734
 (206) 462-3235

ELIGIBILITY: Must meet low-income guidelines, be 65 years of age or older, owner or tenant in a single-family home, mobile home or apartment that uses electric space heating. In multifamily buildings, two-thirds of the occupants must meet eligibility criteria in order to qualify for weatherization under this program.

INCENTIVE TERMS:

100% financing for weatherization work at the homes of low-income elderly customers.

CONSERVATION MEASURES:

Insulation of ceiling, walls, floor and ducts, storm windows or insulated glass, water heater wrap, weatherstripping and caulking. In 1987 a pilot measure, which is a maintenance checkup for the heating system, was offered in one division. The pilot is directed primarily toward electric forced-air furnaces. An attempt is being made to see if heating systems are operating efficiently, or if poor maintenance has contributed to increased energy use. This pilot also is an effort to provide better service to mobile home customers, where it is often difficult to make major improvements in energy efficiency due to construction constraints. The effects of this measure are being evaluated to determine if it would be appropriate to expand its availability to the entire program area.

PROGRAM HISTORY:

A consumer panel recommendation to develop a program for low-income seniors to assist with weatherization initiated a study to determine expected results. The program was approved by the Washington Utilities and Transportation Commission in August 1984. It is an ongoing program which is slowly growing. About 7,500 households are estimated to be eligible for the program. Participation has been disappointing. Marketing techniques are being developed to try to improve participation.

PROGRAM DESIGN

When a request for services is received from an eligible customer, an auditor visits the home to do an energy check-up, make recommendations, and arrange for installation. Installations are often preformed by staff members of the Senior Weatherization

Assistance Team (SWAT). SWAT employees are Puget Power retirees, working in teams of two, who are hired to install caulking, weatherstripping and air infiltration measures. SWAT workers also make minor home repairs and provide information to customers on using energy efficiently. Because of their common age, housewarming customers and SWAT workers are able to communicate well. Puget Power has received letters of praise for SWAT workers from customers.

MARKETING

Because participation rates have been lower than desired in the Housewarming program, Puget Power has conducted focus groups with senior citizens to obtain their input concerning marketing techniques. Several new marketing approaches are being considered and implemented as is discussed below.

Mass media. Advertisements in senior newspapers and local publications have been used for a few years. Targeted radio broadcasts will begin in the Fall of 1987. Senior focus groups have recommended television as a good media to promote this program. Preliminary research into nonprime time spots indicates that this may be a very effective and, surprisingly, not too expensive promotion method for this audience.

Bill inserts and direct mail. Puget Power will soon begin a direct mail effort in one county of its service territory. Using the other counties as a control group, a study will be conducted to identify the amount of increased activity that results from the direct mail effort. If there is an increase in activity, the direct mail effort will be expanded to other parts of the service territory. Senior focus groups provided input concerning the format and content of the direct mailing material. Using large type and lots of open space is clearly important in designing printed materials. Brochures and posters have been redesigned to increase visibility.

Interagency networking. Puget program staff make an extensive effort to work closely with the social service agencies that provide services to the elderly. At the case management level, a relationship develops between the client and the counselor, or service provider, that helps facilitate participation. Personal, one-on-one involvement seems to be the key to success in obtaining participation. In 1987, the Housewarming program Income Eligibility Guidelines were modified to accommodate an exclusion for unreimbursed medical, dental and prescription drug expenses. This change has prompted contact with hospital social service staff, Senior Information and Assistance case management staff and pharmacists who serve Medicare clients and are aware of ongoing prescription drug expense situations. The medical community has been very supportive of the Puget program effort.

Outreach and referrals. Puget Power has entered into referral agreements with community action agencies and other service groups to provide qualified referrals to their program. Under these agreements, Puget will pay a \$50 fee to the agency for the referral of a qualified customer if that referral results in an energy audit. Previously, a \$15 fee was offered, which produced some referrals, but not the desired level.

PROJECT SCORE
SENIOR CITIZENS ORGANIZED TO REDUCE ENERGY WASTE

UTILITY: Savannah Electric and Power Company

CONTACT: Palmyre Sadler
Savannah Electric and Power Company
P. O. Box 968
Savannah, Georgia 31402
(912) 238-2212

ELIGIBILITY: Homeowners age 60 or older.

INCENTIVE TERMS:

Free materials and installation.

CONSERVATION MEASURES:

Electric water heater wraps, plastic interior storm windows, resetting of water heater thermostats.

PROGRAM HISTORY

Project SCORE was initiated in 1982 as a community service project addressing local needs. With reductions in federal assistance programs, the utility identified a large number of elderly living on fixed incomes who could benefit from weatherization assistance, although no income criteria is used. Through 1986, 1250 homes had been assisted.

PROGRAM DESIGN

Project SCORE is administered through Senior Citizens, Inc., a nonprofit organization. The utility funds salaries, tools, materials, and publicity. A coordinator and four senior energy technicians are employed; in addition, a utility representative provides training and energy counseling. VISTA workers have been assigned to the project in the past. The coordinator presents the program to senior citizen groups, identifies eligible households, and schedules jobs. Technicians work approximately 20 hours per week in teams of two. Three-fourths of participating households receive storm windows, and roughly one-fourth receive water heater wraps and thermostat resettings. A strong emphasis is placed on energy counseling during the home visit.

MARKETING

Bill inserts have been used regularly to publicize the program.

Mass media. Program visibility has also been provided through public service announcements, newspaper articles, and television interviews.

Interagency networking. Project SCORE is linked through Senior Citizens, Inc. to the wider network of social service agencies. As Senior Citizens, Inc. itself provides an array of services, energy technicians often make referrals for other assistance.

A consultant from the Georgia Office of Energy Resources has provided training for the technicians on climate related health problems.

SENIOR CITIZEN DISCOUNTS
and
WEATHERIZATION PROGRAMS

UTILITY: Seattle City Light

CONTACT: Caroline Yee-Joy
Seattle City Light
Room 123
1015 Third Avenue
Seattle Washington 98104
(206) 625-3800

ELIGIBILITY: Senior citizens over age 65 years, with less than 70% of the state median income.

INCENTIVE TERMS:

Senior discount rate for municipal utility services, free home weatherization and zero-interest loans up to \$3,000.

CONSERVATION MEASURES:

Attic, floor and wall insulation, low-cost anti-infiltration measures, duct and pipe insulation, and storm windows.

PROGRAM HISTORY

The program was first offered in 1981 to counteract rising power rates in the region. Through its conservation programs, the utility has been able to reduce the amount of wholesale power bought from more expensive sources. Since 1981, approximately 19,200 people have participated in the loan and grant programs; about 50% of those receiving grants were senior citizens.

PROGRAM DESIGN

Low income senior citizens can qualify for discounted rates on electricity, water, sewer, and garbage services. If the senior citizen is a homeowner with electric heat, he/she is required to have insulation installed in the home through the utility's weatherization grant program (other low-income customers can apply for weatherization as well). The program is funded by the utility and administered by the city Department of Human Resources. DHR processes applications, writes work orders, and provides final inspections. Installation is done by approved contractors.

MARKETING

Bill inserts. Newsletters, with program information, are included in bills. In addition, a brief message can be added onto the bill itself, often targeted to specific groups such as senior citizens.

Direct mail. Program information has been sent to targeted city zip codes with concentrations of elderly residents.

Mass Media. Radio and newspaper messages are regularly used. Television advertising has been used in the past, with mixed success. Cost per response is very high.

Interagency networking. Through the Department of Human Resources, the utility can be in touch with a wide array of community service groups. In addition, the program is coordinated with the Mayor's Office for Senior Citizens, a main focus for advocacy efforts and information. The utility's Community Relations Division also assists in marketing the program with presentations at senior centers, meal sites, and other group areas. Lastly, information and referrals are provided through ten community service centers set up for bill payments, program applications and other customer service functions.

SENIOR CONSUMER ENERGY PROGRAM

UTILITY: Southern California Edison Company

CONTACT: Carol Heinz-Dooley
Consumer Affairs Specialist
Southern California Edison Company
P.O. Box 800
Rosemead, California 91770
(818) 302-9141

ELIGIBILITY: Senior citizen customers of the utility.

PROGRAM HISTORY

Company research identified senior citizens as the fastest growing customer segment. Further research was done to determine the needs and concerns of senior citizens. In response, the company developed an outreach program, emphasizing personal contact and experience. The program was tested in 1985 and adopted throughout the system in 1986.

PROGRAM DESIGN AND MARKETING

Retired utility employees were rehired as Senior Advisors to conduct educational programs for senior centers, organizations and agencies. The Senior Advisor, with in-depth knowledge of the company, can serve effectively as a liaison for senior citizens with regard to billing and service problems, available assistance programs, and general advisory functions to the company management. Senior Advisors work on a part-time basis, divided between site visits and customer service offices.

Senior Advisors also contribute to the design and development of a targeted consumer information packet entitled "Power Lines for Seniors."

C.A.F.E.
CONSERVATION ASSISTANCE FOR EVERYONE

UTILITY: Southern Union Gas

CONTACT: Carol Tatum
CAFE Coordinator
Southern Union Gas
P. O. Box 1268
Austin, Texas 78767-9957
(512) 472-2121

ELIGIBILITY: Elderly (over age 60 years) homeowners using natural gas as the primary heating source, with income less than 125% of the federal poverty standard.

INCENTIVE TERMS:

Free weatherization materials and installation.

CONSERVATION MEASURES:

Weatherstripping, caulking, attic insulation, water heater wraps, water pipe insulation, water flow restrictors, duct repair, minor structural repairs. Inspections of appliances and fireplaces are also offered.

PROGRAM HISTORY

The CAFE program was initiated in November 1986, after Southern Union Gas Company negotiated with the City of Austin for a percentage of gross revenues to be spent on conservation. The program consists of various "menus" of conservation services available to residential, commercial, and industrial customers. Weatherization assistance is offered to low-income elderly residents as one part of the program. Weatherization assistance was seen as a valuable community service project and a way to supplement a similar program run by the city. The program targets 275 homes for assistance per year. The average value of assistance received is \$1600.

PROGRAM DESIGN

The CAFE Coordinator oversees the program and identifies eligible households. A contractor, Planergy, Inc., hires and trains installation crews and schedules appointments. In the home, a walk through energy audit and blower door air test is conducted to measure consumption and identify areas needing work. A team of two workers, one supervisor, and an insulation crew, install the materials. After the work is completed, an air infiltration test is performed. On the same day, a utility employee will do a safety inspection of natural gas appliances, such as heaters, water heaters, and ovens. Minor adjustments and repairs are made as necessary to ensure safe and efficient operation. Response to the safety inspections has been tremendous. An on-site inspection and visit is made by the Project Manager to ensure quality of work and customer satisfaction.

MARKETING

The entire CAFE program has been the subject of extensive publicity. In March 1987, bill inserts announced the program and the range of services available. A separate mailing of the CAFE menu was mailed to all Southern Union Gas customers. In order to keep administrative costs down, marketing support is not billed to the program.

Interagency networking. For the weatherization program, contacts with community groups have been the major marketing strategy. The coordinator maintains contact with human service agencies, including the Central East Austin Community Organization Services for the Elderly, Lutheran Social Services, and Caritas, a Catholic social service agency. Referrals are made from these groups. These referrals are especially useful because eligibility criteria already have been checked. Through a separate weatherization program for church facilities, church leaders are also informed of the elderly program and are encouraged to make referrals.

The program is coordinated with the city and county programs to verify that a household is not on another program's waiting list. In addition, in homes needing major structural repairs, referrals are made to the appropriate agencies.

Outreach. Southern Union Gas employees, including customer service representatives and service specialists, are all informed of CAFE services and encouraged to refer customers to the program. While working at a home, it is common for interested neighbors to inquire about the program to crew members whose vehicles and shirts bear the CAFE logo.

TARGETED LIFELINE CONSERVATION (TLC)

UTILITY: West Penn Power Company

CONTACT: J.P. Tambourine
800 Cabin Hill Drive
Greensburg, Pennsylvania 15601
(412) 838-6575

ELIGIBILITY: Electric heat customers with incomes less than 150% of federal poverty standards. Special outreach efforts to the elderly.

INCENTIVE TERMS:

Free materials and installation up to \$1,000 per home.

CONSERVATION MEASURES:

Ceiling, floor, duct, and wall insulation, storm windows, weatherstripping and caulking, and water heater insulation.

PROGRAM HISTORY

The T.L.C. Program was developed after a 1970s rate case required the utility to refund its customers \$500,000. The low-income weatherization program was accepted as the most effective and beneficial mechanism for distributing the refund.

PROGRAM DESIGN

The utility performs a home survey and makes recommendations for appropriate measures. A contractor can be arranged for installation or the customer can do the work. In the latter case, the utility reimburses the customer for materials or arranges for a local supplier to provide materials on credit. After a post-installation inspection, the utility reimburses the parties involved.

MARKETING

Bill inserts are sent to all electric heat customers who have not participated in past T.L.C. programs.

Direct mail. Information is sent to Low Income Home Energy Assistance Program (LIHEAP) customers and those who have had mediated bills.

Interagency Networking. Community action agencies are eligible to be contractors, but the utility has had little response. Coordination and referrals between other weatherization agencies have been infrequent. Confidentiality restrictions may be a factor discouraging referrals.

Outreach. The utility has begun involving meter readers to identify potential participants. The computer terminal used to read meters allows the reader to enter a code for T.L.C. eligibility on the customer's account. A customer service representative then follows up with a phone call to discuss the services available. This strategy appears to be effective in encouraging reluctant elderly customers to participate.

OPERATION HOUSEWARMING

UTILITY: Wheeling Electric Company

CONTACT: Mary Ann Creamer
 Wheeling Electric Company
 P. O. Box 751
 51 16th Street
 Wheeling, West Virginia 26003
 (304) 234-3023

ELIGIBILITY: Low-income and disabled homeowners aged 65 years and over.

INCENTIVE TERMS:

Free materials and installation.

CONSERVATION MEASURES:

Weatherstripping, door sweeps, and plastic window covering.

PROGRAM HISTORY

Operation Housewarming began in 1985. Previously, the company had sponsored a fuel-assistance program which provided matching funds for customer and employee donations. The utility felt that customer interest in that program was dwindling and sought a new approach. Weatherization programs offered by Columbus and Southern Ohio Electric and Puget Power were reviewed and Operation Housewarming was developed on those models. The program ran successfully during the fall of 1985 and 1986. However, it has been difficult to coordinate the program with overburdened human service agencies, and the utility is discussing a switch in project focus.

PROGRAM DESIGN

Eligible households are identified and initially contacted by social service agencies. The utility makes a follow-up call to interested households. All homes are weatherized during a weekend in the fall. Materials are installed by volunteer crews of junior high school students, teachers, and utility employees. Students, who are chosen by their teachers to participate, come from a local school with which the utility has an on-going "mentoring" relationship. One by-product of the weatherization program is the opportunity for personal relationships to develop between employees and students.

MARKETING

Due to the small scale of the program (approximately 30 homes per year are weatherized), the utility has not made any publicity efforts. Social service agencies are the main vehicles for program information and enrollment. Using referrals from agencies has kept the program to a manageable size and has been the most legitimate way to screen potential households.

Difficulties have arisen in locating senior citizens who own their homes, and in organizing referrals from participating agencies. Agency representatives have expressed interest in the utility adopting the Gatekeeper program, which might address these problems by giving utility personnel a larger role in identification and referral situations.

GOOD NEIGHBOR ENERGY PROGRAM
and
THE WISCONSIN ENERGY AND OLDER ADULT NETWORK

UTILITY: Wisconsin Electric Power Company

CONTACT: Mike Brady
Supervisor of Community Relations
Wisconsin Electric Power Company
333 Everett Street A-412
Milwaukee, Wisconsin 53201
(414) 221-3763

ELIGIBILITY: Senior citizens age 60 years and over who are personally responsible for paying their energy bills.

CONSERVATION MEASURES:

Free weatherization kits and vent locks for securing open windows in hot weather are distributed for customers to install themselves.

PROGRAM HISTORY

In 1982, the utility's Consumer Advisory Council recommended that the utility initiate cooperation between utilities and social service agencies. As a result, the Wisconsin Energy and Older Adult Network was formed. It is composed of utilities, senior citizens and community groups operating at the state-wide level.

In 1983, Wisconsin Electric began an in-house service for the elderly: Energy Services for Older Adults and Customers with Disabilities, a component of the company's Good Neighbor Energy Program.

PROGRAM DESIGN

The Network provides educational and outreach services on a statewide basis. Subcommittees plan yearly activities, including conferences, workshops, and legislative lobbying.

Energy Services provides a personal Energy Advisor for elderly customers. After enrolling in the program, the customer is interviewed by telephone. Subsequently, the Energy Advisor stays alert for billing and service problems, and often provides referrals to social service agencies.

MARKETING

Bill inserts. Information on services for the elderly and disabled are sent regularly to all utility customers. Enrollment for the Energy Advisor program was achieved through response card bill inserts.

Newsletters and printed materials. A special newsletter for older adults has been published three times a year since 1982. The newsletter, brochures and educational place-mats are distributed through senior citizen centers and agencies.

Interagency networking. Through the Energy Network, Wisconsin Electric is in contact with community groups and leaders throughout the state. The newsletter often profiles elderly activists and organizations, as well as providing publicity about special events. In addition, customer requests for installation of energy-saving equipment are coordinated with local volunteer work exchanges and chapters of the American Association of Retired Persons.

HANDS-ON WEATHERIZATION PROGRAM

UTILITY: Wisconsin Public Service Corporation

CONTACT: Mike Welch
 Wisconsin Public Service Corporation
 P. O. Box 19001
 Green Bay, Wisconsin 54307-9001
 (414) 433-1178

ELIGIBILITY: Utility customers with incomes less than 150% of the federal poverty standard.

INCENTIVE TERMS:

Free conservation equipment and installation.

CONSERVATION MEASURES:

Low-cost weatherization, such as caulking and weatherstripping; furnace and water-heater wraps; ceiling and sidewall insulation; and furnace retrofits and replacements.

PROGRAM HISTORY

The Hands-On program began in 1982, after a state mandate required Class A utilities to develop weatherization assistance programs. To date, 2700 units have been weatherized. A majority of households (1950) participated as gas customers, with 50% of program funding going towards furnace up-grading. Of the \$3.5 million spent on the program to date, \$470,000 has been provided by Solar Bank funding.

PROGRAM DESIGN

A home energy audit is completed for the eligible household. The utility will recommend any appropriate measures that provide a five-year payback. The work is contracted out by bids to approved firms working to the utility's guidelines. Inspections are completed on finished work.

MARKETING

Special efforts are made to provide senior citizens with program information. However, response from senior citizens has been disappointing. The utility has considered hiring other seniors as contractors to gain acceptance, but three-quarters of the recommended work requires professional installation.

Direct mail. Program information is sent to all recipients of fuel assistance funds.

Interagency networking. Personnel contacts and group presentations at senior centers has been the most effective strategy. In addition, the utility works with state-funded Senior Energy Aides and other state weatherization programs.

Outreach and Referrals. In addition to interagency referrals, utility auditors are completing 12,000 audits per year, and provide eligible customers with program information.

APPENDIX B
STATE AND STATE-WIDE INVOLVED PROGRAMS

CENTRAL ARIZONA SENIORS WEATHERIZATION PROGRAM
SOUTHERN ARIZONA SENIORS PROGRAM
SOUTHERN NEVADA SENIORS PROGRAM

STATE AGENCY: Arizona Energy Office

OTHER PARTICIPANT: Southwest Gas Corporation

CONTACT: Betty McColley
Arizona Energy Office
7th Floor
1700 West Washington
Phoenix, Arizona 85007
(602) 255-3303

ELIGIBILITY: Customers of Southwest Gas Corporation in owner-occupied homes, who are at least 55 years of age. Annual income of less than \$22,000 for a household of two, but above the income-eligibility level for DOE's low-income Weatherization Assistance Program.

INCENTIVE TERMS:

Materials worth up to \$25 are supplied free of charge to the homeowner by Southwest Gas. Elderly volunteers are paid a stipend of \$15 in the Phoenix and Tucson areas, and \$5 in rural areas.

CONSERVATION MEASURES:

Includes caulking, weatherstripping, gaskets behind outlet and light switch plates, water heater jackets, pipe insulation, and door sweeps.

PROGRAM HISTORY

Southwest Gas Corporation contacted the Arizona Energy Office (AEO) to find out what kind of programs the AEO offered. Southwest Gas wanted to explore a joint program for several reasons. They did not want to duplicate efforts, and they thought better results for the same money might be obtained through a joint effort. Both organizations wanted to try to do something together for the good of the community. Staff from both organizations worked together to design program brochures, presentations, training sessions, etc. Currently, program partners include the AEO, Southwest Gas, area Agencies on Aging, and the Retired Seniors Volunteer Program. The power company has provided all financial support.

The program began as a pilot in the Tucson area. The pilot targeted 600 homes, and over 600 received services. Later, the program came to the Phoenix area. Three small rural towns also have been included. In one rural area, nearly all of the eligible homes received services. Statewide, about 7500 homes have been serviced. Through 1987, Southwest Gas had provided about \$400,000 to the various Arizona Seniors Programs.

The volunteer senior energy consultants come from various groups. Volunteers have come from senior centers, the AARP, the Grey Panthers, and other senior organizations. Some volunteers responded to news releases about the program. A variety of professions are represented, including retired college professors, school teachers, housewives, and the building trades. The enthusiasm, skill, and commitment of the volunteers are important reasons for the program's success.

PROGRAM DESIGN

When a homeowner requests services, a team of two volunteers, usually a man and a woman, is sent to the home. In a one-time visit, lasting two to three hours, both a home energy check and all installations are completed by the volunteer energy consultants. There is a strong emphasis on educating customers. Conservation measures and energy habits are discussed. In addition to the energy audit and installations, homeowners receive a do-it-yourself booklet. Referrals to social service agencies and/or home repair services are made as needed.

MARKETING

Mass Media. In Phoenix and Tucson, there is a newspaper directed to seniors across the state. This newspaper has published articles and features with pictures about the program. The program's public information staff also works very closely with the radio and television community. There have been appearances on talk shows and media coverage of installations as volunteer energy consultants were actually in a home doing the work. The media have been very supportive and have given a good deal of recognition to the program. For several years, arrangements were made for the governor to declare June as Senior's Energy Savings month. This declaration generated additional media coverage.

Bill inserts and direct mail. Program request forms were printed as part of a Southwest Gas brochure and inserted in monthly utility bills that had been sorted by zip code areas. The zip code areas to be included in the mailings were selected by using census data to locate the areas with the highest concentrations of seniors. When responses from one targeted area began to decline, request form brochure mailings were started in another zip code area, etc.

As part of the June as Senior's Energy Savings month effort, letters were sent to all senior organizations, civic organizations and churches. The letters contained information about program offerings.

Interagency networking. Many organizations, including the Grey Panthers, the American Association of Retired Persons, the YWCA, the Salvation Army, and various senior centers in the cities, worked with the program. The Governor's Advisory Council on Aging and the local Area Councils on Aging provided assistance, too. The program director talked by telephone with representatives of each of these agencies, invited them to attend planning meetings, and arranged for news releases to appear in their newsletters.

Early in the program, program staff consulted the Governor's Advisory Council on Aging, with some of the council members serving as advisors in the conceptual planning efforts. Over the years, council members were kept informed of program activities so that they would not be surprised by activities in their area of the state. Similar contacts with the various local Area Agency on Aging offices were developed; in

some communities, their services became an integral part of the program delivery. Both organizations appreciate being informed, and have supported program efforts by talking about them in communities across the state and by including program representatives on the agenda of conferences they sponsor.

In Tucson, the program office was located in a senior center and the center provided the office space at no charge. In Phoenix, office space has been provided by the United Way and the YWCA. In Yuma, the Area Agency on Aging provided the office space.

Hardware stores have helped the program effort by providing discounts. Hardware stores throughout the state were contacted and asked to aid the program by offering senior citizen discounts on all energy saving items during the month of June (Senior's Energy Savings month). Discounts ranging from 10% to 25% were offered. In 1986, 70 stores participated. The manager of a hardware store in Phoenix actually delivered the materials and stocked them on the shelves for the program. Although the hardware stores did not receive tax breaks or other financial incentives, efforts were made to recognize their contributions publicly in news releases, recognition days, etc.

The Retired Seniors Volunteer Program (RSVP) writes the stipend checks for the energy consultants and provides them with liability coverage through the RSVP umbrella insurance. When the program began, an outside accounting firm provided the check writing service and insurance was purchased independently. The insurance costs were very expensive. RSVP is paid an administrative fee for the check writing service. Using RSVP's existing insurance coverage has cut costs considerably.

The senior energy consultant training includes presentations by community social service providers. The energy consultants are encouraged to provide referrals to other agencies as needed. About one-third of the homes they visit do need referrals to other social services.

ENERGY EFFICIENCY PROJECT FOR SENIOR HOUSING

STATE AGENCY: California Energy Extension Service

OTHER PARTICIPANTS:

California Association of Homes for the Aging
Pacific Gas and Electric Company
Environmental Intern Program

CONTACT: John Cook
Energy Management Services
3200 Adeline
Berkeley, California 94703
(415)451-0271

ELIGIBILITY: Nonprofit Senior Housing Facilities belonging to California Association of Homes for the Aging.

INCENTIVE TERMS:

Data base describing energy use and related characteristics for all participating senior housing facilities and subsidized energy conservation measures for three demonstration buildings.

CONSERVATION MEASURES:

Ceiling insulation, weatherstripping of doors and windows, caulking, water heater blankets, pipe insulation, low-flow showerheads, and fluorescent lights for demonstration buildings.

PROGRAM HISTORY:

This project began in 1984, with a grant from the California Energy Extension Service to Energy Management Services (EMS), a small consulting firm located in Oakland. EMS, in turn, worked closely with the California Association of Homes for the Aging (CAHA), which represents almost 250 nonprofit senior housing facilities throughout the state. Assistance was also provided by Pacific Gas and Electric Company, a number of other California utilities, and the privately-funded Environmental Intern Program.

At the time this project was developed, senior citizens living in group homes had not received energy conservation assistance commensurate with their needs. The Energy Efficiency Project for Senior Housing was an attempt to serve this segment of the population and to follow up on earlier CEES efforts aimed at residents of rental housing. Since the expiration of the CEES grant, the data base has not been updated.

PROGRAM DESIGN:

This project had two major components: (1) an energy data base describing senior housing facilities throughout California and (2) a demonstration of energy conservation

measures at three select sites. A conservation guidebook describing possible low-cost and no-cost measures and projected savings also was sent to all home administrators.

To elicit information for the data base, questionnaires were sent to all CAHA members asking about facility type and size, number of residents, energy consumption, conservation measures previously installed, and related subjects. Permission was also obtained to gain access to the respondents' past energy bills. Information was received from 125 facilities and entered using the Lotus 1-2-3 software. If the data base were being compiled today, EMS staff have indicated that modern energy accounting software probably would be used.

Upon completion of the data base, the most important results were sent to all questionnaire respondents, allowing each to compare their energy consumption with that of all other facilities. In addition, information from the data base was presented at a statewide CAHA conference. Finally, the complete data base was sent to CAHA so that they could maintain and update it, if desired.

The energy conservation demonstration performed as part of this project involved selecting three housing facilities in the Oakland area and installing a broad range of energy-saving measures. The three buildings were selected based on their potential for energy savings and the interest and abilities of their on-site managers. The specific measures installed were chosen as a result of thorough energy audits. Material purchases were financed by PG&E's Zero Interest Loan Program. All labor, except the installation of ceiling insulation, was provided by students and building maintenance people trained by EMS.

While the three demonstration sites were being weatherized, workshops were held for maintenance staff and residents to increase their awareness of energy-saving opportunities. After the buildings had been weatherized, energy savings were identified by examining pre- and post-weatherization utility bills. The results of the demonstration weatherizations were distributed to CAHA members to illustrate the benefits of energy management.

MARKETING:

To induce individual housing facilities to contribute information for the data base, a cover letter from CAHA headquarters went out to all Association members, along with the questionnaire. Major incentives for returning the questionnaire were: (1) to get access to a potentially helpful source of energy-use data, and (2) to help fellow housing facilities and the Association as a whole. Since participation in the demonstration project had obvious rewards in terms of energy and cost savings, no separate marketing effort was required for that component of the Energy Efficiency Project for Senior Housing.

"WE CARE" PROGRAM

STATE AGENCY: California Energy Extension Service

OTHER PARTICIPANT: City of Riverside, California

CONTACT: Scott Terrell
Energy Services Specialist
City of Riverside
3900 Main Street
Riverside, California 92522
(714) 782-5816

ELIGIBILITY: Senior citizens (55 years of age and older), no income limits

INCENTIVE TERMS:

Free home energy audits and installation of low cost weatherization measures

CONSERVATION MEASURES:

Water heater insulation blankets, low-flow shower heads, weather-stripping for doors and windows.

PROGRAM HISTORY

The "We Care" Program was begun in 1983 as a pilot program, using a grant from the California Energy Extension Service. The program has three primary objectives: to provide energy education to elderly residents, to install free low-cost energy conservation measures for this same target group, and to provide employment opportunities for senior citizens. The pilot program was targeted at two local mobile home parks. It was so successful that, in 1984, it was taken over by the City of Riverside Public Utilities and expanded to serve all seniors throughout the city. Despite its expansion, the "We Care" program still pays special attention to mobile home dwellers.

PROGRAM DESIGN

"We Care" is basically a low-cost program, spending an average of \$26 per home weatherized, and costing the city a total of approximately \$40,000 annually. It has two major components: education and weatherization.

During the pilot phase, energy education was accomplished by holding energy game shows at places where senior citizens congregate, such as senior nutrition centers and selected city parks. The game shows, which were patterned after TV game shows, lasted approximately one hour each, and involved participants in answering energy-related questions. At these events, people were also signed up for energy audits and the installation of low-cost weatherization measures.

The energy audits themselves also serve an educational function. A comprehensive set of energy conservation measures and materials is explained to occupants. Energy

consumption by household appliances and new energy-saving habits are among the items highlighted.

Following an energy audit, appropriate energy conservation measures are installed as needed. The measures installed were chosen because of their low cost and potential high effectiveness in saving energy.

To most effectively reach the target audience, all audits and installation of weatherization measures are performed by senior citizens recruited through the city personnel department. Currently, the city employs two auditors and two installers.

MARKETING

A variety of marketing techniques have been used over the years to solicit clients for the "We Care" audits and low-cost weatherizations. In the early days of the project, it was considered important to establish credibility through a variety of "hands-on" recruitment techniques. In addition to the energy game shows described above, clients were recruited by contacting people directly at senior nutrition sites and by presenting information about the program at mobile home park functions (like potlucks and pancake breakfasts). Today, the program is marketed primarily through the use of bill stuffers (including a mail-back registration form) sent out by the city utility, and through advertisements in the utility's quarterly newsletter. Because of its long and successful history, the program also reaches potential clients through word-of-mouth contacts by satisfied customers.

LIMITED INCOME ENERGY EDUCATION PROGRAM

STATE AGENCY: Georgia Office of Energy Resources

OTHER PARTICIPANT: None

CONTACT: Elizabeth Sparrow Robertson
 Georgia Office of Energy Resources
 270 Washington Street SW Suite 615
 Atlanta, Georgia 30334
 (404) 656-5176

ELIGIBILITY: Low-income residents in general, although no income criteria is used.

PROGRAM HISTORY

The Limited Income Energy Education Program (LIEEP) began in January 1980. LIEEP was designed as a mechanism for reaching the vast majority of senior citizens and other low-income residents not responding to conservation information that is disseminated by mass media, mailings, and meetings. Early efforts at individual and small group counseling relied on the services of volunteers and other social service professionals. Full-time energy counselors have since been hired with oil overcharge funds. LIEEP currently has 26 counselors making about 1000 home visits per month.

PROGRAM DESIGN

Energy counselors are trained by the University of Georgia Center for Continuing Education. Counselors operate out of local social service agency offices, in most cases the same agencies which manage the Weatherization Assistance Program. The emphasis is on home visits and one-on-one counseling. Small group presentations are also made. Information and guidance is available concerning energy conservation, comfort, safety, and personal care for climate-related stress.

MARKETING

As the program was designed to reach a nonparticipating segment, more intensive outreach strategies were used. During the 1980 pilot study, three outreach methods (visits to group meal sites, independent home visits, and home visits with another service provider) were tested. Independent home visits were the most successful and expensive method; tag-along visits with other providers have been used most efficiently from 1981-86. For example, counselors will ride along during deliveries of the Meals-on-Wheels program, introduce themselves, and schedule a second visit.

Although mass media is not used often, one rural counselor uses her regular radio program to broadcast information and gain name recognition and acceptance. Several have contributed newspaper columns, and two have given interviews and appeared on programs on local television.

Interagency referrals and networking. Both aspects have been important to the program. Lists of previous recipients of weatherization assistance are used often for contacting households. Senior centers are both a source of referrals and a site for group counseling workshops. Columns and notices about the program appear in newsletters of social service and elderly organizations.

HANDS-ON ENERGY CONSERVATION WORKSHOPS

STATE AGENCY: Indiana Department of Commerce,
Division of Energy Policy

OTHER PARTICIPANT: None

CONTACT: Dennis Harris
Indiana Department of Commerce
Division of Energy Policy
Indiana Commerce Center
Suite 700
1 North Capital Street
Indianapolis, Indiana 46204-2288
(317) 232-8978

PROGRAM HISTORY

Hands-On Conservation Workshops were initiated in 1985 to provide energy related information to senior citizens and fixed income residents. The workshops grew out of an earlier program offering conservation information to churches for building management. Program funding derives from DOE appropriations and a 20% state match.

PROGRAM DESIGN

The workshops highlight low cost/no cost conservation practices with demonstrations on installation methods. A slide show and actual weatherization materials are used to reinforce demonstrations. Although program planners wanted to provide giveaway weatherization kits to participants, they also wanted to avoid duplication of other programs offering free materials.

The program is offered to both the staff/management of aging agencies and to the public. Initially, presentations were made to personnel contacted through 14 local offices of the Indiana Department of Aging and Community Service. Attendees are encouraged to set up groups of senior citizens for further presentations. Workshops are also scheduled in cooperation with local AARP chapters and aging Advisory Boards. Following a public presentation, evaluation forms are distributed to the audience for immediate feedback on the program's effectiveness.

OUTREACH AND INTERAGENCY NETWORKING

In addition to groups mentioned above, the program has worked with the Governor's Aging Commission. The resources of the National Consortium on Energy and Aging and the Minnesota State Energy Office have been helpful in program planning. Other outreach strategies being planned include a direct mailing of program information to the state's aging network, and an information/demonstration booth to be used at state and county fairs.

LOUISIANA ASSOCIATION OF COUNCILS ON AGING ENERGY FUND

STATE AGENCY: Louisiana Association of Councils on Aging

OTHER PARTICIPANTS:

Louisiana Power and Light
 New Orleans Public Service Inc.
 Central Louisiana Electric Company
 Louisiana Gas Company

CONTACTS: Bobby Cooper
 Louisiana Association of Councils on Aging
 P. O. Box 1248
 Natchitoches, Louisiana 71457
 (318) 352-1556

ELIGIBILITY: Senior citizens and handicapped individuals in parishes served by the utilities.

INCENTIVE TERMS:

Payments are made to defray energy-related expenses.

PROGRAM HISTORY

In 1982, there was an initial meeting of state officials, utility representatives, and others interested in utility assistance programs for the elderly. The utilities were eager to develop community service projects, and wanted to avoid any program duplication. The State Office of Elderly Affairs provided organizational assistance.

PROGRAM DESIGN

A fund is maintained by the Association of Councils on Aging, a quasi-state agency, for each utility company program. Initial contribution ranged from \$30,000 to \$300,000 per utility. In addition, utility employees and customers donate money to the fund, for a total of approximately \$2 million to date. The fund is administered by the Association. Funds are disbursed to the parish-level Councils on Aging, prorated on the basis of the number of each utility's customers in each parish.

The local Council on Aging has tremendous flexibility in providing assistance. The Council adheres to the various utility company program guidelines, limits amounts received, and approves an individual's purchases. Payments of up to \$200 are made and may be used for bill payments, heating equipment, and weatherization. In emergency situations, funds may be used for nonenergy-related expenses. As a security measure, all checks are made payable to two parties, for example a fan merchant and the elderly customer.

MARKETING

Publicity for the program is coordinated by the local Council. The utilities originally took a back seat so as not to appear too self-interested. More recently, the communications resources of the utilities have been put to use in effective ways.

Bill inserts. Bill inserts and donation forms are regularly mailed out to customers.

Mass media. The corporate resources of the utilities have been used to produce a sophisticated media campaign for the program. Radio and television shows are a frequent forum for discussions, with senior citizen activists and utility representatives involved in the program. News releases and other materials are always coordinated by the local Council.

Interagency networking. In addition to the unique public/private structure of the program, assistance efforts are coordinated with Community Action Programs to help prevent redundant efforts. Use of funds from the program are more flexible, and can be used to fill in any gaps resulting from more bureaucratic program procedures.

A program guide of utility-sponsored programs was developed for distribution to community officials, organizations, and customers. However, the Councils are well established as the focus for elderly assistance in the community, and word-of-mouth contributes to the program's success.

LIMITED RESOURCES RESIDENTIAL PROGRAM

STATE AGENCY: Louisiana Department of Natural Resources, Energy Division

OTHER PARTICIPANT: None

CONTACT: Judy Wright
Louisiana Department of Natural Resources
Energy Division
P. O. Box 44156
Baton Rouge, Louisiana 70804

PROGRAM DESIGN

The Limited Resources Residential Program provides conservation information to low income, elderly, and disadvantaged groups. The program has operated since 1980. The State Energy Division develops appropriate seminars on low cost/no cost weatherization techniques and the use of alternative and renewable energy sources. Seminars are presented by staff members of eight regional offices of the Louisiana Association of Planning and Development Districts. These regional offices maintain contacts with other governmental offices and community organizations on the parish and local level, and presentations are scheduled through this interagency network. Approximately 200 presentations are made a year at senior centers, meal sites, churches, trade schools, and other places. The program staff can provide referrals to other social service providers, and has assisted in the development of a statewide directory of services for the elderly.

COMMUNITY-BASED CONSERVATION PROGRAM

STATE AGENCY: Minnesota Department of Public Service/Energy Division

OTHER PARTICIPANT: Peoples Natural Gas

CONTACT: Arlen Restad or Art Barr
Peoples Natural Gas
Box 21-386
Egan, Minnesota 55121
(612) 452-0890

ELIGIBILITY: Senior citizen and low-income customers using gas as their primary heating source. Specific age and income criteria were not set, in order to avoid any public perceptions of a "welfare stigma."

INCENTIVE TERMS:

Free materials and installation.

CONSERVATION MEASURES:

Low-cost air infiltration measures, such as caulking, weatherstripping and outlet covers. Additional materials, such as door sweeps and foundation insulation, may also be provided.

PROGRAM HISTORY

The program began in 1984, after a Minnesota law was passed requiring the larger utilities to implement locally-based conservation programs. The utilities' programs are combined at the local level with grants from the State Energy Division. State funds cover administrative costs, and the utility contributions are reimbursements for labor and a pre-packaged kit of materials. In 1987, the state grants were limited to \$15,000. Oil overcharge funds will increase funding levels to \$45,000. Peoples Natural Gas currently participates in programs in five communities, with two other locations under consideration. Currently 50-200 households receive assistance in each locality.

PROGRAM DESIGN

Each community may develop a unique program. Typically, a local coordinator is hired with state funding. Two senior citizens are hired as installers in each community. Eligible households are identified by the coordinator through social service agencies and community groups. In the homes, the senior workers install weatherization kits and try to emphasize conservation education and lifestyle changes to encourage the household's involvement in energy conservation.

MARKETING

Mass media. News releases and public service announcements are made through the local coordinator. Articles describing the program are featured in senior citizen publications. Radio and television spots have been used on occasion. State grant money is used for any promotional activity.

Networking and outreach. The coordinator markets the program through interagency contacts with senior citizen groups and their staff. Presentations are made to churches and at congregate dining sites.

As in similar programs, word-of-mouth is a most effective and reliable strategy. After an initial round of announcements, the personal networks of participating senior citizens account for much of the program's success.

Bill inserts. These were used infrequently and were regarded as an inefficient means of disseminating program information.

ENERGY CONSERVATION BANK
GRANT PROGRAM

STATE AGENCY New York State Energy Office

OTHER PARTICIPANTS:

Brooklyn Union Gas Company
Central Hudson Gas and Electric Corporation
Consolidated Edison Company of New York
Long Island Lighting Company
National Fuel Gas Distribution Corporation
New York State Electric and Gas Corporation
Niagara Mohawk Power Corporation
Orange and Rockland Utilities, Inc.
Rochester Gas and Electric Corporation

CONTACT: Shirley Brand
Manager, Energy Conservation Bank
New York State Energy Office
2 Empire State Plaza
Albany, New York 12223
(518) 473-1737

ELIGIBILITY: All people who own or rent a one-to-four family home and qualify for HEAP benefits. Priority consideration is given to senior citizens.

INCENTIVE TERMS: Grants of up to \$2500 per unit for the installation of cost-effective energy conservation improvements.

CONSERVATION MEASURES:

Replacement furnaces and boilers, burners, clock-thermostats, insulation, storm windows and doors, weatherstripping and caulking, and energy-related home repairs.

PROGRAM HISTORY

This grant program was established by the State Energy Office (SEO), which incorporated it into the State's Solar Energy and Energy Conservation Bank (ECB) in late 1983. By matching Solar Bank funds awarded to the state by the U.S. Department of Housing and Urban Development with oil overcharge funds received by the state, it was possible for the ECB to offer 100 percent to HEAP-eligible households.

Initially the program was restricted to senior citizens and more than 2,400 elderly households were assisted. In 1986, the State Legislature appropriated \$7 million in Exxon restitutionary funds to continue the grant program and to expand it to include all HEAP-eligible households residing in one to four family buildings. Elderly households still receive top priority. The grant program has been operated by the SEO as a weatherization component of the state's HEAP plan.

PROGRAM DESIGN

The program was designed to take advantage of an existing state-mandated residential energy audit and loan program, operated by the state's nine major investor-owned utility companies. The on-site energy audits are free, and are used to identify energy conservation measures eligible for ECB funding. The utilities are a voluntary and integral part of the application and grant award process.

Potential applicants are identified by local offices for the aging and departments of social services who refer them to the program. Persons referred to the program are provided with free home energy audits by their utility. The audits identify measures which are applicable and which meet a seven-year simple payback requirement. Applicants secure estimates from local contractors who are included on their utility's list of contractors who are eligible to participate in the state-mandated audit and loan program.

All applications are received and processed by the utilities and then submitted to the State Energy Office for review and approval. A two-party check, made out to the assisted household and the contractor, is issued after the grant recipient and the contractor have signed a completion certificate which certifies that the approved work has been satisfactorily completed.

At least ten percent of the ECB-assisted households are inspected by the ECB utilities in order to verify that the work was completed and that the measures were installed in compliance with program standards and requirements. No administrative funds are provided to the utilities or the local agencies.

MARKETING

General. Since the funds available for this grant program have always been very limited relative to the size of the eligible audience, it has never been considered necessary or advisable to engage in a major marketing effort.

Referrals by local social services agencies have been sufficient to absorb the available funds, but the infusion of \$7 million in Exxon funds into the program has permitted a more active outreach effort.

State Energy Office. The SEO develops program materials and has distributed widely a fact sheet describing the program. The fact sheet has been distributed in quantity to the participating utilities, local offices for the aging, local departments of social services, state legislators, community organizations and senior citizen organizations.

Press releases and public service announcements are being used in areas of the state where program participation appears to be inordinately low. The SEO also operates a toll-free phone service, which provides information about SEO programs and services to thousands of callers each year.

Aging Agencies. The SEO and the State Office for Aging work together closely to train and involve local offices for the aging in the grant program. The program has relied heavily on referrals from these agencies, as they are acquainted with a majority of the eligible elderly and are in a position to identify and assist those most in need.

Utilities. Each participating utility includes the program in its bill inserts and other publications, includes program materials in its energy audit packets, and uses information booths, displays, and the involvement of customer service representatives to inform customers about the program.

SENIORS HELPING SENIORS

STATE AGENCY: North Dakota Office of Intergovernmental Assistance

OTHER PARTICIPANT: None

CONTACT: Sherry Herman
Office of Intergovernmental Assistance
State Capitol, 14th Floor
Bismarck, North Dakota 58505
(701) 224-2094 or 2687

PROGRAM: Outreach and education on energy conservation provided to senior citizen community groups by senior citizens hired as energy consultants.

PROGRAM HISTORY

Begun in 1985 as a pilot program in one area, the program currently is working in three communities. The program was initiated by the Office of Intergovernmental Assistance and Aging Services of North Dakota to respond to an intense perceived need for basic information among older adults. During 1986-87, response to the program was disappointing. Scheduling and organizational problems, plus a very mild winter, combined to produce little interest among community groups to arrange presentations. For 1987-88, an intensive marketing effort is planned, with consultants already hired and trained.

MARKETING

Senior energy consultants have begun to market the program to senior centers and other groups. Press releases and direct mail announcements have been used. Phone calls and personal visits to eligible groups appear to be very effective.

SENIOR ENERGY AIDE PROGRAM

STATE AGENCY: Wisconsin Bureau of Aging

OTHER PARTICIPANT: Wisconsin Power and Light Company

CONTACT: Glenna Ewing
Consumer Affairs Coordinator
Wisconsin Power and Light
P. O. Box 192
Madison, Wisconsin 53701
(608) 252-3238

ELIGIBILITY: Senior citizens age 60 years and over.

PROGRAM HISTORY

Beginning in 1982, a portion of the state's Low Income Home Energy Assistance Program funds was directed to the State Bureau of Aging for outreach activities aimed at elderly and homebound residents. With those funds, senior citizens were hired by county social service agencies on a seasonal and part-time basis. Currently, about 80 Senior Energy Aides are employed at peak periods. The 32 counties in the Wisconsin Power and Light service area all have active Senior Energy Aides.

PROGRAM DESIGN

In participating counties, a Senior Energy Aide is based in the county Office of Aging or other social service department. Wisconsin Power and Light provides training and materials for the aides. The aides make home visits and group presentations on energy conservation and awareness. Residents are reached mainly through informal networks and agency referrals. The program is available to all residents, but is especially targeted to senior citizens.

More than half of Senior Energy Aides are women. A strong rapport can develop between aides and their audience, especially with elderly women who may be inspired to make energy-related changes to their homes and lifestyles.

Booklets on energy awareness are distributed by aides, along with clips and pens to highlight sections on home repairs or conservation measures with which relatives might assist.

MARKETING

Mass media. Office of Aging newsletters and energy columns regularly carry information on the program.

Interagency networking and referrals. The bulk of program marketing is accomplished through networks of social service offices and community groups. In addition, Energy Aides make referrals to the relevant community organization for residents requesting weatherization services.

APPENDIX C

EXAMPLES OF CUSTOMER SERVICE PROGRAMS FOR THE ELDERLY
THAT DO NOT OFFER DIRECT WEATHERIZATION SERVICES

SPECIAL BILLING ARRANGEMENTS

Budget Billing Plans

Budget billing plans are designed to help households manage their energy expenses by adjusting energy bills so that they will be the same amount each month. Spreading energy costs evenly over the year helps households to plan and maintain a budget that can cover energy expenses. For eleven months, charges will be based on an estimate of annual costs. Every twelfth month is an adjustment month when the customer is billed (or credited) for any difference between the amount paid and the actual energy costs.

Third-Party Notification

Customers can request that a third party be notified if utility service may be disconnected. With this confidential service, someone the customer knows and trusts can help make payment arrangements. The "third party" may be a friend, relative, member of the clergy, or staff person at a government or social service agency. This person can help the elderly person understand the bill and disconnection notice, and help take action to prevent disconnection. The third party is not obligated to pay the bill.

Deferred Payment Agreements

If a customer has been unable to pay bills in full and on time, arrangements can be made to pay past due bills in installments the customer can afford. Arrangements also can be made to avoid late charges if Social Security or pension checks come after billing dates. An agreement is made that the bill will be paid without late penalties after the Social Security or pension check is received.

INFORMATION SERVICES

Energy Newspapers and Newsletters

A number of utilities, including Southern California Edison, Northeast Utilities, Wisconsin Electric Power, Wisconsin Natural Gas, Florida Power and Light and Florida Power Corporation, publish special newspapers or newsletters for elderly customers. Two examples of Southern California Edison's Power Lines for Seniors are shown in Appendix D. This publication includes information on energy usage, energy savings, personal health and safety, emergency preparedness, third-party notification, budget billing and payment assistance. The materials in Power Lines for Seniors were designed with direct input from senior customers and senior advisors (see below under Energy Advisors heading). Special design and formatting techniques were incorporated to appeal to seniors. Bold type with serifs and sharply contrasting inks on white paper were used to ensure readability. Graphics were used instead of photos so the materials would not have ethnic limitations or become quickly dated.

Directories

Several utilities compile directories of community organizations and social service agencies in their utility service areas to help seniors find the services they need. One

example, the Northeast Utilities' publication "Programs that Help People," is approximately 78 pages long and is used extensively by human services staff in Connecticut and Western Massachusetts.

Energy Advisors

At Wisconsin Electric and Wisconsin Natural Gas, an elderly customer, or someone acting on their behalf, may request an energy advisor. An energy advisor is a personal contact at the utility company who will serve as a single source of information for any energy-related concerns. The advisor can answer questions about bills or energy use and is aware of all utility services plus the range of available services offered by community organizations or social service agencies.

At Southern California Edison, retired Edison employees are rehired part-time to conduct educational programs for senior centers, organizations and agencies. Talking personally with seniors at locations where they meet regularly, enables the Senior Advisors to easily contact seniors and to work in a cooperative partnership with existing senior agencies. Liaisons are established with the State Department of Aging and the Local Area Agencies on Aging. This program began as a pilot in one division in 1985. It operated so successfully on a minimum budget that system-wide implementation was approved for 1986.

Hypothermia Education and Related Assistance

Many utilities distribute information about the dangers of hypothermia in booklets, newsletters, brochures, etc. (see Appendix D for a few examples). Energy advisors, speakers and workshops often deliver information about hypothermia, too.

Two innovative programs dealing with hypothermia are Public Service Electric and Gas Company's (PSE&G) "Warm up to Hats" program, and Northeast Utilities' (NU) "Your Friend the Hat" program. In both of these programs, volunteers knit hats which are distributed free of charge. Warm up to Hats is a joint venture between PSE&G and the state-wide Retired Senior Volunteer Program (RSVP). PSE&G provides the material, and RSVP volunteers knit the hats for elderly seniors. The hats, which act as a preventive measure against hypothermia, are distributed to needy seniors during hypothermia seminars conducted by PSE&G Consumer Advisors. A Warm up to Hats kit includes brochures promoting the Senior Save program (see description in Appendix A), facts on hypothermia, a brochure describing the RSVP, and a knitted hat. Senior citizens groups interested in attending educational seminars on hypothermia may contact PSE&G staff to make arrangements. In the NU program, the hats are distributed to low-income children who participate in educational activities with senior volunteers. Workshops, featuring a slide presentation and video, are given for children at Headstart and day-care centers. Workshops also are given at senior centers in the NU program.

APPENDIX D

EXAMPLES OF MARKETING MATERIALS
(e.g. BILL INSERTS, NEWSPAPER ADS, ETC.)

APPENDIX D

This appendix contains photocopied examples of marketing materials of several types, which are presented in the following order: bill inserts, direct mail pieces, newspaper advertisements, senior newsletters, brochures and fact sheets, handbooks and directories. Permission to reproduce the materials was obtained from all the utilities that contributed examples.

BILL INSERTS

NEWS LINE

ENERGY USERS BULLETIN

January/February 1987

Don't let a weather-related outage catch you by surprise this winter.

You can reduce any inconvenience during an outage by planning ahead and preparing an Outage Kit. Some items you should include in the kit are:

- several books of matches
- candles
- flashlight
- battery powered radio
- extra batteries
- manual can opener
- wind-up clock

You also might want to be sure you have paper plates, plastic utensils, fuel for camp stoves, charcoal, firewood and kindling, and extra blankets.

Be sure to write down the repair and construction listing of your local Puget Power office and keep it where it is easy to find.

In case the outage is a prolonged one, be aware of the systems in your home that rely on electric power. Keep

doors, windows and draperies closed to retain heat in your home. Keep refrigerator and freezer doors closed. Opening them periodically to check condition of contents only speeds up defrosting. Conserve water, since electric pumps from wells or pumping stations may also be out of power.

If you rely on life-sustaining equipment, have it registered by calling Puget Power's Customer Service office. You should also purchase a small generator or know where to rent one.

When your power is out, be sure to let Puget Power know by calling the repair and construction number so we can dispatch a service crew to your area as soon as possible.

These and other suggestions for being prepared during the blustery months ahead are available in a Puget Power brochure entitled *Be Prepared if the Lights Go Out*.

65 PLUS FREE WEATHERIZATION

Staying healthy and comfortable is important to everyone. In later years, that health and comfort

often depend on keeping warm by setting the thermostat higher and using more heating energy.

Puget Power understands the energy needs of seniors. To help those on a low income, a special Housewarming Program has been developed that can provide weatherization services at no cost. The program is available to customers who



1 use electric heat as their primary source of space heating and the electric

heat was installed prior to Jan 6, 1982.

2 are 65 years of age or older.

3 live in a house, mobile home or apartment, rented or owned.

4 have a monthly income of \$558 for a one-person household, or \$754 for a two-person household. Customers who qualify can receive insulation, storm windows and weatherstripping, with Puget Power covering 100 percent of the costs. The costs are paid with a grant. It is not a loan and does not have to be paid back.



For information on how you can have your home weatherized to be warmer at less cost this winter and from now on, call the toll free number below or contact your Puget Power local office.

1-800-562-1482

A CENTURY OF SERVICE

Puget Power has come a long way since its humble beginnings about 100 years ago when ancestor companies began providing electric power to the Pacific Northwest. This year Puget Power will take a look back as it celebrates a century of service.

In the early days the electric utility industry was made up of many tiny, inefficient companies, each serving its own small circle of customers. These original companies eventually joined in 1912 to form Puget Sound Traction, Light and Power Company, the predecessor of Puget

Sound Power & Light Company.

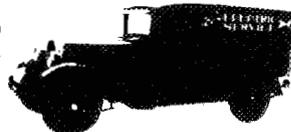
The company has grown over the years to keep pace with the increasing energy demands of the region.



Thomas A. Edison

To celebrate a century of service by Puget Power and its parent companies, several special events are being planned and an editorial staff is busy at work on a definitive company history book, which will be published later this year.

Be watching for more information about the celebration in the future.



Help is there for those in need

There are a variety of programs to help customers who may be having difficulty paying electric bills and are living on a low income. Programs also are available to help customers budget their payments. If you need assistance and think you might qualify for one of these programs or would just like more information, call your Puget Power local office so we can help.

Energy Assistance Program

Regardless of what type of heat you have --- electric, natural gas, wood or oil --- you may be eligible for help with your winter heating bill under a federal assistance program.

The Energy Assistance Program (EAP) helps families having problems paying their winter heating bills.

The Energy Crisis Intervention Program (ECIP) provides aid to those facing the possibility of having no heat.

Eligibility for federal assistance is based on income. For example, a two person family with an average monthly income of \$754 or less would be eligible.

To learn more about federal energy assistance, contact your local Community Action Agency (CAA). Do not call these agencies for information about your Puget Power bill or service.

Energy Fund

Administered by the Salvation Army, Energy Fund is supported by Puget Power customers, employees and stockholders to help their neighbors in extreme financial need. Funds are distributed beginning in mid-January.

For information about Energy Fund, call your local Puget Power office.

Winter Moratorium

A winter moratorium payment plan is offered to qualified low-income customers. The moratorium does not reduce your responsibility for payment of your electric bill, but it does prevent disconnection of your heat during the winter months.

Budget Payment Plan

An alternate to the moratorium is the Budget Payment Plan. This plan provides fixed monthly billings and spreads the cost of annual energy usage evenly throughout the year. This program is available to all residential customers.

Call your Puget Power local office for information about the Budget Payment Plan.



TROPICAL WATER FROM \$4.50 A MONTH



Your water heater is one of the largest users of electricity in your home. Puget Power can help you reduce the amount of electricity it uses --- and save you money in the process --- through the water heater rental program.

Puget Power will replace your conventional water heater with a super-insulated water heater. A super-insulated water heater saves you hundreds of kilowatt hours every year.

You can rent a super-insulated tank from Puget Power for a low monthly charge of only \$4.25 to \$5.75 a month, depending on the size of the tank. The company will install it and provide full maintenance --- absolutely free --- for as long as you rent the tank. For additional information call: 1-800-421-RENT, toll free, 24 hours a day.

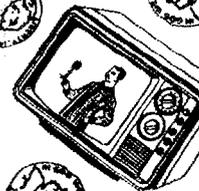
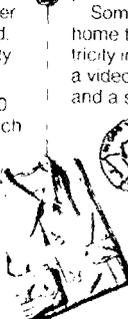
A nickel goes a long way

Ever wonder if you're getting your money's worth? You'll be surprised to know what you get for five cents worth of electricity. For five cents worth of electricity you get three minutes in a shower with a low-flow shower head. Five cents worth of electricity will operate:

- a 100 watt light bulb for 10 hours (for example, a porch light burning all night)
- a refrigerator for 8 hours
- an iron for 1 hour
- a clothes dryer for 10 minutes
- a radio for 20 hours
- a stereo for 9 hours
- a solid state color television for 5 hours

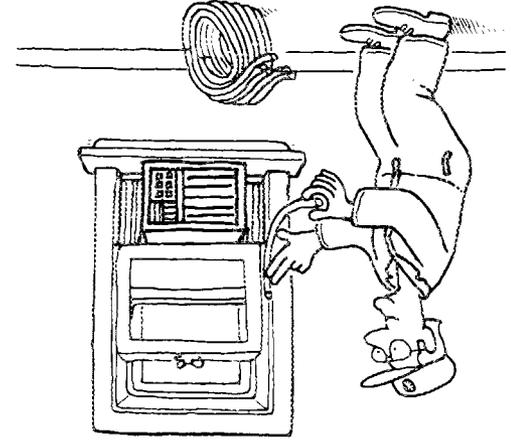
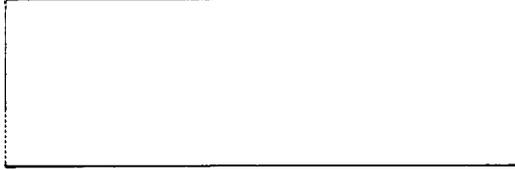
Remember that for an electrically heated home, the combined water heating and space heating make up about 75 percent of your winter power bill.

Some appliances in your home that use the least electricity include an electric mixer, a video recorder, a disposal and a sewing machine.



DIRECT MAIL

**FREE \$200
Energy-Saving
Offer**



80 Park Plaza, 221D
Newark, NJ 07101
SENIORSAVE PROGRAM



BUICK RATE
U.S. POSTAGE
PAID
NEWARK, NJ
Permit No. 1578

**All it takes is one phone call
to save energy dollars and be
comfortable in your home all
year long.**



Take advantage of a \$200 Energy-Saving offer **FREE OF CHARGE** from PSE&G. Now is the time to protect your home or apartment against hot summer days and chilly winter nights. All you have to do is say "Yes" for up to \$200 worth of free weatherization services.

has contractors waiting to seal up your home or apartment at no cost to you. As part of our Senior\$ave program, a PSE&G contractor will install caulking and weatherstripping for windows and doors, door sweeps, plastic storm windows (for winter) and a water heater wrap. These free weatherization measures will make your home more comfortable all year long. For those of you who already took advantage of the free Seal-Up services, PSE&G extends a hearty thank you.



If you haven't called in PSE&G for your free Senior\$ave Seal-Up services worth up to \$200, say "Yes, I want to Seal-Up and Save" when the PSE&G contractor calls you.

Or call PSE&G's toll-free number today!

Monday through Friday 9 a.m. to 5 p.m.



NEWSPAPER ADS



Free Home Weatherization for Seniors

No cost home weatherization for Puget Power customers who:

- have electric heat.
- are 65 or older.
- live in a house, mobile home, or apartment, whether rented or owned.
- meet specific income guidelines.

For details, call toll free 1-800-562-1482 or mail coupon.

**PUGET
POWER**

Name _____

Address _____

City _____ State _____

Zip _____ Phone _____

Mail to:

Puget Power, Housewarming Program, OBC-08N
P.O. Box 97034, Bellevue, WA 98009-9734



Lifeline Customers... Free weatherization services are yours for the asking.

Reduce energy waste in your home or apartment... with PSE&G's Senior Save Services

We'll keep the cold out... and your savings in.

You could qualify for as much as \$200 in contractor-installed **FREE** services from PSE&G. And now, with winter almost here, these **FREE** weatherization improvements will not only make your home or apartment more comfortable, but also save you money on your energy bill as well.

As an example, you may receive:

- WATER HEATER
- INSULATION WRAP AND TEMPERATURE CHECK
- WINDOW AND DOOR CAULKING
- WINDOW AND DOOR WEATHERSTRIPPING
- DOOR SWEEP
- PLASTIC INDOOR STORM WINDOWS
- LOW-FLOW SHOWERHEAD
- FAUCET AERATORS
- RADIATOR REFLECTORS

We'll do the work... you'll get the savings.

We'll send a trained energy professional to perform up to \$200 worth of these energy and dollar saving measures.

Who's eligible?

If you're one of PSE&G's Lifeline customers, this is a perfect opportunity to make your home more comfortable... while saving energy and money at absolutely no cost and no further obligation to you.

This Senior Save Program is provided by PSE&G in cooperation with the NJ Board of Public Utilities and the NJ Department of Energy.

Mail the coupon below for these **FREE** weatherization services. Or, if you prefer, call PSE&G's Energy Conservation Center toll-free at 1-800-854-4444, weekdays, 9am-5pm.

I am interested in having \$200 in **FREE** Senior Save Weatherization Services. Please call me to schedule an appointment.

Name _____ (print clearly)

Address _____

City/State _____

Zip _____

Account No. _____ (if you have it)

Phone No. _____

A WARM MESSAGE FOR SENIORS.

FOR FREE HOME WEATHERIZATION CALL 1-800-562-1482. You can qualify if you:

- Have electric heat.
- Are 65 or older.
- Live in a house, mobile home or apartment (rented or owned).
- Have a monthly household income of no more than \$573 for one person or \$771 for two. For details, call us, toll-free.

PUGET POWER
The Energy Starts Here



A WARM MESSAGE FOR SENIORS.

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You can qualify if you: • Have electric heat. • Are 65 or older. • Live in a house, mobile home or apartment (rented or owned). • Have a monthly household income of no more than \$573 for one person or \$771 for two. For details, call us, toll-free.

PUGET POWER
The Energy Starts Here

SENIOR NEWSLETTERS

LIVE WIRES

Published by Puget Sound Power & Light Co.

Winter 1987

How Housewarming helped them

Harry and Velma Goulding are retired and live just outside Olympia. The rural setting is a pleasant one; views are of rolling fields and woodlands, widely scattered houses and barns, flocks of sheep and, on a clear day, majestic Mt. Rainier.

The couple is comfortable — now. They weren't several months ago. Their house was drafty and cold, and a high electric bill during last winter's cold spell had left them worried. Turning down the heat and putting on extra clothing had not answered either the comfort or the bill-paying problem.

Harry and Velma turned to their local Community Action program for assistance in paying the electric bills. While the agency was helping solve their immediate concern, it suggested to the Gouldings that they contact Puget Power for help in reaching a long-term solution.



noticed the change in the comfort level almost immediately after the windows beside the front door were double-paned and sealed," said Mrs. Goulding. All other windows were also sealed, insulation was added to attic spaces, doors were weatherstripped — even the electric outlets on the outside walls were sealed to prevent heat loss. Puget Power decided what work needed to

be done, hired a contractor, inspected the completed work, and paid for everything. The Gouldings are thankful for the Housewarming program. Their house is warmer, and the heating bills are much less than before the work was done. "We couldn't afford to stay here without the help provided by Housewarming," offered Mrs. Goulding. Mr. Goulding, when asked about

From the start the Gouldings began to benefit from Housewarming. "We

be done, hired a contractor, inspected the completed work, and paid for everything.

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Continued on page 8.

ENERGY Spectrum

Information on energy topics for older adults from Wisconsin Electric Power Company

No. 7, January 1985

WE, Network Push Awareness Of Hypothermia

Wisconsin Electric has launched a major effort again this winter to alert people in the company's service area to the dangers of hypothermia.

The company is acting in cooperation with the Wisconsin Energy & Older Adult Network's Hypothermia Alert Campaign.

Wisconsin Electric and the Network conducted a similar program in 1983-84.

Mail Carries Message

In December, the company started mailing brochures and placemats to nutrition sites, senior centers, libraries and churches, in addition to a bill insert to all customers.

All carry a message on how to prevent hypothermia. Hypothermia, or cold stress, is a life-threatening condition that occurs when a person's body temperature falls to 95 degrees

Continued on Page 4



Dr. D.C. White, vice president, Radio Station WAWA and associate director of the O.C. White Soul Club, greets Charles McNeer, chairman of the board, Wisconsin Electric, during a reception for older adults during the four-day grand opening of the new WE Customer Center at North Avenue and King Drive (formerly Third Street) in Milwaukee. The Center is a major step forward in the redevelopment of the area.

Early Alert Services Help With Energy, Other Bills

People who are having problems managing their gas or electric bills may find help in Early Alert Services, a new customer assistance program offered by Wisconsin Electric & Wisconsin Natural Gas.

Early Alert Services links the customer with an energy adviser who can assist customers in difficult

financial situations.

The adviser can help customers make manageable payment arrangements or apply for financial assistance from the proper public or private agencies.

In addition, the adviser can help customers take advantage of company programs such as weath-

Continued on Page 4

POWER LINES FOR SENIORS

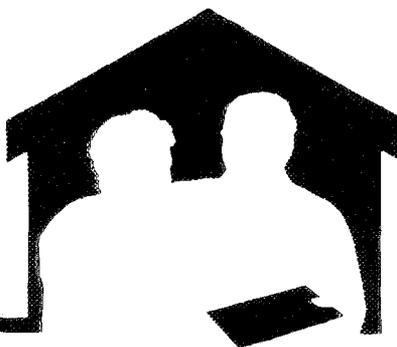


SPECIAL SERVICES FOR SENIOR CITIZENS

YOUR EDISON BILL.

Depending on when you receive your Edison bill, it represents anywhere from a 27 to 33 day service period. Your bill is due and payable when you receive it. If it is unpaid 19 days later, your bill is considered overdue.

You can pay your bill by check or money order and mail it to us in the envelope provided. Or you can drop by any Edison office or authorized payment station to pay in person. Many of our offices have after-hours payment drop boxes for your convenience.



If you have any questions about your bill or about our services, please call the local business office at the telephone number shown on your bill.

A FRIEND CAN HELP REMIND YOU TO PAY.

By request to Edison you may have another person, besides yourself, noti-

fied in the event your electric service is subject to disconnection for nonpayment. The third party may be a relative, friend, doctor, clergyman or public or private agency who gives consent to receive such notice. This notice does not obligate the third party to pay the bill, nor will it prevent disconnection of electric service; but it does alert the third party to your problem. If you are qualified and would like to receive these services, ask us for a Certification of Eligibility and a Third Party Notification Request Form by writing to:

Southern California Edison
Consumer Affairs, Room 390
P.O. Box 800
Rosemead, CA 91770

You may also obtain these forms at your local Edison office.

WE'RE HAPPY TO DISCUSS PAYMENT ARRANGEMENTS.

If you are unable to pay your bill, call the Edison telephone number shown on the front of your bill or call your Edison office to discuss payment arrangements.

If you receive Federal Supplemental Security Income (SSI) funds, or food stamps, call toll-free 1-800-433-4327 to find out if you're eligible for temporary or emergency assistance from the State of California.

WE'LL HELP WITH YOUR MONTHLY BUDGETING.

Edison's Level Pay Plan can help you budget your electric bills over a full

POWER LINES FOR SENIORS



UNDERSTANDING AND PREVENTING COLD STRESS

COLD STRESS IS DANGEROUS

Cold stress is another name for hypothermia

When your body experiences a deep drop in temperature, the condition is called hypothermia or cold stress. This condition is serious because when body temperatures begin to drop below 95°F, vital organs can be damaged, existing conditions — like diabetes or heart disease — can worsen, and death can result.

Hypothermia can happen without your being aware of it.

Cold stress occurs when your body is exposed to temperatures of 65° or less and it loses body heat faster than it can be replaced.

Healthy seniors can be at risk.

It can happen to you — an older person sitting quietly at home. You can also be at risk because age decreases your body's ability to respond to changing temperatures. Health problems — like hypothyroidism (underactivity of the thyroid gland), arthritis, Parkinson's Disease, stroke, diabetes — can also increase your risk of hypothermia. Even medications, including anti-depressants, sedatives and cardiovascular medicines, can impair your body's ability to regulate temperature and may increase the rate of heat loss.

Other things increase your susceptibility to cold stress, too. Inadequate nutrition hinders your ability to produce heat. And the substitution of alcohol for proper nutrition contributes to the amount of heat your body loses.

RECOGNIZING AND TAKING CARE OF HYPOTHERMIA

What to be on the lookout for.

Some symptoms of hypothermia resemble stroke or diabetic coma.

And the symptoms for hypothermia change — from individual to individual, and from one body temperature to a lower one.

In the early stages, people with hypothermia or cold stress sometimes tremble. It's more a shaking than a visible shivering in response to cold.

The suspicious signs to look for include:

- Bloated facial skin
- Pale, waxy skin tone that can suddenly appear very pink
- Slurred speech
- Drowsiness
- A weak pulse or an irregular heartbeat

At a more advanced stage, hypothermia exhibits itself by confusion, poor coordination and a sense of disorientation.

What to do.

If you suspect someone has hypothermia, call for medical aid immediately. While you're waiting for help to arrive, cover the person with blankets, all the way up to and around the head.

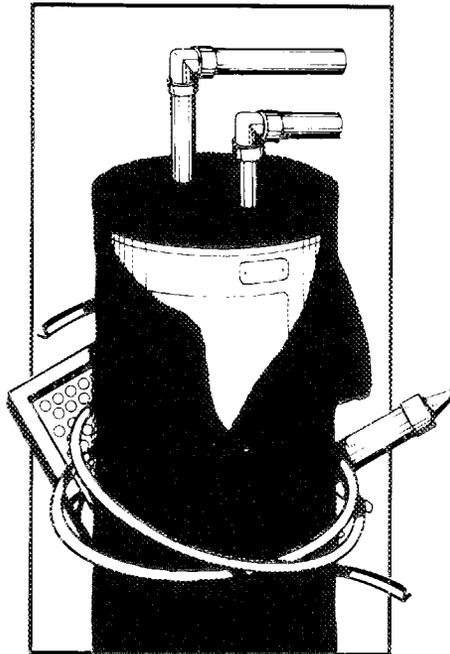
Also, be aware of the things you shouldn't do. You should *not* use electric blankets, hot water bottles, heating pads or put the victim into a hot bath or shower or try to rewarm him. The heart is very weak at this point and any sudden heat surge could cause the heart to fail entirely.

You shouldn't raise the victim's feet, rub his skin or give him anything to eat or drink. Rather than trying to move him, keep the victim still.

Rewarming a person whose deep body temperature has dropped is tricky. Hospitals are equipped to do that. So getting medical help as quickly as possible should be your first priority.

BROCHURES & FACT SHEETS

Let HL&P Weatherize Your Home



**Free of Charge
to You!**

You could be just a phone call away from more home energy savings if you're eligible to participate in the Light Company's Weatherization Assistance Program.

If you're a Light Company customer who's a senior citizen living on a low, fixed income, or if you're disabled, you may qualify for this free service. Please call for more information on qualification requirements. If you do qualify, an HL&P consultant and specially trained crew will visit your home to install a number of measures which will help it stay more energy efficient year round.

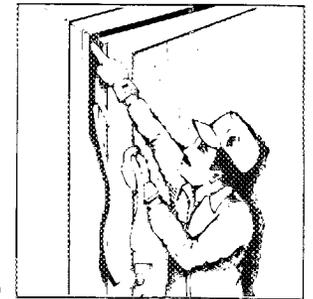
Here's what we'll do at your home, completely **free of charge** to you:



1.

CAULKING

Caulking around outside doors, window frames, air conditioning vents, and entry points of utility lines.



2.

WEATHERSTRIPPING

Weatherstripping on fixed original doors. Does not include screen doors, garage or utility room doors.

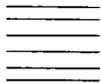
BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 80

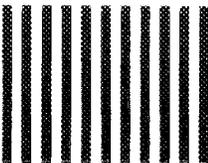
HOUSTON, TX

POSTAGE WILL BE PAID BY

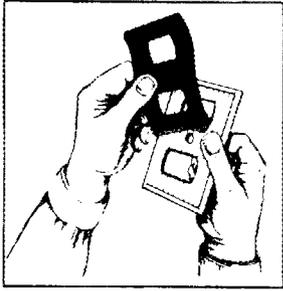
HOUSTON LIGHTING & POWER COMPANY
ATTENTION: ENERGY INFORMATION CENTER
WEATHERIZATION ASSISTANCE PROGRAM
P O Box 1700
Houston, Tx 77097-2063



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



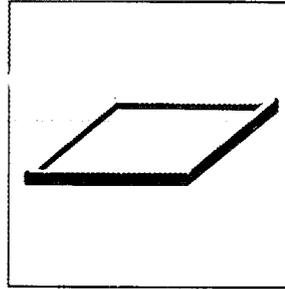
3.



AIR INFILTRATION GASKETS

Air infiltration gaskets installed in electrical outlets on walls that face the outside.

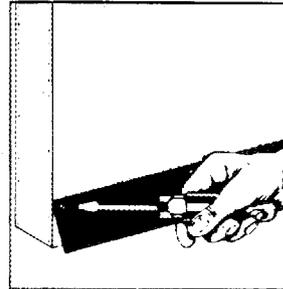
5.



NEW FILTERS

New filters for your window air conditioning units.

7.



DOOR SWEEPS

Door sweeps of aluminum and vinyl will provide a barrier against drafts.

Note: Window glazing also may be included as part of your free service. The HL&P consultant will decide if this work can be done and will schedule an additional appointment. The customer is responsible for removing screens so that glazing may be done.

All of these measures will help make your home weathertight and energy efficient. That means less money needed for utility bills and more money available for other important expenses.

For more information on this free program, call HL&P's Energy Information Center at **660-3944** in Houston. We also invite you to fill out the attached business reply card to see if you qualify for free weatherization. After you've provided the necessary information, just tear along the dotted line and mail it to us. Postage is free.

4.



INSULATION BLANKET

Insulation blanket installed around your electric or gas water heater.

6.



TAPING DUCTWORK

Taping ductwork in your attic if you have a central heating and air conditioning system.

YES, I would like to see if I qualify for my home to be weatherized **free of charge** by Houston Lighting & Power Company.

(Please print)

NAME _____

STREET ADDRESS _____

PHONE _____

Please write your HL&P account number. It is on your monthly bill.

ACCOUNT NUMBER _____

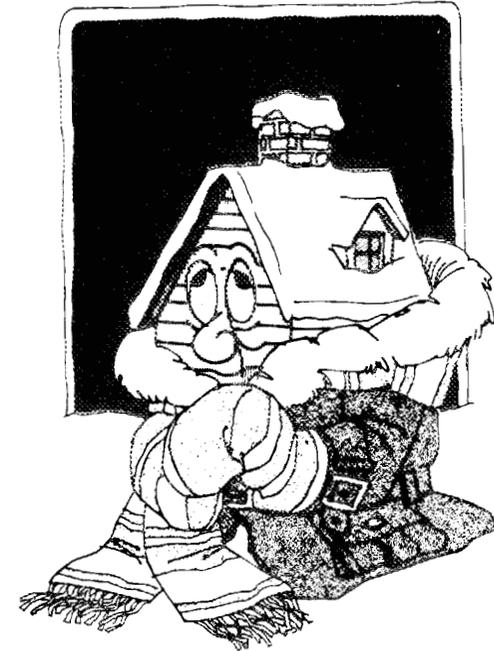


The Light company

Houston Lighting & Power



**NYSEG and
senior citizen contractors
team up to weatherize the
homes of senior citizens**



Does your home seem cold in the winter even when you turn up the thermostat? Do you feel drafts when you are sitting in your favorite chair? If so, Seniors Lending A Hand may help.

NYSEG and senior citizen contractors have teamed up to provide FREE WEATHERIZATION ASSISTANCE to homes of senior citizens in need.

The weatherization will be installed by local senior contractors who have participated in a weatherization training program. The contractors provide their own tools and transportation.

***All costs of weatherization materials and labor will be paid for
Absolutely no costs will be passed on to the customer.***

- make your home more energy efficient
- increase your comfort by reducing drafts
- improve your safety



- caulking and weatherstripping around windows and doors
- installing door sweeps and thresholds
- replacing of broken window panes
- reglazing of windows
- installing plastic storm windows
- installing insulated water heater jackets
- reducing electric or gas water heater thermostat to 120° setting
- cleaning and servicing furnaces and boilers.

- be a NYSEG customer
- be 60 years of age or older
- live in the dwelling to be weatherized
- fall into one of the following categories:
 - have received emergency assistance from Social Services or Project SHARE
 OR
 - have an energy emergency
 OR
 - be referred by a human service agency or NYSEG Consumer Representative

To apply for Seniors Lending A Hand in the Auburn area please call 253-2701, ext. 736 or write to:

NYSEG
 Attn: T. A. Mansell
 P.O. Box 370
 Auburn, N.Y. 13021

New York State Electric & Gas Corporation

*Good people.
 Good service.™*

by NYSEG.





Senior Citizens: \$200 In Free Energy-Saving Measures

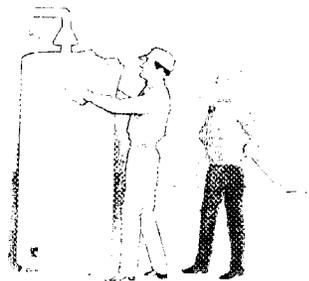


PSEG

How It Works



When you call PSE&G about the Senior\$ave program, we'll set up an appointment for one of our trained energy experts to visit you at your convenience. He'll *only* install up to \$200 worth of the following FREE Energy-saving measures:



- Water heater insulation blanket

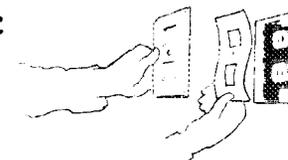


- Caulk window(s); Caulk door(s)

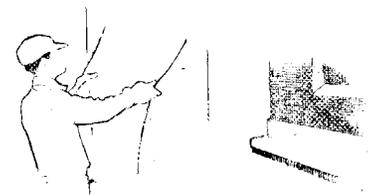
- Energy-saving showerhead
- Faucet flow restrictor



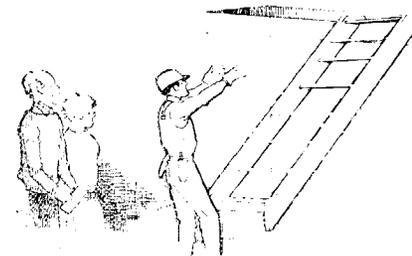
- Electric outlet gaskets



- Plastic Interior storm windows; Door sweep(s)



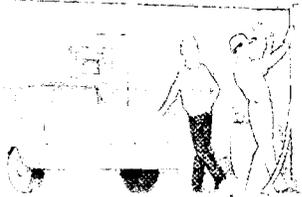
- Attic hatchway insulation
- Vertical attic door insulation
- Pull-down attic stairs insulation



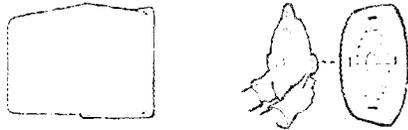
- Pipe insulation (hot water or heating)



- Duct insulation
- Garage door weatherstripping



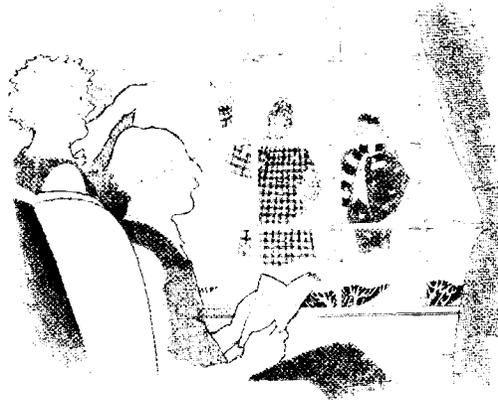
- Air conditioning covers
- Air conditioning caulking; kitchen exhaust fan covers



Our expert will select those items that will have the most dramatic impact on increasing your comfort and decreasing your future energy expenses. And he'll do it at absolutely no charge. Up to \$200 FREE! Please note that the installation of any and all energy-saving measures is limited to \$200.

Senior\$ave — It's just another way PSE&G is trying to serve the deserving members of our community.

\$200 In Energy-Saving Measures Can Be Yours Absolutely FREE



Now there's no need for senior citizens to tolerate uncomfortable conditions or to struggle with unnecessarily high energy expenses.

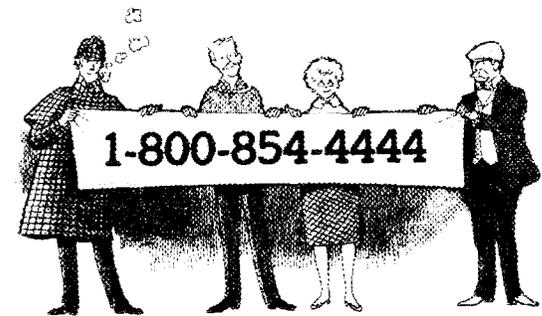
If you qualify for State of New Jersey Lifeline assistance benefits, you also qualify for PSE&G's Senior\$ave program. Through the program, PSE&G will install up to \$200 worth of important energy-saving measures in your home or apartment. **ABSOLUTELY FREE!**



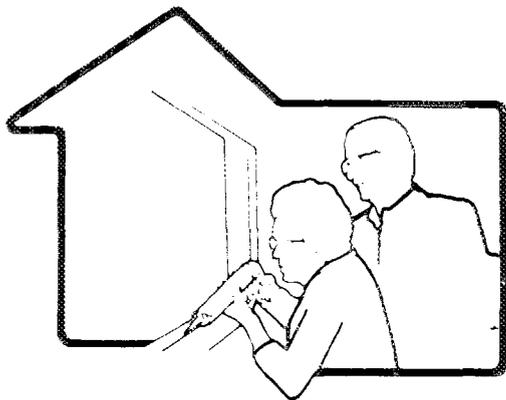
Who To Call?

For more information on qualifying and/or applying for State of New Jersey Lifeline Assistance Benefits, please call, toll-free, at 1-800-792-9745.

For more information and to set up a Senior\$ave appointment, please call the PSE&G Energy Conservation Center, toll-free, between 9am and 5pm at 1-800-854-4444.



SENIORS...



Personas Mayores De Edad...

CENTRAL ARIZONA SENIORS PROGRAM

ARE you 55 years of age or older?

If so, then you may qualify for the Central Arizona Seniors Program.

You must also be buying or own your home (mobile homes not included) and have an income of **MORE** than \$6,075 a year for one person or \$8,175 for two people. There are other programs available through the state if your income is below these levels. The highest yearly income for eligibility is \$22,000.

if you qualify, a trained Senior Consultant will be made available to visit with you to identify ways to make your home more energy-efficient. Included with this visit will be a selection of **FREE** weatherization materials that the Consultant will install to help you save energy **AND** money.

This program is sponsored by Southwest Gas, the Arizona Office of Economic Planning and Development, the Governor's Advisory Council on Aging, and your local area Agency on Aging.

PROGRAMA DEL CENTRO DE ARIZONA PARA PERSONAS MAYOR DE EDAD

¿Tiene Ud. 55 años o más?

Si su respuesta a esta pregunta es sí, puede ser que Ud. califique para nuestro programa para Personas Mayores de Edad.

Es necesario que Ud. esté comprando o que sea dueño de su casa, (casa móviles no se incluyen) y que gane más de \$6,075 al año por persona o menos de \$22,000. Si su sueldo es menos de \$6,075, hay otros programas con el estado de Arizona que le pudieran ayudar si Uds. quisiera.

Si Ud. califica y quisiera ser parte de este programa, llene la tarjeta y mándela por el correo. Un Consultante de Personas Mayores que está entrenado estará a su dispuesto para hacerle una visita y ayudarle para identificar las maneras en que puede hacer su casa más eficiente. También durante esta visita, Ud. puede escoger materiales **GRATIS** para proteger su casa contra el frío o el calor y conservar energía. El consultante instalará estos materiales para que Ud. ahorre dinero y energía. Este programa **NO LE CUESTA DINERO A UD.**

Fill in this form, fold, and fasten edge for mailing. Llene esta forma, doblela, peguela y pongola en el correo.

YES! I am 55 years of age or older and would like a trained Energy Consultant to visit my home to install some **Free** home weatherization materials.

¡SI! Tengo 55 años o mas de edad y quisiera que un Consultante de Energía venga a mi casa para instalar materiales que son **Gratis**. Entiendo que estos materiales me ayudaran a guardar energía y dinero.

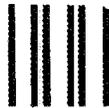
It is best to call me in the: _____ morning _____ afternoon.
Es mejor que me llamen en la: _____ mañana _____ tarde.

I own or am buying my home
Soy dueño o estoy comprando mi casa
_____ Number in household
_____ Número de personas en mi casa
Annual Income Range:
Mi sueldo anual es:
 \$ 0 - \$6,075 Over \$22,000
 \$6,075 - \$12,000 mas de \$22,000
 \$12,000 - \$22,000

Name _____
Nombre _____
Address _____
Dirección _____
Phone Number _____
Teléfono _____
SWG# (from your bill) _____
SWG# (en su cuenta) _____

**A Special
Money Saving
Program Just
For You.**

**¡Hay un programa
especial para que
ahorre dinero!**



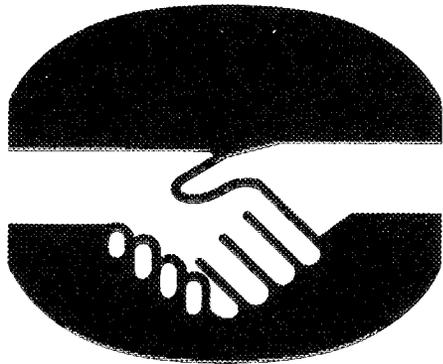
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 478 LAS VEGAS, NV

POSTAGE WILL BE PAID BY ADDRESSEE

Central Arizona Seniors Program
Dept. of Consumer Affairs
P.O. Box 52075
Phoenix Arizona 85072-2075





WEATHERIZATION PROGRAM

***OG&E and
Senior Citizen Contractors***
TEAM UP TO WEATHERIZE
HOMES OF THE ELDERLY

OG&E's Hand-N-Hand Weatherization Program

provides an opportunity for Senior Citizens who want to be active in the community to assist Senior Citizen home owners who need their help.



The Hand-N-Hand Program Will:

- Provide weatherization for the elderly and reduce energy consumption...at no cost to the homeowner
- Increase the comfort of the homes in all seasons, allowing senior citizens to live independently and longer in their own homes.

To Qualify For Hand-N-Hand Weatherization, A Person Must Be:

- an Oklahoma Gas and Electric Company customer
- an owner-occupant of the home to be weatherized
- 65 years of age or older
- Unable physically or financially to weatherize the home



Senior Citizen Contractors

Hand-N-Hand Weatherization Materials Will Be Installed by Senior Citizen Contractors 62 Years of Age or Older Who Must:

- be in bona fide retirement
- be an OG&E customer
- provide own hand tools and transportation
- perform the work as an independent contractor
- Attend a training session and sign a Hand-N-Hand Weatherization contract with OG&E



All costs of weatherization materials and labor will be paid by OG&E, with a maximum expenditure of \$500 per home. There will be no charge whatever to the Senior Citizens whose homes are selected for weatherization.

Hand-N-Hand Contractors Are Trained to:

- Caulk and Weatherstrip Exterior Doors and Windows
- Install New Thresholds
- Replace Broken Window Glass
- Reglaze Windows
- Install Water Heater Insulation Jackets
- Make Minor Structural Repairs for Weatherization Purposes



Ceilings To Be Insulated, Too!

Ceiling insulation will be installed in attics by qualified insulation contractors through working agreements with OG&E. Guidelines for adding ceiling insulation are:

- If existing ceiling insulation level is R-0 to R-8, insulation will be increased to R-13 level.
- If existing insulation level is R-9 or better, no insulation will be added.



Citizens Advisory Councils have been set up in each community served by OG&E to select the homes in most immediate need for weatherization. The councils are composed of representatives from agencies and organizations concerned with the problems of the elderly. Agencies and organizations represented on the councils include, but are not limited to: Community Action Program, Department of Economic and Community Affairs, American Association of Retired Persons, NAACP, Area Wide Aging, Neighbor for Neighbor, Salvation Army and civic and church groups.

If you qualify for Hand-N-Hand Weatherization or know someone who does, please submit the name and address to an agency or organization active in senior citizen activities. We'd like to help!

A
COMMUNITY SERVICE
ACTIVITY OF

OG&E
ELECTRIC SERVICE

KEEP WARM & HEALTHY THIS WINTER.



HOW TO PREVENT HYPOTHERMIA.

Hypothermia is dangerous and sometimes fatal.

Hypothermia, or cold stress, is a dangerous medical condition that can be fatal if not treated promptly. Hypothermia occurs when a person's body temperature, which normally is about 98.6°F, falls to or below 95°F. It can occur even when air temperatures are as mild as 60°F, but is most likely to occur on cold, windy days.

Older adults, infants and people who use certain prescription medicines are especially susceptible to hypothermia, because they are less able to adapt to extreme temperatures.

However, hypothermia can be prevented—simply by keeping warm.

How to prevent hypothermia.

The following recommendations will help you keep warm and healthy in cold weather.

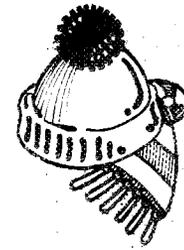


DRESS WARMLY.

Several layers of loose clothing will keep warm air near your body. If you feel cold, add more layers; if you feel too warm, remove layers until you feel comfortable. When sitting for long periods, use a lap cover.

It's a good idea to wear wool, down or synthetic materials instead of cotton in cold weather. They will keep you warmer than cotton if they should become damp or wet.

When you are outside, wear a windproof outer layer and cover your neck with a warm scarf.



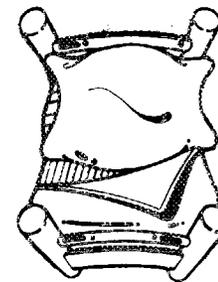
KEEP YOUR HEAD COVERED.

More than half of your body heat can be lost through your head and neck. Wearing a hat will actually keep the rest of your body, especially your hands and feet, warmer. For additional help keeping your hands warm, wear mittens rather than gloves.



STAY DRY.

If your clothes become wet, change them as soon as possible. After taking a bath or shower, dry your hair with a hair dryer immediately. Damp or wet hair can lead to rapid body heat loss if your home is cool.



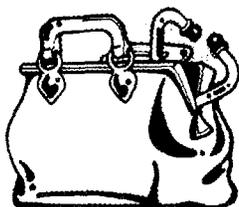
SLEEP WARMLY.

It's important to keep your bed warm. Since hypothermia can begin while you're asleep, add an extra blanket or an electric blanket to your bed. You can also keep a hot water bottle or heating pad outside the covers. This will keep you and your bed warm. You might want to wear a nightcap, long underwear and socks to bed, too.



EAT WELL.

Good nutrition is very important in cold weather. Food provides the fuel your body needs to keep warm. Hot, nourishing meals and warm drinks add heat to your body. However, avoid alcoholic drinks. Alcohol cools your body.



CHECK WITH YOUR DOCTOR.

If you take medication for high blood pressure, nervousness, depression or sleeping and have trouble keeping warm, ask your doctor about hypothermia.



KEEP IN TOUCH.

Be a good friend and call any older adults you know once a day during cold weather. If you're an older adult yourself, ask someone to call you, too.

Warning signs of HYPOTHERMIA.

The following are signs of hypothermia:

- confusion
- shivering
- slow breathing
- sleepiness
- difficulty speaking
- cold skin, especially on the stomach
- trembling on one side of the body or in one arm or leg.
- difficulty waking
- cold, stiff muscles
- puffy face
- forgetfulness

If you suspect hypothermia, keep calm and call a doctor, ambulance, rescue squad or emergency room. Handle the person very gently and protect him or her from the cold with blankets, quilts or towels, making sure you cover the head and neck.



Could you use a "good neighbor"? Call us about Early Alert Services.

If you or someone you know is experiencing difficulty managing gas or electric bills, call or visit your local Wisconsin Electric or Wisconsin Natural Gas office and ask to speak with an energy adviser about Early Alert Services, available through the companies' Good Neighbor Energy Program.

The energy adviser will give you information about specialized payment plans, energy assistance, weatherization and community programs that can help.

If your house or apartment is not weatherized and you meet certain income requirements, you may also be eligible for free weatherization services through either company.

For more information, please call Wisconsin Electric's Energy Facts Phone toll-free at 1-800-222-9288. In Milwaukee, call 277-3311.

This brochure comes to you from Wisconsin Electric and Wisconsin Natural Gas, in cooperation with the Wisconsin Energy & Older Adult Network.

Reviewed by Dr. Stephanie Williamson, Milwaukee Health Department and a member of the Wisconsin Energy & Older Adult Network.

Puget Power takes care of everything.

It's very easy to participate in our HOUSEWARMING PROGRAM. First, we come out to your house, mobile home or apartment to see what type of weatherization is needed. Then we arrange to have the work done.

When it's finished, we inspect the work to make sure it meets today's energy-efficiency standards.

Then we pay the bill.

You don't have to worry about a thing and there are no repayment requirements — ever.

Check into it today.

If you're over 65, are a Puget Power electric heat customer, and meet income guidelines — or if you know someone else who may qualify and needs weatherization — call us **toll free at 1-800-562-1482**. Or fill out the attached reply card and we'll get in touch with you.



A service for the special needs of seniors.

In later years, health and comfort often depend on staying warm.

That usually means keeping your heat set higher. And that can be a real hardship for seniors with low incomes.

Puget Power recognizes that the energy need of seniors may be more extensive. To help, a special HOUSEWARMING PROGRAM has been developed that can provide weatherization at no cost to Puget Power customers who:

- have electric heat.
- are 65 or older.
- live in a house, mobile home or apartment, whether rented or owned.
- meet specific income guidelines.

A warmer house and lower heating costs.

For customers who meet the qualifications, Puget Power can pay 100% of the cost of adding insulation, storm windows, weatherstripping, caulking, water heater wraps and other weatherization, *providing it's cost-effective.*

Once the home is weatherized, it will be warmer and less costly to heat. Not just this winter, but every year from now on.

It will also be using less energy for heating, and that helps everyone, because the energy saved will serve future customers.

Please contact me.

I'm interested in your HOUSEWARMING PROGRAM for seniors. I'm a Puget Power customer, I'm 65 or over, have electric heat, and would like more information on no-cost weatherization.

Name _____

Address _____

City _____

Telephone _____

Best time to call: _____

State _____

Zip _____



Housewarming for Seniors Fact Sheet

- Puget Power's Low Income Senior Weatherization Program is specifically designed for qualifying senior customers to decrease home heating costs, increase home comfort level, and save energy.
- **100% financing** means **No Cost to Qualifying Seniors** for installing cost effective energy saving home improvements.
- Energy saving improvements available on this program at **No Cost to Qualifying Seniors** are listed below:

Insulation	Storm Windows
Caulking & Weatherstripping	Water Heater Insulation Kits

- Meeting the requirements listed below will qualify you for the Housewarming Program.
 1. You have electric heat which was installed prior to January 6, 1982.
 2. A person occupying the home is 65 years of age or older.
 3. The combined annual income of all the household occupants is less than 125% of the federally established poverty level.

Income Eligibility Guidelines

NUMBER OF PERSONS IN HOUSEHOLD	MONTHLY INCOME	ANNUAL INCOME*
1	\$ 573	\$ 6,875
2	771	9,250
3	969	11,625
4	1,167	14,000

* Income documentation is required for the previous calendar year. (Examples of acceptable income documentation are shown on the application) Unreimbursed medical, dental and prescription drug expense may qualify for a deduction.

- If you qualify, fill out both sides of the attached application, sign, date, and mail with a copy of your income documentation to:

Puget Sound Power & Light Co.
Conservation Department, OBC-08N
P.O. Box 97034
Bellevue, WA 98009-9734
- If you need help filling out this application, please visit or call any Puget Power local office or call **1-800-562-1482**.
- Puget Power's Conservation Department will review your application and contact you soon regarding participation in the program. **(It is very important that you provide a daytime telephone number where we can contact you).**

If mailing the application is inconvenient you may take it to any Puget Power local office.

HANDBOOKS AND DIRECTORIES

SPECIAL INFORMATION FOR

**Senior
Citizens**

MEMPHIS LIGHT, GAS AND WATER

HYPOTHERMIA

Many older adults are vulnerable to colder weather during the winter months. Because of this vulnerability, millions of older people risk developing a dangerous condition called Hypothermia. Hypothermia means low body temperature and is caused by exposure to cold. Older people who have difficulty keeping themselves or their homes warm are the most common victims.

Your body temperature needs to be around 98.6°F (37°C) to function properly. If cold causes your body temperature to drop below 95°F, your heart begins to slow down, and your mind becomes confused which prevents you from recognizing the danger and seeking help. The result could be fatal.

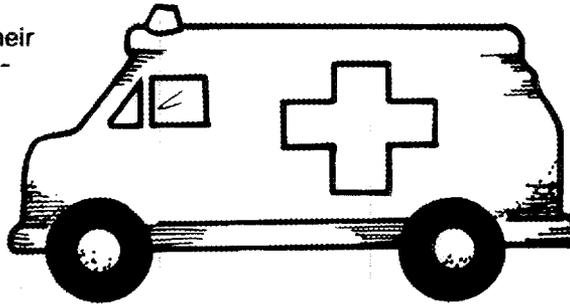
Many older adults die in their own homes without ever reaching the hospital because friends and relatives do not recognize that they have hypothermia until it is too late.

Warning Signs of Hypothermia

- Confusion
- Difficulty Speaking
- Shivering
- Slow Breathing
- Sleepy and Hard to Wake Up
- Cold, Stiff Muscles
- Puffy Face
- Stomach Cold to Touch
- Forgetfulness
- Trembling on One Side of the Body or in One Arm or Leg

If you suspect Hypothermia...

- Keep calm.
- Call a Doctor, ambulance, rescue squad or local emergency room.
- Handle the person very gently.
- Protect the person from the cold with blankets, quilts, towels or extra clothes.
- Make sure that you cover the head and neck.



Do Not

- Do not give hot drinks or hot food.
- Do not raise the legs or place hot water bottles on the feet.
- Do not place the person in a hot shower or bath.
- Do not give any alcohol or drugs.
- Do not massage the arms or legs.

How to Prevent Hypothermia

1. Stay Warm

Your strongest defense against hypothermia is to stay warm. Temperatures *do not* have to be below freezing for hypothermia to develop.

2. Dress Warmly

If room temperatures are cool or cold, dress warmly, wear several layers of clothes. Loose clothes trap a lot more warm air around your body than tight clothing.

3. Keep Hands & Feet Warm

Keep your hands and feet warm. Wearing a hat will cause your body to send more warm blood to your hands and feet. Mittens are warmer than gloves. Use a warm scarf to cover your neck.

4. Keep Wind Out

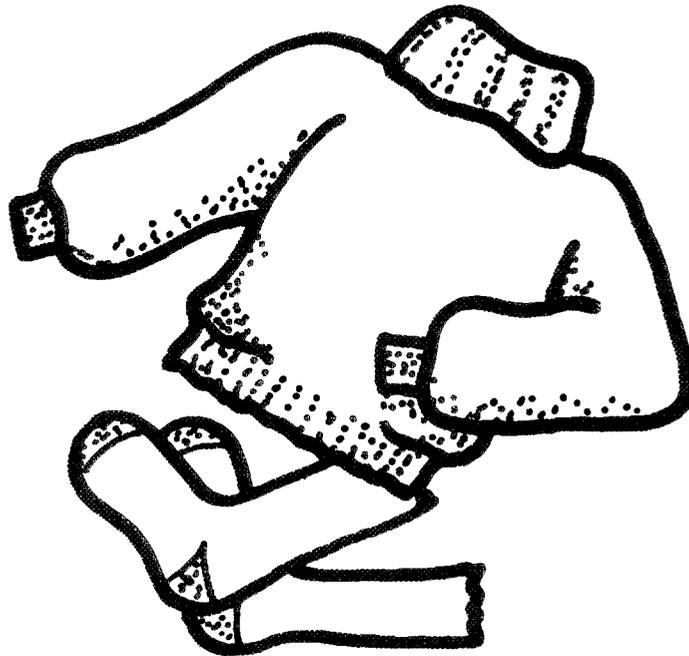
Wear windproof outer layer when you are outdoors.

5. Keep Clothes Dry

Keep your clothes dry and change long underwear or socks if they become damp or wet.

6. Keep Your Bed Warm

At night use hot water bottles, heating pads and electric blankets to help keep your bed warm. Wear a nightcap.



CREDIT POLICIES

Credit Policy

MLGW urges its customers to maintain a good pay record with us by getting into the habit of paying their utility bills promptly. After customers have paid their bill on time each month for a year, they may carry a month's bill to the second month and still maintain good credit with MLGW. Although we would like all of our customers to have a good pay record with us, we do realize that some people will have difficulty paying their utility bill, due to genuine hardships. These are the customers that we want to work out a mutually satisfactory agreement for payment. Customers who need to work out a payment plan should call 523-0711 or come in to one of our Credit and Collections offices (addresses listed on page 7). In this pamphlet, you will find some of our payment plans, billing policies and other programs that might be useful to you.

Extended Payment Plan

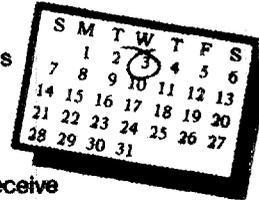
Sometimes, our customers may have serious problems such as death or illness in their family or unemployment which may cause them to have difficulty paying their utility bills. When we verify such cases, these customers can qualify for our Extended Payment Plan. The purpose of this plan is to allow a customer with an accumulated large balance, at least \$200, to be spread out over a number of months, not exceeding three months. Each month, the customer must pay their current bill and the agreed monthly portion of the extended balance. Some customers may have a problem with paying a balance of less than \$200 and others may need more time than three months to pay their

balance. In such cases, exceptions will only be made in extenuating circumstances. Each customer is judged on his/ her own merit and credit history with MLGW.

Delayed Payment Plan

The delayed billing plan is designed to help certain customers on fixed monthly incomes pay their utility bills near the first of the month and avoid having to pay the larger gross amount of the bill instead of

the smaller net amount. Customers who are eligible for this plan include those who are age 65 or older, those who receive Social Security Income, Supplemental Security Income, Aid to Families with Dependent Children or other governmental assistance by a monthly check after the net amount of the bill is due. Those who receive their income checks before the net amount is due are not eligible.



Extensions on One Month's Bill

Where financial, health, unemployment or any other hardship conditions are known, the customer may be granted additional time to pay his bill and the delinquent disconnect would be postponed. In some cases, the balance would be brought forward on the following month's bill. Extensions usually are not granted for two consecutive months, but extenuating circumstances could alter this policy. This plan is primarily for a temporary hardship condition.

Winter Moratorium

This program provides qualifying elderly and handicapped customers with the assurance that their utility services will not be cut off during the three hard winter months, December, January and February. Qualifying customers must be signed up for this program by December 1, of each year. Anyone interested in signing up should contact the Shelby County Office on Aging at 525-2273.



Third Party Notification

The third party notification program allows MLGW customers to designate a third party to be notified in the event of a pending service cutoff due to non-payment or unsatisfactory payment arrangements. The program is designed to prevent some of these cutoffs. Under this double notification plan, the customer authorizes the Division to send a copy of any "final notice" received before the cutoff date to a specified third party. This third party can be any person or agency selected by the customer, such as a relative, friend, church or social services agency. The third party *will not* in any way be responsible for paying the bill. That person or agency will act only as an additional communication link with customers to make sure they are aware of the pending cutoff in case their notice has been lost, mislaid, accidentally overlooked or simply misunderstood.

Services Disconnected

Before a customer's utility service is disconnected for non-payment, a cutoff notice is mailed indicating the last day to pay the amount of the bill. If the bill is not paid within 10 working days after receiving the cutoff notice and if satisfactory arrangements are not made with the Credit Department, the customer's electric service is terminated. Our Account Investigators and Customer Service Representatives attempt to make personal contact before terminating service. However, if personal contact cannot be made, service will still be terminated. In five working days, after the first 10-day period, an all-service termination order is issued if the account remains unpaid. It is important that customers contact MLGW and make payment arrangements *before* service is cut off.

Weather Beater Billing

This is a pre-payment plan that is a system of building a reserve during low usage months which is then used to offset bills resulting from high usage in heating and air conditioning months. The averaging of bills lasts for six month periods, April through September and October through March. Under this program, the customer's average monthly bill is based on the past year's usage. The "budget" bill will include a percentage added to offset future rate increases and increased usage. Any

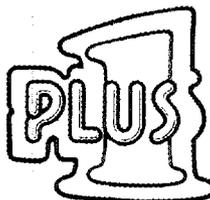
month the actual bill is less than the calculated budget bill, we will bill the customer for the budget amount. Any excess will go into the customer's budget billing reserve account and will be held in reserve until needed to bring higher bills down to the budget amount. Any month the actual bill is more than the budget amount, MLGW will use money from the customer's reserve account to bring the bill down to the budget amount, if the reserve account has the funds. If the reserve does not have enough money in it to bring the bill down to the budget amount, we will apply whatever is there and the customer will pay the difference.

Life-Sustaining Equipment

We know that some of our customers use life-sustaining equipment in their homes. However, we do not know who each customer is or when our customers are put on life-sustaining equipment. So, it is up to these customers, their friends or relatives to contact MLGW and make us aware of this situation to avoid utility service cutoff for non-payment or planned outages. Some equipment these customers depend on is all-electric, such as iron lungs, respirators, kidney machines, suction pumps, rocking beds and ultrasonic nebulizers. Identification of these customers will allow MLGW to help these people in case of an emergency should their electricity go out.

Disputed Bill Hearings

Customers who, for any reason, disagree with their utility bills may make arrangements for an informal conference to clear up any questions, to discuss disputed bills or to make any needed adjustments prior to the cutoff date.



MLGW's PLUS 1 Program

MLGW's PLUS 1 program allows customers to voluntarily contribute \$1 on their utility bills to help those who cannot pay. The MLGW Board of Commissioners has chosen the Metropolitan Interfaith Association (MIFA) to administer the PLUS 1 program. We do not decide who receives assistance and act only as a collection agency for this program. MIFA works cooperatively with other public and private agencies to see that those who need help most, get it.

Telecommunication Devices for the Deaf

MLGW has available Telecommunication Devices for the Deaf (TDD). A TDD has a special keyboard that connects to the telephone enabling those with speech or hearing impairments to send messages to another person who has such a device. For those persons who own a TDD or have access to one, routine utility business can be handled by calling a special line, 528-HEAR, from 8:30 a.m. until 11 p.m., seven days a week. After 11 p.m. only emergency calls can be made on that number.

MLGW OFFICES & HOURS

Main Office

Administration
 245 S. Main
 8:30 a.m.—5 p.m.,
 Monday through Thursday
 8:30 a.m.—6 p.m., Friday

North Community Office

1220 North Watkins
 8:30 a.m.—5 p.m.,
 Monday through Thursday
 8:30 a.m.—6 p.m., Friday

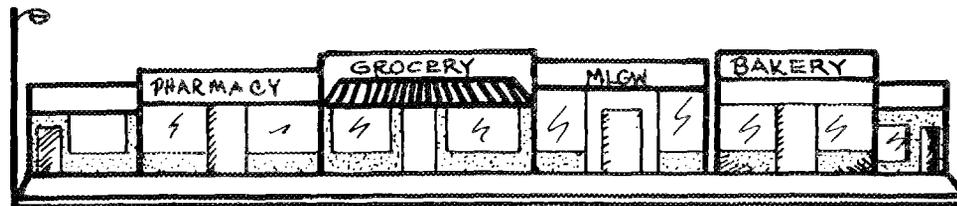
Lamar/Airways Office

Lamar Airways Shopping Center
 8:30 a.m.—5 p.m.,
 Monday through Thursday
 8:30 a.m.—6 p.m., Friday

Millington Office

5169 Navy Road
 8:30 a.m.—4:30 p.m.
 Monday through Friday

Customers may also pay their bill at any of our authorized agencies, such as banks and drug stores that display the MLGW paying agent sign. The agencies are authorized only to accept *FULL* payment on the gross or net amount. Night depositories are located at the Main Street and Second Street entrances of the Administration Building.



Inside



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WITH YOU IN
MIND**



**SECTION 2
A LITTLE HELP
FROM A FRIEND**



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**SECTION 5
PROTECTING YOUR
HEALTH**



**SECTION 6
ARE YOU SURE
YOU'RE SECURE?**

Seniors Are Special



Jersey Central Power & Light Company

WITH YOU IN MIND

We recognize that you have special needs and concerns. In order to better serve you, we'd like you to know who we are and some of the services we provide.

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A LITTLE HELP FROM A FRIEND

We understand that there are times when expenses can exceed income. When this happens, it's possible to get behind in paying some bills. It's easy to begin to worry about how to pay for some of the necessities of life. It is also possible to get so far behind in paying for certain vital services that they become subject to disconnection or are discontinued due to non-payment.

As a supplier of one of these vital services, we want to continue to supply electric service. The sections that follow offer alternatives which continue the supply of electricity and allow us to meet our social responsibility, while achieving the business objectives of our ratepayers and stockholders.

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FOR SAFETY'S SAKE

Electricity is a faithful and convenient servant we have come to depend upon to provide lighting, make work easier, entertain us and increase our comfort. While most electric products are designed, tested and built according to stringent safety standards, we should be aware of how to use them safely. We should also be aware of signs that indicate when they malfunction or become hazardous. All of us at Jersey Central want you to be aware that even small amounts of electricity may be harmful unless care and common sense are practiced every day.

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PROTECTING YOUR HEALTH

Your vitality, your ability to live a healthy and independent life, and your general well-being, may depend in large part on your ability to create a safe and healthy environment. At Jersey Central, we want to help you learn how to use energy wisely to protect your health.

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ARE YOU SURE YOU'RE SECURE?

Practicing good security for yourself, your property, and your possessions is sensible and easy. Here are a few security tips that can both increase your personal safety and ease your mind.

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Seniors Are Special

Reader Response Card

We'd appreciate your comments about this Seniors Are Special booklet. Please fill in the appropriate categories below.

Name: _____

Address: _____ Acct. #: _____

Why I liked the material on: _____

Why I didn't like the material on: _____

I would like to see more information on: _____

Comments: _____

JCP&L / GPU

ENERGY-RELATED SERVICES FOR OLDER ADULTS

FROM THE WISCONSIN ENERGY AND OLDER ADULT NETWORK

The Wisconsin Energy and Older Adult Network is a consortium of agencies, organizations and energy suppliers in southeastern Wisconsin. Since older adults have special needs when it comes to energy use and rising energy costs, the Network has prepared this

directory of special services. The directory includes many services available in southeastern Wisconsin. We have tried to make it comprehensive and accurate to be useful as a reference now and in the future.



SOUTHEASTERN WISCONSIN
SECOND PRINTING

WHERE TO GET FINANCIAL HELP WITH HOME ENERGY BILLS

LOW INCOME ENERGY ASSISTANCE PROGRAM

Each year, federal dollars are available through the Energy Assistance Program to assist low-income persons with their gas, electric and oil heating bills. Fuel oil deliveries may also be available in emergency situations. These programs are administered by your county Department of Social Services or your Community Action Agency. Their numbers are listed on pages 6 and 7.

GOOD NEIGHBOR ENERGY FUND

Additional energy assistance dollars are available for low-income older adult customers of Wisconsin Electric with a home energy emergency through the Good Neighbor Energy Fund. This fund was initiated by Wisconsin Electric Power Company. For more information call the Salvation Army in Racine and Kenosha, St. Vincent de Paul in Ozaukee and Washington counties, and La Casa de Esperanza in Waukesha or Jefferson counties.

SPECIAL UTILITY SERVICES

WISCONSIN ELECTRIC POWER COMPANY

Your gas and electric utilities have special services available that can help you keep your utility bills as low as possible and manage your energy use wisely.

Billing Services: Would you like to be on a budget billing plan? Or, do you need to make special arrangements to pay an overdue bill? Is there a medical emergency situation that deserves special consideration? Call the toll-free number, **1-800-242-9137**, to talk with a customer contact representative about these special billing services.

Good Neighbor Energy Program

- **Energy Services for Older Adults or Customers with Disabilities.**

Do you rely on special electrically powered medical equipment? Would you like a relative or third party notified in the event you miss a bill payment or go out of town for a period of time? Are there special circumstances in your household affecting your energy usage or payments? This program provides adults over 60 and customers with disabilities with a personal energy advisor to take these special circumstances into consideration to ensure protection against interruption of service. Call your local Wisconsin Electric office for more information.

- **Telecommunications Device for the Deaf (TDD)**

Hearing-impaired and deaf customers can now communicate directly with trained Wisconsin Electric personnel over regular phone lines through the use of a TDD. Calls can be placed through the TDD switchboard at **1-800-855-1155**. This is a toll-free number.

Consumer Services: Wisconsin Electric has a wide range of conservation programs and services to help you use electricity wisely and safely. There is an **"At Home with Energy"** slide show designed for older adult audiences and developed in cooperation with the American Association of Retired Persons. A quarterly newsletter for older adults features information on conservation, safety and health. The newsletter, **Energy Spectrum**, is provided free of charge. The next time you go shopping or visit one of the nutrition sites in your community, look for Wisconsin Electric's new **Energy Van**. Stop in and see how you can conserve energy and save dollars, while viewing displays on electrical safety and usage. Also plan a visit to the new **Energy House** at 2500 West Capitol Drive in Milwaukee. Special programs for older adults on conservation, safety, and nutrition are available. For more information on any of these services, call **277-3311** collect.

Energy Checkup: Is your house or apartment energy efficient? Call collect, **277-3400**, for a free Home Energy Checkup or a Renter's Energy Checkup. An Energy Specialist will tell you about low-cost and no-cost ways of reducing energy usage and about possible installation of weatherization measures.

Energy Facts Phone: Do you have questions about energy matters such as how to use your appliances more efficiently? Call the Energy Facts Phone collect, **277-3311**. You can listen to any of 140 tapes on many energy and conservation issues, and talk to an energy information specialist.

Weatherization Assistance: If you have an electric water heater, or supplement your oil heating with electric space heaters, you may qualify for weatherization assistance. Customers within 150 percent of federal low-income guidelines, about \$600 a month for one person or \$800 for two, are eligible for this weatherization service. Call **277-3311** collect for more information.

Wrap-Up/Seal-Up: Wisconsin Electric customers with an electric water heater who do not meet the above income eligibility guidelines can still obtain weatherization services at reduced prices through this program. A contractor will insulate your water heater and perform other weatherization measures. Call **277-3400** collect for an application.

WISCONSIN GAS COMPANY

Bill Information: Do you prefer budget billing, third party notification, or special payment arrangements? Should Wisconsin Gas be aware of a medical emergency situation in your household? Call your local Wisconsin Gas office for more information on how the company can help you.

Consumer Education Services: If you need a program for a group or a club, call our Speakers Bureau for an interesting and useful presentation on saving energy. There are educational services, films, and slide programs, too. Call your local Wisconsin Gas office for any of these services. Check to see what programs Wisconsin Gas might be offering at the new **Energy House**, 2500 W. Capitol in Milwaukee.

Energy Audit: For a free energy audit of your home, or a free rental unit checkup and certificate of energy efficiency, call your local Wisconsin Gas Office.

**WISCONSIN
NATURAL GAS
COMPANY**

Energy Hotline: Wisconsin Gas has an energy telephone hotline with experts to answer all your questions on conservation, gas use, and safety. Call **272-SAVE**.

Weatherization Program: Older adult and low-income households that heat with gas may qualify to have their homes weatherized. Call your local Wisconsin Gas Office now to get your home weatherized this winter.

Billing Services: Customers who have questions about their bills or wish to make special payment arrangements should contact their local Wisconsin Natural Gas office.

Good Neighbor Energy Program: This program, described under Wisconsin Electric Power Company Special Services (page one), is available to both Wisconsin Electric and Wisconsin Natural Gas customers over 60 or with disabilities. Call your local Wisconsin Natural Gas office to find out how you can have your own personal energy advisor to help you take advantage of all the programs and services of both companies available to older adults.

Energy Audit: Want to spend less on your gas bill this winter? Call now and arrange for a free home energy audit. Both homeowners and renters can take advantage of this program. Call your local Wisconsin Natural Gas office.

Weatherization Assistance: Could you use some help with weatherizing your home? If you are a Wisconsin Natural Gas older adult customer with an income at or below 150 percent of the federally defined poverty level, about \$600 a month for one and \$800 for two, you may be eligible. Call your local office to see if this program is for you.

**WISCONSIN
SOUTHERN GAS
COMPANY**

Billing Services: Wisconsin Southern Gas currently provides customers with opportunities for third party notification, deferred payment agreements, and budget billing. Call the number on the back of your bill to request these services.

Weatherization Program: If you want to have an energy audit on your gas-heated home or are interested in weatherization financing, call the number listed on the back of your current bill.

**HOW TO AVOID
DISCONNECTION**

Gas and electric utilities are allowed to disconnect service during non-winter months if a customer's bills are not paid. If you have overdue bills, or have received a disconnection notice, call **now** to discuss special payment arrangements.

Wisconsin Electric Power Company	1-800-242-9137
Wisconsin Gas Company	(414) 273-8500
Wisconsin Natural Gas (see the number on the back of your bill)	
Wisconsin Southern Gas (see the number on the back of your bill)	

**PUBLIC SERVICE
COMMISSION
OF WISCONSIN**

If you are unable to resolve a situation with a gas or electric utility, you can call the Public Service Commission of Wisconsin's consumer information line for help with the resolution of your problem. The number is **(608) 266-2001**. This is not a toll-free number but long distance to Madison.

SPECIAL COMMUNITY HELP

HEALTH CARE SERVICES

For health **emergencies** in your community call your local **paramedics, ambulance service or fire department**. The number is on the inside front cover of your phone book (white pages).

Write it here for emergencies: _____

For non-emergency health care needs, call your local doctor, hospital or the number listed below in your county:

Dodge	Community Health Nurse	386-4411, x350
Fond du Lac	Home Health Care	929-3085
	City Health Department	929-3290
Jefferson	Nurses Office	674-2500
Kenosha	City of Kenosha Health Department	656-8170
Ozaukee	Nurses Office	377-6400, x230
Racine	Lincoln Lutheran Becker Geriatric Center	637-7486
Sheboygan	Public Health Nurse	459-3030
Walworth	Public Health Nurse	723-5570
Washington	Community Health Nursing Association	338-4462
Waukesha	Public Health Department	548-7600

NUTRITION SERVICES

You know the value of good nutrition. A list of meal sites for noon meals is available through your County Office on Aging. Call for a time and location convenient for you.

Dodge	386-4411	Ozaukee	377-6400, x279
Fond du Lac	929-3111	Racine	634-2334
Jefferson	674-3105	Sheboygan	459-3095
	1-800-242-0133	Walworth	723-5754
Kenosha	656-6656	Washington	338-4497
	658-3508	Waukesha	548-7828

SOCIAL SECURITY

If you have questions about Social Security or your check is delayed, call the local Social Security number or the toll-free 800 number in your county.

Dodge	887-7403	Racine	554-1450
Fond du Lac	887-7403	Sheboygan	458-2133
Jefferson	1-800-242-9946	Walworth	1-800-242-9946
Kenosha	658-2501	Washington	1-800-242-9946
Ozaukee	1-800-242-9946	Waukesha	276-2700

**TELEPHONE
REASSURANCE**

If you wish to receive a supportive daily phone call from a friendly neighbor call and ask about telephone reassurance in your county.

Jefferson	Elderly Services	1-800-242-0133
Kenosha	Telecare	658-2051
Ozaukee	Office on Aging	377-6400
Racine	Lincoln Lutheran Telephone Reassurance	637-6531
	St. Mary's Medical Center Telecare	636-4292
Sheboygan	St. Nicholas Hospital	459-4714
Walworth	Telecare	723-5754
Washington	Hartford	673-6323
	West Bend	338-2210
	Germantown	645-8111
Waukesha	Fire Department Project Reassurance	547-3366
		544-9560

TRANSPORTATION

Various transportation services are available in your county, if you are an older adult and either do not have, or cannot use, public transportation. For the type of service and cost, call the office in your county.

Dodge	Commission on Aging	386-4411
Fond du Lac	Commission on Aging	929-3114
Jefferson	Elderly Services	1-800-242-0133
Kenosha	Transportation Office	658-9093
Ozaukee	Office on Aging	377-6400
Racine	Specialized Transportation	639-3521
Sheboygan	Office on Aging	459-3095
Walworth	Department on Aging	723-5187
Washington	Hartford	673-6323
	West Bend	338-2210
	Germantown	645-8111
Waukesha	Department of Aging Ride Line	548-7838

WEATHERIZATION

Weatherization assistance may be available in your community. Both grants and loans are available. Some utility companies have programs as well. Call the number listed below for more information.

Dodge	Information Services	887-1611
Fond du Lac	ADVOCAP	922-7760
Jefferson	La Casa de Esperanza	547-0887
Kenosha	Community Action Agency	552-7342/657-0840
Racine	Community Action Agency	637-8377
Sheboygan	Comunidad de Amigos	452-7331
Walworth	Community Action Agency	728-8296
Washington	Hartford Housing Authority	673-7878
Waukesha	La Casa de Esperanza	547-0887

COMMUNITY ORGANIZATIONS AND REFERRAL SERVICES

Dodge	American Assoc. of Retired Persons	885-5363
	Commission on Aging	386-4411
	Community Action Commission	674-3105
	Department of Social Services	386-2777
	Toll Free Referral	887-1611
Fond du Lac	ADVOCAP	922-7760
	Commission on Aging	929-3114
	Department of Social Services	929-3400
Jefferson	Elderly Services (Toll Free)	1-800-242-0133
	Human Services Department	674-3105
Kenosha	Community Action Agency	657-0840
	Catholic Social Services	658-2088
	Department on Aging	656-6646
	Homemaker	658-3508
	Lutheran Social Services	658-3154
	Salvation Army	694-1333
	Senior Citizens Center	656-6260
	Spanish Center	658-4641
	Urban League	652-2111
Western Kenosha Senior Council	843-3828	
Ozaukee	Department of Social Services	284-9411
	Office on Aging	377-6400

Racine	Consumer Advice for Older Adults	637-9176
	Family Services	634-2391
	Racine County Adult Social Services	636-3308
	Spanish Center	637-7931
	Urban League	637-8532
Sheboygan	Catholic Social Services	458-5726
	Comunidad de Amigos	452-7331
	Department of Social Services	459-3200
	Lutheran Social Services	458-4161
	Office on Aging	459-3095
Wauworth	CAP Agency	728-8296
	Department on Aging	723-5754
	Department of Social Services	723-5580
	Senior Center	723-5756
Washington	Department of Social Services	338-4610
	Lutheran Social Services	334-9551
	Office on Aging	338-4497
Waukesha	Department of Aging	548-7828
	Department of Social Services	548-7212
	City of Waukesha Office of Senior Citizens	547-2201
	La Casa de Esperanza	547-0887

NOTES:

HYPOTHERMIA

Hypothermia is a drop in **body temperature**. You should not let your **body temperature** drop below 97° Fahrenheit. If your body temperature drops below 95° F, it can be **fatal** if not detected and properly treated. Older adults living in poorly heated homes are most often the victims of hypothermia. Even air temperatures of 60° F. can cause hypothermia. If you have a chronic health problem such as inactive thyroid or take medication for anxiety, depression, nausea, or sedation, or use alcohol, you may be especially susceptible to hypothermia. Consider contacting your physician regarding precautions.

The best way to avoid the risk of hypothermia, or lowered body temperature, is by keeping warm and eating well-balanced meals. The following suggestions may help:

- Ask a friend or relative to call once a day.
- Drink warm fluids.
- Eat foods high in calories such as red meats, peanut butter, bread, honey, beans, rice, etc.
- Maintain a warm, insulated home; use a humidifier. If you are over 75 years of age, maintain the thermostat at 70°F. Keep the thermostat no lower than 68°F.
- Wear heavy-layered clothing such as sweaters, woolen shirts, slacks, etc.
- Wear warm-type shoes with socks.

If you follow the suggestions above, you will lower your risk of hypothermia. If you suspect that you or someone you know may have hypothermia, contact a physician immediately. Hypothermia should be suspected if you notice any of the following signs: bloated face, pale and waxy or oddly pink skin color, trembling without shivering, irregular and slow heart beat, slurred speech, shallow and very slow breathing, low blood pressure, and drowsiness.

Hypothermia is a medical emergency requiring prompt medical attention.

HYPERTHERMIA

Hyperthermia, or heat stress, is a rise in **body temperature**. You may have this condition if your **body temperature** remains above 100° F. You can develop hyperthermia or a rise in body temperature when the **air temperature** stays above 95° for several consecutive days. Older adults are more susceptible to hyperthermia, especially those who live in the top floors of apartment buildings, in homes with poor ventilation or in homes without fans or air conditioning. If you have medical problems, your body system is less able to cope with the stress of prolonged heat, thus increasing your vulnerability to heat stress.

You can prevent heat stress by calling or visiting your doctor and discussing it thoroughly with him or her, prior to the hot weather season.

The best way to avoid the risk of accidental hyperthermia or a rise in body temperature is by keeping cool. During hot weather, keep the following suggestions in mind:

- Ask relatives or friends to call once a day.
- Avoid strenuous physical activity.
- Cool baths, showers or sponge baths provide relief from the heat.
- Drink plenty of cool fluids, but avoid beer or high salt content beverages.
- Remain indoors in a cool, well-ventilated room.
- Wear light-colored, lightweight, loose-fitting clothing; wear a brimmed hat or use an umbrella for shade when outdoors.

The symptoms of heat stress include: faintness, dizziness, staggering, headache, nausea, loss of consciousness, high body temperature (104° or above), strong rapid pulse, and flushed skin. This is a serious medical emergency and requires attention and treatment by a doctor.

Take heat seriously . . . your health is important.

MEMBERS OF THE WISCONSIN ENERGY AND OLDER ADULT NETWORK

Mr. Joseph Breiner
Milwaukee County Dept.
of Social Services

Mr. William Clay
Social Development Commission

Ms. Agnes Cobbs
University of Wisconsin-Ext.

Ms. Debbie Duskey
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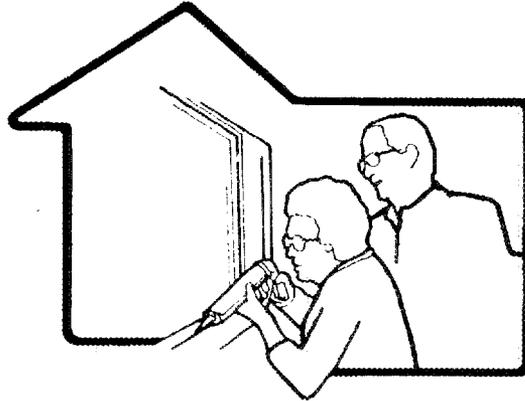
Ms. Joyce Reiss
United Way Information
Service for the Aging

Ms. Juanita Renteria
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Mr. John Schmitt
AFL-CIO

Ms. Audrey Stick
Indian Health Board

For more information on the Wisconsin Energy and Older Adult Network, or for additional copies of this directory, please call Wisconsin Electric, **277-3311**.



Central Arizona Seniors Program

**An Energy Management Program
Handbook**



**Sponsored by
Southwest Gas Corporation
Arizona Energy Office of the Department of Commerce
Governor's Advisory Council on Aging
and
Retired Seniors Volunteer Program (R.S.V.P.)**

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