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Date: January 30, 2004

To: Rebecca Eberle

From: M. Sami Khawaja

Re: Draft Utah HELP Evaluation Comments

Utah Division of Public Utilities Evaluation – Reports 1 and 2

The Utah Division of Public Utilities Evaluation was comprehensive, clear, and well thought out. The evaluation investigated the following and found no significant problems:

1. Most (97%) customers on HELP primarily come from HEAT and, as such, are likely qualified. Of the non-HEAT customers on HELP, few eligibility exceptions were found and noted.
2. The surcharge was appropriately included in the Utah Power bills and was properly excluded from eligible customers' bills.
3. The company over-collected beyond the amount allowed by the Commission. It was noted that collecting the exact amount is very difficult. We concur.
4. The start-up costs by the company and the agencies were within the commission's allowable levels.
5. The interest on the collected funds was computed correctly.
6. Credit was applied appropriately.
7. Re-certification was done appropriately.
8. Program delivery and administration costs were found to be reasonable.

The following describe areas that could be revised in future reports in order to more accurately assess the results of the Program. We recognize that a number of these areas are improvements that may take some time, but would be of value in a longer term analysis of the actual impact of the HELP Program.

Performance Measures Lists. The Division developed a list of measures to use in the evaluation that were found to be inconclusive due to the inability to establish attribution. A comparison group, made up of customers with incomes that meet the requirements of the Program but were not participants, would provide the data necessary to establish attribution.

In conducting assessments of the impacts of conservation programs, evaluators have traditionally used "quasi-experimental design." Using this approach, the behavior of the participants is compared to that of a similar group of nonparticipants (comparison group). The purpose is to estimate "what would have happened in the absence of the program." Rarely, however, in low-income evaluations is an appropriate comparison group readily available; utilities almost never have access to income data on their customers. Lacking a true comparison group as a means of comparison, evaluators are often constrained to 1) using data on participants, but from time periods prior to their actual program participation, 2) using customers waiting to receive the service, 3) using customers from known low-income geographic concentration, 4) using other low income programs such as food stamp participants, or 5) other means.

In the following sections, we present examples of other studies of similar efforts that had been able to establish attribution.

PacifiCorp - Washington Rate Discount Program
Quantec, LLC

Quantec was able to estimate reduction in arrears and other collection costs for program participants (approximately 5,500 households). The program period covered three years. Quantec used participants from years 2 and 3 as a comparison group for year 1. Similarly, year 3 participants were used as the comparison group for year 2. In this analysis, a year 1 participant's billing and payment data (covering the year before and the year after participation) were compared to the same period's data for a year 2 and year 3 participant.

There were three steps to the preparation of the data for this approach. The first step was to merge the program data with utility billing records. The utility data were used for the information on energy consumption and to calculate the accrual of arrears in the periods prior to and following program participation. It is important to note that the available data provided no information on the actual level of arrears for participants. Instead, arrears were set to zero starting at the beginning of the pre-program year and then calculated based on the accrual of the difference between the amount paid and the amount due during that pre year.

For the 2000 program participants, the comparison group was selected from the 2001 and 2002 participants. Similarly, for the 2001 participants, the comparison group was selected from the 2002 customers. No comparison group was available for the 2003 Program. All participants and comparison groups were combined into one dataset for overall analysis of Program impacts. Table 1 illustrates the benefits realized by participants over the three-year program period as determined by comparing the participant's and control group's actions.

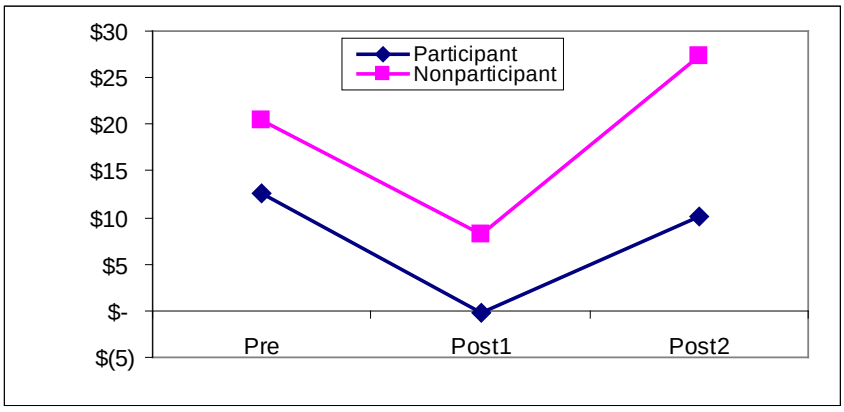
Table 1: Benefits Washington Rate Discount Program/PacifiCorp

Reduction in Arrears	$298,980
Time Value	$19,484
Reduction in Notices	$3,066
Reduction in Collections	$1,622
Reduction in Shutoffs	$4,349
Reduction in Mobility	$135,030
Total Benefits	$462,531

Columbia Gas of Ohio- Warm Choice
Quantec, LLC

The use of a comparison group can be critical to the findings. For example, in a study conducted by Quantec for Columbia Gas of Ohio, the participants' arrears decreased after participation in the program, but so did the comparison group's. The program impact was estimated as the difference between the two observed changes in arrears. During the two years post participation reviewed, the participants arrears actually increased. Without a comparison group, one would have assumed that the program *caused* the increase or, at best, declared the results inconclusive. In fact, the observed increase in arrears was due to significant increases in gas rates and bad economic conditions. When the comparison group was examined, the same trend was observed; however, the comparison group was significantly worse off than the participants. Finally, the estimated impact of the program was a reduction of approximately $60 and $147 in years 1 and 2 post participation. The results of these findings are illustrated in Figure 1.

Figure 1: Average Monthly Arrearage/ Columbia Gas of Ohio



Oregon Housing & Community Services - Oregon Energy Assistance (OEA) Program
Quantec, LLC

For this program, the participants' own payment behavior in different time periods was used as a proxy for a comparison group. The following summarize the findings of the impact assessment of the Program:

1) The actual arrears approximately one year after the energy assistance payment is made is estimated to be roughly $340 less than it would have been had the Program not existed. Of that amount, $207 is directly the result of applying the payment from OEA, and $133 is due to customers' ability to "catch up" and start paying part of their own outstanding arrears.

2) Due to the reduction in the daily account balance per participant, the Companies (PacifiCorp and PGE) saved approximately $11 per participant simply due to time value of money and reducing their need to acquire capital.

3) Utilities often incur significant costs in attempting to collect debt from customers. These collection activities include phone calls, letters, customer visits, and collection agency costs. The program reduced these costs by approximately $190,000 over the study period (18 months; or about $125,000 annually).

4) When energy costs are high, household funds are diverted from other uses including food, medical care, and rent. In some cases, high-energy bills may force occupants to move from their current dwelling either to lower energy costs or to avoid paying an energy bill. Not only are frequent moves expensive and inconvenient, they have other extremely serious effects. These include increasing school dropouts and inability to hold a job. Energy assistance and weatherization programs lower the energy vulnerability of the participating low-income families and their forced mobility. Mobility can be especially hard for the elderly and families with children. We followed a conservative approach of assuming reductions of only $700 per move and about 15% in mobility. This amounts to over $700,000 of benefits for the program overall. Reduced mobility also benefits the utility. For example, when a customer moves, the utility often has to read the meter prior to assigning a new account. The benefit to the utilities is estimated at just over $22,000.

Eugene Water and Electric Board - Energy Assistance Program (Energy Share)
Quantec, LLC

A comparison group was found by selecting customers in the same "neighborhood" as the participants. For each participant, we selected at least two neighbors. The theory is low-income families are likely to have low-income neighbors. Following are the relative findings:

1) The net decrease in arrears was estimated at $374, of which $196 was in the form of the Energy Share assistance.

2) The calculations of the aggregate benefit for the utility for reducing outstanding debt was estimated at $32 pre participant or a total of $97,899 for the program overall.

3) To study the impacts of program participation on various collection actions, participants were compared to a comparison group as shown in Table 2 below. These groups were classified based on payment behavior during the pre- and post-participation periods. Behavior was classified as "normal" (i.e., no shutoffs) or "problematic" (i.e., shutoffs). We only analyzed those with shutoffs in the period prior to participation. The average annual number of shut-offs for program participants declined from 1.66 during the pre- to 0.08 during the post-participation period, which represents a 95% decline. For non-participants, the decline was more modest, from 1.4 pre to 0.2 post (an 87% decline). We calculated both the gross and net impacts on shutoffs (subtracting out the observed change for non-participants).

Table 2: Average Annual Shutoffs by Group

	Energy Share Participants			Control		
	Number	Pre	Post	Number	Pre	Post
Problematic to Normal	109	1.7	0	20	1.4	0
Problematic to Problematic	8	1.3	1.2	1	1.2	3.7
Total	*117*	*1.7*	*0.1*	*21*	*1.4*	*0.2*

4) We performed similar analyses for other collection actions, including door hangers, final notices, and assignment to collection. The results appear below in Table 3.

Table 3: Annual Savings Associated with Energy Share Participation, Net of Non-participant Changes

Incident	Annual Decline per Participant	Aggregate Annual Decline	Per-Incident Cost
Door Hangers	0.7097	2,184	$15
Final Notices	0.7468	2,298	$0.75
Assigned to Collection	0.0002	1	$69
Shutoff	0.0675	208	$20

5) Overall cost effectiveness was analyzed using the benefits above as well as some non-energy benefits. Results are shown in Tables 4 and 5 below. We analyzed high and low scenarios using various assumptions that are beyond the discussion in the memorandum.

Table 4: Energy Share Cost Effectiveness Results – High

	Societal Test	Utility Test	Ratepayer Test
Benefits			
Reduction in Arrears		$1,150,394	$1,150,394
Time Value	$97,899	$97,899	$97,899
Reduction in Collections	$155	$155	$155
Reduction in Final Notices	$1,948	$1,948	$1,948
Reduction in Door Hangers	$36,616		
Reduction in Shutoffs	$4,688		
Reduction in Mobility	$323,085		
Consumption Savings	$256,801	$256,801	$256,801
Total Benefits	$721,192	$1,507,196	$1,507,196
Costs			
Program Administration and Delivery	$211,908	$211,908	$211,908
Weatherization	$0	$0	$0
Assistance Payments and Arrearage Payments		$603,593	$603,593
Lost Revenues			$439,917
Total Costs	$211,908	$815,501	$1,255,418
Net Benefits	$509,283	$691,695	$251,779
B/C Ratio	3.40	1.85	1.20

Table 5: Energy Share Cost Effectiveness Results – Low

	Societal Test	Utility Test	Ratepayer Test
Benefits			
Reduction in Arrears		$1,150,394	$1,150,394
Time Value	$97,899	$97,899	$97,899
Reduction in Collections	$37	$37	$37
Reduction in Final Notices	$1,724	$1,724	$1,724
Reduction in Door Hangers	$32,755		
Reduction in Shutoffs	$4,152		
Reduction in Mobility	$323,085		
Consumption Savings	$47,227	$47,227	$47,227
Total Benefits	$506,879	$1,297,281	$1,297,281
Costs			
Program Administration and Delivery	$211,908	$211,908	$211,908
Weatherization	$0	$0	$0
Assistance Payments and Arrearage Payments		$603,593	$603,593
Lost Revenues			$80,902
Total Costs	$211,908	$815,501	$896,403
Net Benefits	$294,971	$481,780	$400,878
B/C Ratio	2.39	1.59	1.45

State of Ohio -Ohio Weatherization
Michael Blasnik

This is an evaluation of a weatherization program that reduced annual energy cost of participants by approximately $150 annually (versus HELP, which reduced cost by about $120). Major findings included:

- The participants in this program reduced their arrears by 63% (from $142/year to $42). The comparison group increased their arrears over the same time period by 7%.
- The frequency of collection activities declined by 6.4% for the participants while increasing by 20.8% for the comparison group.
- Participants experienced 39.3% reduction in disconnections while the comparison group increased by 28.5%. In absolute terms, of the 1,500 participants included in the evaluation, this translated to 40 avoided terminations.

States of Wisconsin and Washington – Weatherization Evaluations
Quaid and Pigg

In measuring the impact of low-income energy services on arrears, Quaid and Pigg found in the case of Wisconsin (multifamily weatherization) a reduction of $56 among the participants and an increase of $176 among the comparison group. In Washington, the participants in the budget planning effort offered by the local agency saw a decrease from $93 to $9 in the level of arrears. In the same time period, the comparison group had no change in their level of arrears.

Equitable Gas - Energy Assistance
H. Gil Peach

In an analysis of the Equitable Gas energy assistance effort, Peach found that "before Energy Assistance Program was introduced, Equitable had approximately 8,700 payment troubled low-income customers who were paying on average 50% of the tariffed price. EAP has provided an alternative that works for most of these customers by providing a lower price that 70% of those who enter paid consistently for at least one year, and 68% for at least two years as measured in this study. Although EAP bills less, it collects about 100% of what is asked. Stated another way, the price offer is lower than under the regular tariff, but the net received is higher than under the regular tariff. In addition, restoration of the habit of reliable payment is an investment in the future of both the customer and the utility."

Other Examples

1) The Pennsylvania Customer Assistance Programs (CAPs) involve rate discounts reducing bills to an affordable level. According to the Bureau of Consumer Services (Pennsylvania Public Utilities Commission), on average, 82% of all program participants statewide make full and timely payments each month. This represents a 50% reduction.

2) Columbia Gas of Ohio reported that termination notices for participants in their CAPs were reduced by 48%.

3) Clarke County Public Utilities District (Washington) reported that their rate discount delinquencies declined from 74% to 18%. Number of disconnections decreased by 64%.

4) According to Niagara Mohawk (NY), their rate discount program has doubled the number of payments received from participating low-income customers. During the same period, low-income customers not receiving the discount actually decreased their number of payments.

5) National Fuel Gas Low Income Rate Assistance Program (LIRA) decreased number of disconnections by over 80%

Bottom Line

The evaluation conducted by R.W. Beck and the Division handles process and delivery inquiries very well. Our concerns are on the impact side and issues of attribution. We feel that a comparison group would have helped tremendously in determining attribution. This is especially the case when faced with extreme changes in the economy and customer rates.

When the cost and time requirements do not allow for detailed analysis, the evaluator can rely on secondary sources when available. Given the results of similar programs presented above, and the Division's analysis that the program is being effectively administered, there is no reason to assume that the positive impacts of these Programs would not also apply to the HELP Program.

At this point, we see the following possible alternatives:

1. ***Use the results from the secondary sources presented***. While they do not give the exact answers as to the impact of this Program, they give an indication of the direction of the various indices. This may be sufficient given that the Program was never intended to prove cost effectiveness explicitly. We will provide complete copies of the studies referred to in this document upon request.
2. ***Get a reasonable proxy for a comparison group*** from either the participants themselves or by selecting one or two geographic areas known to be low income. This is a reasonable approach and can produce results in a reasonable time frame. However, even a "reasonable time frame" may not be possible given the tight time line of the third year evaluation of the Program. We estimate that the effort will take about two to three weeks from the time the data are made available. Data preparation on PacifiCorp end will probably require at minimum 2 weeks. In addition, there is an initial process required to identify a reasonable data source for a comparison group.
3. ***Get a better comparison group*** by matching two or three nonparticipants for each participant. This may be accomplished by selecting neighbors of each participant. The selection may be further refined based on available data such as energy consumption, levels of arrears, etc. This approach will take longer and most likely is not feasible within the timeline. We estimate that the data preparation and analysis will take at least four weeks from the receipt of data from PacifiCorp. As in 2 above, data preparation on PacifiCorp end will probably require at minimum 2 weeks.