REACH Evaluation—Year 1

Table of
Contents

Chapter 1. Program Overview

A. Program Description

The Federal Residential Energy Assistance Challenge Option Program (REACH) is a program that seeks to reduce the energy vulnerability of low-income residents. The program seeks to accomplish this by using the expertise of existing state and local social service agencies. These agencies include the Oregon Housing and Community Services Department, which provides administrative and technical support, and 16 Community Action Agencies (CAA) that implement the program.

The Oregon Housing and Community Services Department was initially awarded a three-year REACH grant in 1996. In 1999, OHCS was awarded another REACH grant for operation of a similar Program through September 2002. One notable difference in the second REACH grant is the inclusion of delegated case management. Delegated case management utilizes the services of agencies such as the State of Oregon's Adult and Family Services to assist low-income clients. Formerly, CAA personnel had provided these services. In addition, in 2000 the State applied for and received a similar three-year grant from the investor-owned electric utility company PacifiCorp that provides funding through May 2002.

This first year summary evaluation report for the Federal and PacifiCorp programs includes activities from program startup, in April 2000, through March of 2001. The summary evaluation for both programs is combined in this document for two reasons: (1) the goals and operations of the programs are similar and thus facilitating such an approach; and (2) the evaluation of each program may well be of interest to both Federal and PacifiCorp sponsors. A combined evaluation allows the two programs to be compared and contrasted in a meaningful manner.

B. Goals of Program

Although the goals and objectives of the Federal and PacifiCorp programs differ slightly, they are similar in that they are attempting to lessen the energy vulnerability of low-income Oregon residents through the application of a host of services. The REACH Program is designed to determine the effectiveness of energy education, weatherization and other services in helping clients reduce their energy costs and, in the case of the PacifiCorp Program, the cost effectiveness of promoting such programs for public and private utilities. This is especially important because the percentage of income spent on energy by low-income clients is greater than that of average Oregon households. According to the 1990 Census, the average Oregon households spend 2-3 percent of their income on electricity versus 11 percent for low-income clients.

Low-income households often have difficulty managing energy expenses. Although meeting energy bills has been a chronic problem, it has assumed even greater importance due to the recent turmoil in the

energy industry and the resultant rate increases. The rate increases make the struggle to meet basic energy needs more difficult and the increasing inability to pay energy bills often causes further instability in the social and economic lives of low-income residents. To address these issues, REACH aims to help clients:

- Reduce energy consumption;

- Remain current in their fuel bill payments;

- Reduce home heating and/or cooling costs; and

- Eliminate health and safety risks to family members.

C. Logic Model Framework

A logic model developed by the consulting firm quantec, based in Portland, Oregon, guides this evaluation of the REACH Program. The components of the logic model include underlying assumptions, activities, immediate outcomes, intermediate outcomes, and goals:

- **Assumptions** determine the need for and the design of the program. For example, one underlying assumption is that low-income clients lack energy usage knowledge.

- **Activities** are services offered to ameliorate the problems identified by the assumptions. Activities might include cash assistance, and energy education or counseling.

- **Immediate Outcomes** are brought about by the activities mentioned above and, it is hoped, will lead to beneficial immediate outcomes. For example, energy education may lead to an increased awareness of the relationship between behavior and energy usage.

- **Intermediate Outcomes** are also the result of program activities, but may take longer to become evident. For example, you might provide energy education and immediately increase awareness of energy use. However, evidence of decreased energy use takes time to establish. In this example, decreased energy use is an intermediate outcome.

- **Goals** the program goals are, hopefully, reached through this chain of cause and effect. In this case, the program goals include reduction in clients' energy vulnerability.

Figure 1 below is a visual representation of this chain of cause and effect created by quantec.

Figure 1: REACH Logic Evaluation Model Development Objectives
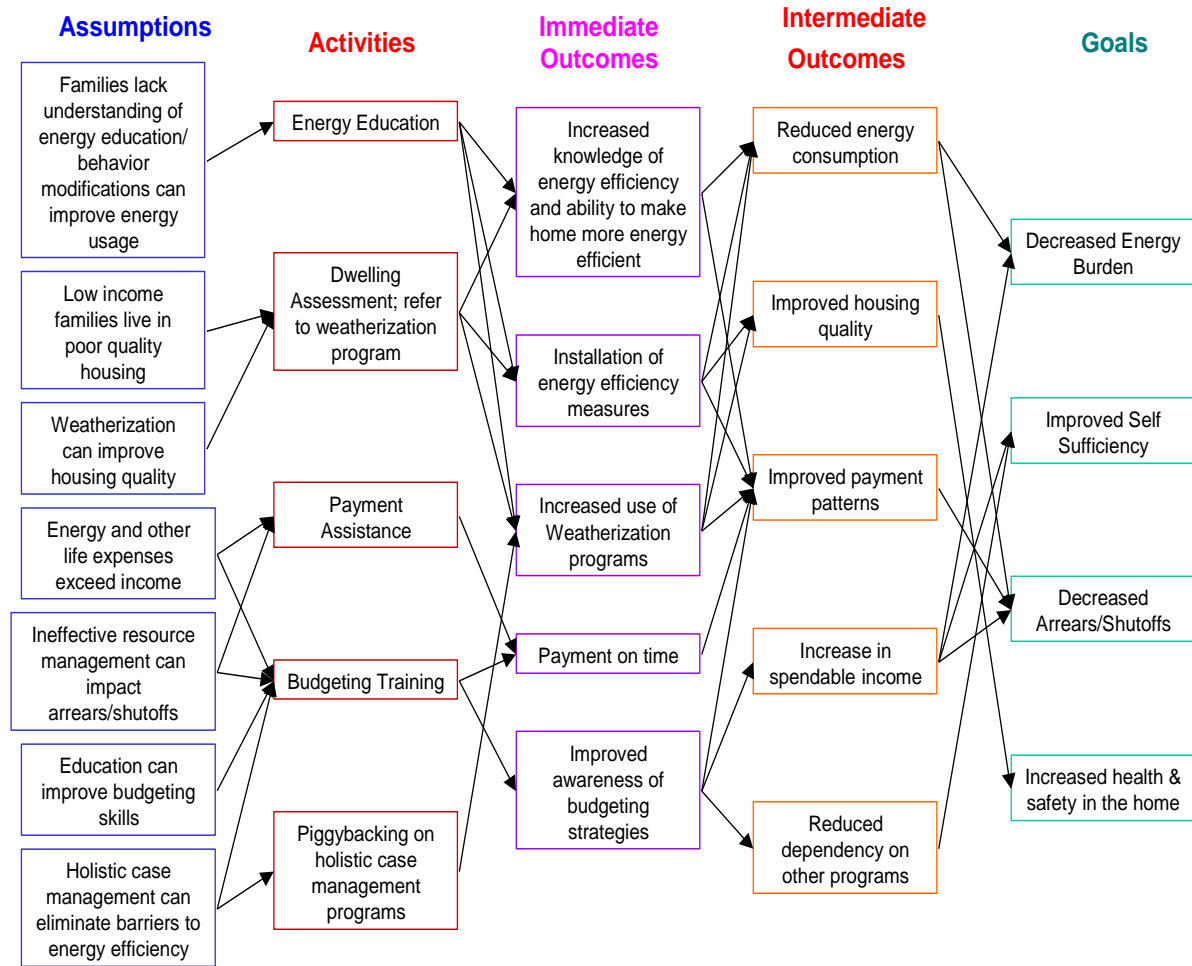
D. Scope of Program

The Federal and PacifiCorp REACH Program have substantial resources to utilize in lessening the energy instability experienced by their low-income clients. The Federal REACH Program is operating in 25 Oregon counties and is available to LIEAP (Low-Income Energy Assistance Program) eligible candidates that are involved in a case management program. LIEAP is a federally funded, energy assistance program designed to help low-income households with home heating costs. PacifiCorp also extends REACH eligibility to their LIEAP-eligible customers that are in danger of having their electricity shut off. The Federal and PacifiCorp Programs have budgets of $1,617,600 and $1,188,900, respectively.

The Federal program hopes to serve 1,744 households, while the PacifiCorp Program intends to serve 1,050 households during the three-year funding period. Both programs are utilizing the services of CAAs throughout the state to provide client services. The names, locations, counties served, and abbreviations of each community action agency are listed in Table 1 below.

Table 1: Community Action Agencies Participating in REACH

Agency Name	Abbreviation	Location	Counties Served
Access Inc.	ACCESS	Medford	Jackson
Community Action Program East Central Oregon	CAPECO	Pendleton	Gilliam, Morrow Umatilla, Wheeler
Community Action Team	CAT	St. Helens	Clatsop, Columbia Tillamook
Community Connection of Northeast Oregon	CCN	LaGrande	Baker, Grant Union, Wallowa
Clackamas County Social Services Division	**CCSSD**	**Clackamas**	**Clackamas**
Community Services Consortium	CCS	Corvallis	Benton, Lincoln, Linn
Josephine County Community Services	JOCO	Grants Pass	Josephine
Lane County Human Services Commission	LANHHS	Eugene	Lane
Malheur Community Action	**MCOA**	**Ontario**	**Malheur**
Mid-Columbia Community Action Council	MIDCOL	The Dalles	Hood River, Sherman, Wasco
Community Action Program Office, Multnomah County Dept. Of Community and Family Services	MULTCO	Portland	Multnomah
Mid-Willamette Valley Community Action Agency	MWVCAA	Salem	Marion, Polk
Oregon Human Development Commission	OHDC	Portland	Klamath
Southwest Oregon Community Action Commission	SWOCAC	Coos Bay	Coos
Umpqua Community Action Network	UCAN	Roseburg	Douglas
Yamhill Community Action Program	**YCAP**	**McMinnville**	**Yamhill**

Source: OCHS data

Agencies that appear in **bold** are not part of PacifiCorp REACH.

Chapter 2. Evaluation Methodology

A. Introduction

The University of Oregon, Department of Community and Regional Planning, Community Service Center is conducting the REACH Program evaluation. The evaluation will include process and outcome elements. In addition, particular attention will be paid to delegated case management. In the current incarnation of the REACH Program, case management is delegated (using agencies such as the State of Oregon's Adult and Family Services) to handle client case management, instead of the local REACH coordinators. It was believed that delegated case management would serve as a natural conduit to direct clients into the program and would increase its effectiveness

What follows is an explanation of the complete program methodology and the methods that will be used for the final Federal and PacifiCorp REACH reports. Those reports will be presented in September of 2002 and May of 2003, respectively. Table 2 shows the evaluation elements and the reports in which they will be included.

Table 2: Evaluation Components

Evaluation Component	Federal Report Date			PacifiCorp Report Date		
	5/15/01	4/01/02	9/01/02	5/15/01	4/01/02	5/01/03
State/CAA Staff Surveys	X			X		
Participant Survey[1]						
Utility Survey		X	X	X	X	X
Decrease in Energy Burden		X	X	X	X	X
Decrease in Arrears/shut-offs		X	X	X	X	X
Increase Home Health /Safety		X	X	X	X	X
Increase Self Sufficiency		X	X	X	X	X

Source: Quantec logic model

[1] Participant survey has been discontinued

B. Process Evaluation

The process evaluation uses both quantitative and qualitative measures to assess the perceived success of the program and to help identify strengths and weaknesses in design and implementation. Aspects of the process evaluation include:

- **Document Review** – Documents, including memoranda of understanding between CAAs and case management providers, were reviewed to facilitate the understanding of the objectives and delivery methods used by the program. Documents relating to the Energy Education Program will also be analyzed in an attempt to identify areas that can be improved.

- **State/CAA Staff Surveys** – Annual Surveys of State and CAA program administrators will be conducted. In addition, key state personnel who are involved in the program will be presented with the opportunity to provide input in personal annual interviews.

- **Participant Surveys** – Pre and post participant surveys were originally planned. The decision to discontinue these interviews was made by state administrators

- **Utility Survey** – Public and private utilities in Oregon will be surveyed annually beginning in the summer of 2001 to asses their support and interest in funding future REACH-like activities.

C. Outcome Evaluation

Evaluation measures for the outcome portion of the evaluation that will be analyzed for the second and third years of the report include:

- Client bill reductions;

- Client energy burden reduction in general, defined as:

$$\frac{\text{Energy cost}[1]}{\text{Income}}$$

- Reduction in client arrearages;

- Improved client payment pattern;

- Increased home health and safety; and

- Increased self-sufficiency.

1. Reduction of Energy Burden

A primary goal of the REACH Program is to reduce client energy burden. This, in general, can be defined as the ratio of energy costs to income. This evaluation will calculate:

---

[1] For a more detailed discussion of the definition of energy burden, see Appendix A.

- **Normalized energy burden** – this attempts to estimate the impact of the REACH Program in controlling for the changes in weather and/or price.

- **Actual Energy Burden** – uses total annualized billed energy consumption to obtain energy burden experienced by clients.

- **Worst month energy burden** – Calculates energy burden for month of client's highest energy expenditures.

Calculations for client energy burden will be determined using Princeton Scorekeeping Method (PRISM) software. This software is widely used for estimating residential energy use and conservation program savings. The PRISM model will be run for the base year, defined as the year preceding the treatment and the verification year, defined as the year following the project completion date (date of energy education or weatherization). Income data for these calculations will be collected from data generated by the OHCS Tracker database. A control group of non-REACH participants will be drawn from PacifiCorp customers. (See Appendix A for a more in-depth explanation of energy burden.)

2. Decrease Arrears and Shutoffs

Utility data will be used to conduct a comparison between the pre- and the post-average arrears and shutoffs associated with program participants. Differences between participants in the program and non-participants in the control group will be measured to assess the net changes made in the payment behavior. Five specific measures will be examined:

- The actual number of payments made during the pre and post periods;

- The total payment amount during the pre and post periods;

- The payment amount as a proportion of the amount billed during the pre and post program period;

- The average overdue balance (arrears) per month; and

- The number of reconnections (indicating collection actions resulting in service disconnections) during the pre- and post-program periods.

3. Increase of Homes Health and Safety

A review of dwelling assessment data along with the applied changes will provide the base for this assessment.

4. Increase Self-Sufficiency

As mentioned above, income data for participants will be collected using the OHCS Tracker database. The income information collected will provide an assessment of this goal. Increases in total income associated with an increase in the proportion of the income earned are a sign of self-sufficiency.

Chapter 3. First Year Evaluation

A. Scope and Timeframe of First Year Evaluation

The first year evaluation covers both the Federal and PacifiCorp REACH programs and includes demographic data collected through March 1, 2001, and program statistics collected through April 1, 2001. This first year program evaluation will not incorporate all quantitative measures that will be used for future evaluations due to data availability limitations.

B. Goals of the First Year Evaluation

The first year summary evaluation relies on program statistics, demographics, administrator surveys, and anecdotal evidence to illustrate the progress of the REACH Program. Although some conclusions can be made regarding elements of the program that are working more or less effectively than others, conclusions about the overall success or failure of the program (Intermediate Outcomes and Goals) would be premature given the limited amount of data that has been accumulated and analyzed. The Year 2 and 3 evaluations should present ample opportunity to make more specific conclusions and recommendations.

C. Demographic Information

Oregon Department of Housing and Community Services information is the source for the information provided in this section. Demographic information was gathered from the 16 agencies that participate in the REACH Program and is presented for both the Federal and PacifiCorp REACH Program. For additional demographic information, see Appendix B.

Tables 3 shows the clients served by the REACH Program, and in each program. As the table show, there is little difference in average household size between the two programs.

Table 3: Clients Served by the REACH Program (4-00 to 3-01)

	Federal Program	PacifiCorp Program
Total Persons Served	2,146	261
Total Households Served	679	88
Average Household Size	3.16	2.97

Source: OHCS data

Table 4: Age Composition of REACH Households

Age	Federal Number	Federal Percentage	PacifiCorp Number	PacifiCorp Percentage
0-5	455	22%	48	18%
6-11	422	20%	42	16%
12-17	311	15%	32	12%
18-23	130	6%	16	6%
24-44	599	29%	87	33%
45-54	120	6%	21	8%
55-69	49	2%	12	5%
70+	15	1%	3	1%
Total	2,101	100%	261	100%

Source: OCHS data

The statistics for age composition of REACH households in Table 4 show little variance between those served by the Federal and PacifiCorp programs, and that the largest category served is the 24-44 year olds.

Table 5: Ethnicity of REACH Participants

Ethnicity	Federal Number	Federal Percentage	PacifiCorp Number	PacifiCorp Percentage
Asian	1	0	0	0
Native Hawaiian or Pacific Islander	5	0.2%	0	0
Black or African American	91	4.3%	16	6.1%
Unknown	139	7.0%	2	0.8%
American Indian or Alaskan Native	142	6.7%	1	0.4%
Hispanic	218	10%	13	5.0%
White	1,516	72%	229	87.7%
Total	2,112	100%	261	100%

Source: OCHS data

In both Federal and PacifiCorp programs, the majority of recipients have been White, as shown in Table 5. The program statistics can be compared to 2000 Census data which show that Oregon's population is comprised of 3 percent Asian, 0.25 percent Hawaiian or Pacific Islander, 1.6 percent Black, 1.3 percent Native American or Alaskan Native, 8 percent Hispanic or Latino and 86.6 percent White. It may be beneficial to reassess the number of ethnic clients that are being served to determine whether adequate outreach methods are being utilized. For example, is marketing material available for those low-income Oregon residents for whom English is a second language.

Table 6: REACH Program Statistical Information

Client Service	Federal Program		PacifiCorp Program	
	Number	**%**	**Number**	**%**
Clients Attending Energy Education Workshops	492	70%	49	79%
Clients Attending Money Management Workshops			19	30%
Client Receiving In-home Education	536	76%	53	85%
Clients Receiving Budget Counseling			26	42%
Clients Receiving Dwelling Assessments	492	70%	53	85%
Clients Receiving Initial Follow-up Home Visits			20	32%
Clients Receiving 30 day Follow-up Home Visits			33	53%
Clients Receiving 60 day Follow-up Home Visits			28	45%
Energy Plan Development	551	78%	54	87%
Total	703		62	

Source: OCHS data

Headings in **bold** indicate services offered only by PacifiCorp Program

Column totals exceed 100% because clients can receive multiple services

Table 6 above lists by category some of the services provided by each program and the number of clients that have been served thus far. The statistics gathered for REACH services are generated by Oregon Department of Housing and Community Services data through April 2001.

The demographic and statistical measures presented, when combined with information presented in Appendix B, helps to illustrate the progress of the REACH Program in its first year of operation. The data indicates that the program is serving the population as outlined by the REACH grant. This, in general, is the low-income population of the state. Further, persons involved in the program generally possess a high school education/GED or less, are at 75% of poverty level or less (66%) and are often single parent females (64%). Recruitment procedures also ensure that both Federal and PacifiCorp are experiencing energy vulnerability. This is demonstrated in the Federal Program by the fact that clients are recipients of LIEAP (Low-Income Energy Assistance Program) Funds and in the case of the PacifiCorp Program that clients are LIEAP and a have had utilities shut off or are in danger of shutoff.

D. Community Action Agency/State Program Administrators Survey Summary

To supplement statistical data provided by Oregon Housing and Community Services, the Community Service Center administered a survey to state and community action agency personnel at a January 2001 training session. (For a complete copy of the survey, please see Appendix C). The respondents include both CAA program administrators and OHCS staff. A mixture of quantitative and qualitative questions were asked in the survey in an attempt to assess the effectiveness of various aspects of the REACH Program, and to isolate any aspects that are or are not working for the people who administer the program. The following is a summary of the survey data and anecdotal evidence that was gathered at that meeting

A total of 18 surveys were returned of the approximately 30 distributed. The survey was divided into four sections that sought to assess program design, delivery, administration, and implementation. To enhance clarity, not all questions are presented here. Instead, the questions that appeared to shed the most light on different areas of the REACH program are discussed and the results are summarized in Table 7 and the text that follows. Opinions and concerns voiced by CAA administrators were transcribed during the January meeting and are also summarized.

A majority of respondents believe that reducing energy burden, a main goal of the REACH Program, is realistic (Q-3). In addition, 80 percent believe that current delivery procedures are effective, while 20 percent do not (Q-9). Sixty percent of those surveyed do not believe that the program they administer is adequately staffed, while 40 percent disagree (Q-10). Many respondents also believe that training provided to them was inadequate (Q-11). Nevertheless, a majority of those surveyed believe that administrative personnel are available to answer questions they have about program implementation and operation (Q-16, 17). Many respondents also feel that they lack familiarity with program evaluation goals (40 percent familiar vs. 60 percent unfamiliar (Q-29)). This lack of familiarity is also evidenced in Q-30 and Q-31.

Table 7: CAA/State Survey Question Summary

	Yes	No	Don't Know
Q-3 **Do you believe that reducing energy burden is a realistic goal for the REACH Program?**	76%	24%	
Q-9 **Do you feel that the current delivery procedures for the REACH Program are effective?**	80%	20%	
Q-10 **Do you believe that the REACH Program you administer or participate in is adequately staffed?**	40%	60%	
Q-11 **Do you believe that the training provided to you to administer the REACH Program was adequate?**		100%	
Q-16 **If you have questions about REACH Program implementation, are admin. personnel available to answer them?**	100%		
Q-17 **If you have concerns about REACH Program operation are administrative personnel available to discuss those concerns?**	100%		
Q-18 **Do you believe your agency is meeting all of the requirements of the REACH Program?**	67%	33%	
Q-21 **Do you believe that the REACH Program is an effective outreach tool for other programs?**	88%	12%	
Q-22 **Does your agency have a field monitoring process in place?**	50%	50%	
Q-29 **Are you familiar with the goals of the REACH Program evaluation?**	40%	60%	
Q-30 **Do you feel that all of the data needed for the REACH Program evaluation are being collected?**	19%	6%	75%
Q-31 **Do you feel that all the reporting needs of the REACH Program are being met?**	42%	50%	8%
Q-32 **Do you feel that REACH Program is an effective social service program?**	100%		

Source: Community Service Center Survey Data

Respondents were asked if they felt the program was effective in reducing energy burden (Q-4). Nineteen percent felt that the program was very effective, while 75 percent felt that the program was "somewhat effective" and 6 percent felt that it was not effective. Over 90 percent of respondents feel that energy education is a "very important" aspect of the program, and six percent felt that energy education was "somewhat important." No respondents felt that energy education was "not important." When asked in an open-ended question what the most effective aspects of the program were (Q-24), 53 percent said energy education**.**

E. Supplemental Survey Summary

After analysis of the initial survey and comments made during the group discussion at the January meeting, it was evident that an additional survey would be beneficial.

The intent of this supplemental survey was to explore the depth of dissatisfaction with the concept of delegated case management that was included in this

Reach grant. It was believed that using delegated case management (using agencies such as the State of Oregon's Adult and Family Services) to handle client case management, instead of the local REACH coordinators, would increase program efficiency and effectiveness. Comments from program coordinators, however, suggest that this new component of the program has not worked as well as expected.

A total of 12 surveys, of the 16 distributed, were returned for this analysis. The results of the survey are presented in Table 8 below. (For a complete copy of the survey, please see Appendix D.)

Table 8: Supplemental Survey Summary

	Yes	No
Q-1 Has the addition of delegated case management in the second cycle of REACH helped to identify clients for your energy education classes?	42%	58%
Q-2 Do You believe delegated case management is an effective way to provide referrals for your REACH Program?	56%	44%
Q-3 Did you participate in the first cycle of the REACH Program?	58%	42%

Source: Community Service Center Survey Data

Respondents were next asked about this second cycle of REACH, which included delegated case management. Respondents were asked to select the statement that most accurately reflected their opinion from among the statements provided. Table 9 below shows that 70 percent of respondents felt that REACH is less effective with delegated case management, while 30 percent felt it was more effective.

Table 9: Supplemental Survey Summary

Possible Responses	%
REACH is less effective with delegated case management.	70%
REACH is more effective with delegated case management.	30%
No change in REACH 's effectiveness with delegated case management.	0

Source: Community Service Center Survey Data

Respondents clearly indicated that case management has not worked as well as expected. At the January 2001 training session, CAA administrators commented that delegated case management had

"complicated the program and makes it harder to implement." The reasons cited for this include an increase in paperwork when dealing with additional agencies and the fact that some case managers are not fully supportive of the program. Others stated that attempting to coordinate with delegated case managers adds "another layer of complexity" and made coordination all the more difficult. However, one REACH administrator stated that the addition of delegated case management has changed the target audience from senior citizens to families with children. This is due to the fact that senior citizens, who are often on fixed incomes, are often the recipients of LIEAP funds, but not often in a case management program. The change to a focus on case managed clients also changed the focus of the program to families with children, who are quite likely to be the recipients of case management services. . This change in emphasis, the respondent felt, helps to educate heads of households and the children in the households, thus paying double dividends. In addition, some CAA administrators feel that this type of case management is becoming more productive as relationships are established between agencies.

Chapter 4. Conclusions and Recommendations

A. Conclusions

The first year summary report is largely descriptive and recounts the progress of both the Federal and PacifiCorp REACH programs during their first year of operation. Drawing major conclusions about the goals and objectives of the program at this time would be premature. This will occur in future reports when more data concerning client usage and arrearages are gathered and analyzed. Nevertheless, some observations can be made and conclusions drawn concerning program operations.

B. Benefits of the REACH Investment

Although quantitative evidence is important to prove the merit of any social program, the human side of the equation should not be ignored. Evidence of the success of the REACH Program includes instances of a disabled senior citizen who, because of a lack of financial means, was forced to rely on a kitchen range as her primary source of heat. In another instance, a single mother of four small children had such severe problems with water leakage near exposed electrical wires that she shut off the electricity whenever it rained.

REACH appears to combine the beneficial aspects of several existing social services programs. Clients are eligible for financial aid to prevent utility disconnections and to lessen arrearages. In addition, clients are eligible for more comprehensive energy education, which may include in-home visits. Finally REACH clients are given priority for weatherization services. This means that they may only wait weeks for weatherization, rather than the 1.5 to 2 year wait that may occur without priority status.

The REACH program seeks to combine both immediate benefits, as illustrated above, with energy education in an attempt to increase the awareness of safe, efficient, and effective energy use. It is hoped that the combination of these tactics will help to bring about immediate changes in the living conditions of clients while also offering the ability to make long-term beneficial changes in client energy use patterns, resulting in clients with less vulnerability to energy-related insecurity. Future evaluation results will help illustrate what impact the funds spent on REACH-type programs have on client payment and usage patterns.

C. Areas of Concern

The addition of delegated case management to the program generated the most discussion among program administrators at the January meeting. It appears to some administrators that this addition has not added any real benefit to the program and, indeed, may be an

---

impediment. Some CAA staff feels that collaborative case management does little but reduce the amount of time that is available for client contact. Others, however, feel that the passage of time may strengthen working relationships between delegated case managers and CAA program administrators and make the concept more viable. Concerns about delegated case management were discussed at the January training session and strategies were recommended to resolve those concerns. Some administrative personnel advocated for an extension of the program's end date. They cited the lack of initial training and amount of time required to make the program operational as difficulties that have lead to a difficulty serving the number of clients mandated. Although no extension has been granted, the decision was made to reduce the number of clients that would be served by the program (reduced to 1,744 from 2,044). The reduction in numbers may well alleviate concerns expresses by administrators.

Concern about training provided to CAA administrators was also evident in the survey. This, in large part, is due to the fact that the current OHCS program coordinator was hired after the program had already begun. Thus, there was some lag time before the new OCHS coordinator was installed and training could be scheduled.

A technical concern that was expressed was the use of the TRACKER data system. Some administrators feel that the system is difficult to use, outdated, and should be replaced.

The discontinuation of the participant survey may also be worthy of reconsideration. Initially, pre and post participant surveys were planned. Both were discontinued and may have been seen as burdensome to those who were faced with administering them (generally CAA REACH coordinators). Past surveys have duplicated demographic information that is already being tracked by existing databases and the form could be streamlined to impose less of a burden. The ability to contact clients for a post survey is also a difficulty that needs to be considered when trying to gather such data. Nevertheless, an opportunity to collect relevant data from participants on their perceptions of the effectiveness and merit of the REACH program is being missed. This data could include information, from the client's perspective, detailing aspects of the program's services that they feel are especially beneficial. For example, the survey could help document educational methods that clients find particularly useful or not useful. This information could be used to help fine tune future REACH Programs to insure that the most effective social service is being provided. In any case, client input, negative or positive is at this time limited. Thus it seems wise to consider the reinstitution of at least a post-program participant survey.

If a survey of participants is conducted, it should be distributed by OHCS. This will ensure the anonymity of respondents and will not impose an additional workload on CAA REACH coordinators. The survey should be simple and easy to complete, and aimed at the reading skills of participants, to ensure a high response rate.

Appendix A: Energy Burden Calculation

The following definition of energy burden and method of energy burden calculation are taken from the logic model developed by quantec.

In general, everyone is in agreement that energy burden is defined as:

$$\frac{Energy\ Cost}{Income}$$

Therefore change in energy burden is measured as:

$$\frac{\Delta Energy\ Cost}{\Delta Income}$$

This general definition, therefore, requires tracking energy usage, energy prices, and participants' income.

Unfortunately, due to diverse potential components of both the numerator and the denominator, this equation is not as simple as it appears. Both energy cost and income pose some interesting computational challenges. The expanded equation for energy burden has the following form.

$$\frac{Energy\ Consumption * \Pr ice}{Earned\ Income + Subsidies}$$

Energy cost is energy consumption multiplied by the price paid. In terms of energy consumption, the question is whether actual or weather normalized consumption should be used. Furthermore, should energy consumption include all forms of energy or only what is used in the home? Should energy used in the home include bulk fuels or only metered usage? As for the price component, should the price be held constant or should our energy burden definition reflect price changes?

For the income component, the questions that arise also revolve primarily around the composition. In other words, the question is whether income should or should not include transfer payments. Other questions involve both the number of income earners and number of people in the household.

We propose the following definitions:

Normalized Energy Burden. This is perhaps the best definition to use for estimating overall Program impacts. This definition attempts to estimate the impact of the REACH Program controlling for the changes in the weather and/or prices. The following equation is to be used:

$$\frac{Normalized\ Energy\ Consumption * Energy\ price\ (pre)}{Earned\ Income}$$

Both pre- and post-normalized annual energy consumption estimates are obtained using the Princeton Scorekeeping Method (PRISM). This produces estimates of "what consumption would have been had the weather been normal." The difference between the pre- and post-normalized annual consumption is the REACH impact in terms of energy conservation.

Only metered energy (electricity, natural gas, and propane) is to be used.

Energy price should be fixed at the pre-program level.

The income portion of the equation should only include earned income. The limitation of the income to only the earned portion is motivated by the fact that REACH is intended to impact the amount participants earn and reduce their reliance on other income sources.

The difference between the pre- and the post-program energy burden estimates is an assessment of the overall program impacts under conditions of constant weather and prices.

Actual Energy Burden. While the normalized energy burden is a good "academic" measure of the Program impacts, the burden that the participants actually experience is defined as:

$$\frac{Actual\ Energy\ Consumption * Energy\ price}{Total\ Income}$$

The numerator of this equation reflects what the participants actually paid in the pre- and post-program periods. As such, the equation uses total *annualized* billed energy consumption (again electricity and natural gas only) and the pre and post energy prices. Total income includes earned incomes as well as transfer payments.

This definition does not attempt to separate out non-programmatic effects, and it reflects what the participant's actually experienced pre and post participation. Any changes reflected in this index are composite of several factors (e.g., changes in price, weather, transfer payment amounts, etc.). While this renders the index not very useful for long-term impact assessment, it is a true reflection of the conditions of low-income households' energy burden and should be made available to policy makers.

Worst Month Energy Burden. We recommend also computing a worst month energy burden pre and post Program. This may be normalized using the ratio of pre- and post-Program heating degree-days and the

pre-Program prices. It can also be calculated as actual worst month index. Both would be very useful additions to the evaluation report.

Appendix B: Demographic Information

Demographic information has been calculated using data generated by Oregon Housing and Community Services Databases through March of 2001

Table 10: Participant Education Levels

Education Level	Federal		PacifiCorp	
	Number	%	Number	%
O-8th Grade	40	5%	6	5%
9-12th grade (non-graduate 19-24)	34	4%	3	2%
9-12 Grade (non-graduate adult	134	17%	25	20%
High School Graduate/G.E.D.	276	35%	40	33%
High School/Some College	110	14%	28	23%
College Graduate	27	3%	4	3%
Status Unknown	171	22%	17	14%

Source: OCHS data

Table 11: Family Type of REACH Participants

Family Type	Federal		PacifiCorp	
	Number	%	Number	%
Single Parent Female	314	64%	26	35%
Single Parent Male	21	4%	5	7%
Two Parent Household	100	20%	27	36%
Single Person	60	12%	16	22%

Source: OCHS data

Table 12: Family Size of REACH Participants

Family Size	Federal		PacifiCorp	
	Number	%	Number	%
One Person in Household	109	16%	16	19%
Two Persons in Household	137	20%	22	26%
Three Persons in Household	171	26%	15	18%
Four Persons in Household	130	19%	20	23%
Five Person in Household	68	10%	9	10%
Six Persons in Household	30	4%	3	3%
Seven Persons in Household	18	4%	0	
8+ Persons in Households	6	1%	1	1%

Source: OCHS data

Table 13:Insurance Status of REACH Participants

Health Insurance Status	Federal		PacifiCorp	
	Number	%	Number	%
Have Health Insurance	715	41%	Not Available	
No Health Insurance	1049	59%	Not Available	

Source: OCHS data

Table 14:Poverty Level of Reach Participants

Poverty Level	Federal		PacifiCorp	
	Number	%	Number	%
Under 75% of Poverty Level	508	66%	52	47%
76 to 100% of Poverty Level	119	16%	27	25%
101 to 125% of Poverty Level	64	8%	19	17%
126 to 150% of Poverty Level	31	4%	3	3%
151% or Above	45	6%	9	8%

Source: OCHS data

Table15: Housing Type of REACH Participants

Housing Type	Federal		PacifiCorp	
	Number	%	Number	%
Rent	552	84%	61	69%
Own	108	16%	27	31%

Source: OCHS data

Appendix C: CAA/State Program Administrators Survey

Reach Administrators Survey

The following survey is designed to help evaluate the REACH Program by gathering information from those who know the program best: those who administer it. This survey is designed to gather information about the program, and serve as the starting point for a discussion of the REACH Program at the training session on January 23.

Your cooperation in filling out the surveys is greatly appreciated!

Sincerely,
Robert Choquette
Robert Ault
Community Service Center
University of Oregon

Program Design

Q-1 How familiar are you with the underlying assumptions of the REACH Program?
- ❑ VERY FAMILIAR
- ❑ FAMILIAR
- ❑ SOMEWHAT FAMILIAR
- ❑ NOT FAMILIAR

Q-2 Please state what you believe are the goals of the REACH Program
1. _____
2. _____
3. _____
4. _____

Q-3 Do you believe reducing energy burden is a realistic goal for the REACH Program?
- ❑ YES
- ❑ NO

Q-4 How effective do you feel the REACH Program is in reducing energy burden?
- ❑ VERY EFFECTIVE
- ❑ SOMEWHAT EFFECTIVE
- ❑ NOT EFFECTIVE

Q-5 How important do you believe energy education is as a component of the REACH Program?
- ❑ VERY IMPORTANT
- ❑ SOMEWHAT IMPORTANT
- ❑ NOT IMPORTANT

Q-6 How often do you refer clients to the weatherization component of the REACH Program?
- ❑ OFTEN
- ❑ SOMETIMES
- ❑ SELDOM
- ❑ NEVER

Q-7 In your opinion, what have been the **most** effective aspects of the REACH Program design process?

1. _____

2. _____

3. _____

Q-8 In your opinion, what have been the **least** effective aspects of the REACH Program design process?

1. _____

2. _____

3. _____

Program Delivery

Q-9 Do you feel that current delivery procedures for the REACH program are effective?
❑ YES
❑ NO

Q-10 Do you believe that the REACH Program you administer or participate in is adequately staffed?
❑ YES
❑ NO

Q-11 Do you believe that the training provided to you to administer the REACH Program was adequate?
❑ YES
❑ NO

Q-12 If you answered **no** to Q-11, what additional training should be provided?

_____
_____
_____

Q-13 How did your agency implement its marketing approach?

_____
_____
_____

Q-14 What are the most effective promotional activities your agency uses?

_____
_____
_____

Q-15 How well have the planned delivery procedures that your agency uses worked during actual implementation?
❑ VERY WELL
❑ ADEQUATELY
❑ NOT VERY WELL

Program Administration

Q-16 If you have questions about REACH Program implementation, are administrative personnel available to answer those questions?
❑ YES
❑ NO

Q-17 If you have concerns about REACH Program operation, are administrative personnel available to discuss those concerns?
❑ YES
❑ NO

Q-18 Do you believe your agency is meeting all of the requirements of the REACH program?
❑ YES
❑ NO

Q-19 How do the administrative costs of REACH compare to other programs you have administered?
❑ REACH IS MORE EXPENSIVE
❑ REACH COSTS ABOUT THE SAME
❑ REACH IS LESS EXPENSIVE
❑ DON"T KNOW

Q-20 Do you believe that, in the future, administrative costs will increase, decrease or stay the same?
❑ INCREASE
❑ DECREASE
❑ STAY THE SAME
❑ DON"T KNOW

Program Implementation

Q-21 Do you believe the REACH Program is effective as an outreach tool for other programs?
❑ YES
❑ NO

Q-22 Does your agency have a field monitoring process in place?
❑ YES
❑ NO

Q-23 Are program participants responsive to the program information you provide?
❑ YES
❑ NO
❑ NOT SURE

Participation Data

Q-24 What REACH services are **most** often used by your clients?

1. _____
2. _____
3. _____

Q-25 What REACH services are **least** often used by your clients?

1. _____
2. _____
3. _____

Q-26 If some REACH services are unpopular, why do you believe this is so?

_____
_____
_____

Q-27 If participants have dropped out of the REACH Program you administer, please list the most often stated reasons for their discontinued participation.

_____
_____
_____

Q-28 Do you think that the Tracker data collection system is effective?
- ❑ YES
- ❑ NO
- ❑ DON"T KNOW

Q-29 Are you familiar with the goals of the REACH Program evaluation?
- ❑ YES
- ❑ NO

Q-30 Do you feel that all the data needed for the REACH Program evaluation is being gathered?
- ❑ YES
- ❑ NO

Q-31 Do you feel that all reporting needs of the REACH Program are being met?
- ❑ DON'T KNOW
- ❑ YES
- ❑ NO

Q-32 Do you feel that REACH is an effective social services program?
- ❏ YES
- ❏ NO

Q-33 If you answered **no** to Q-32, please describe why you believe REACH is not effective**.**

_____
_____
_____

Thank you for your help!

Appendix D: Supplemental Survey

The primary area of concern identified at the recent Salem REACH administrators meeting was the institution of case management. In order to quantify the depth of dissatisfaction with case management and to track changes in those levels over time, I would greatly appreciate the completion of these additional survey questions.

Q-1   Has the addition of case management in the second cycle of REACH helped provide clients for your energy education classes?
❑ YES
❑ NO

Q-2   Is case management an effective way to provide referrals for your REACH program?
❑ YES
❑ NO

Q-3   Did you participate in the first cycle of REACH?
❑ YES
❑ NO

Q-4   If you answered **yes,** please rate the second cycle of REACH, which includes case management.
❑ REACH IS MORE EFFECTIVE WITH CASE MANAGEMENT
❑ REACH IS LESS EFFECTIVE WITH CASE MANAGEMENT
❑ NO CHANGE IN EFFECTIVENESS WITH CASE MANAGEMENT

Thank you for your help!