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September 15, 2006

IDAHO PUBLIC
UTILITIES COMMISSION

VIA OVERNIGHT DELIVERY

Idaho Public Utilities Commission
472 West Washington
Boise, ID 83702-5983

Attention: Jean D. Jewell
Commission Secretary

Re: Case No. PAC-E-06-10
In the Matter of the Petition of PacifiCorp to Determine the Appropriate Payment
Structure of Schedule 21

As stated in the Petition for Declaratory Order, (PAC-E-06-10), PacifiCorp (d.b.a. Rocky Mountain Power) hereby submits for filing an original and seven copies of Direct Testimony and Exhibits in the Matter of the Petition of PacifiCorp to Determine the Appropriate Payment Structure of Schedule 21.

Service of pleadings, exhibits, orders and other documents relating to this proceeding should be served on the following:

Dean Brockbank
PacifiCorp
201 South Main Street, Suite 2200
Salt Lake City, Utah 84111
Dean.Brockbank@PacifiCorp.com

Brian Dickman
PacifiCorp
201 South Main Street, Suite 2300
Salt Lake City, Utah 84111
Brian.Dickman@PacifiCorp.com

It is respectfully requested that all formal correspondence and Staff requests regarding this material be addressed to:

By e-mail (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, Oregon, 97232

By fax: (503) 813-6060

Sincerely,

D. Douglas Larson
Vice President, Regulation
Enclosures

CERTIFICATE OF MAILING

I HEREBY CERTIFY that on the 15th day of September 2006, I served a true and correct copy of Direct Testimony and Exhibits in Docket No. PAC-E-06-10 upon the following named parties by the method indicated below, and addressed to the following:

Brad Purdy Attorney at Law Community Action Partnership Association of Idaho 2019 N. 17 th Street Boise, ID 83702		Hand Delivered
		U.S. Mail
	*	Overnight Mail
		FAX



Peggy Ryan
Regulation Department

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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

**IN THE MATTER OF THE PETITION OF
PACIFICORP TO DETERMINE THE
APPROPRIATE PAYMENT STRUCTURE
OF SCHEDULE 21**

) CASE NO. PAC-E-06-10
)
) Direct Testimony of Brian S. Dickman
)
)

PACIFICORP

CASE NO. PAC-E-06-10

September 2006

1 **Q. Please state your name, business address and present position with**
2 **PacifiCorp dba Rocky Mountain Power (the Company).**

3 A. My name is Brian S. Dickman, and my business address is 201 South Main Street,
4 Suite 2300, Salt Lake City, Utah. My current position is Manager, Idaho
5 Regulatory Affairs.

6 **Qualifications**

7 **Q. Please briefly describe your educational and professional background.**

8 A. I received a Bachelor of Science Degree in Accounting from Utah State
9 University in 2001 and a Masters of Business Administration from the University
10 of Utah in 2002. Prior to joining PacifiCorp in 2003, I was employed as an analyst
11 for Duke Energy Trading and Marketing. At PacifiCorp, I worked as a revenue
12 requirement analyst before taking my current position. I have been involved in the
13 preparation and prosecution of numerous filings with public utility commissions
14 in PacifiCorp's six-state service territory.

15 **Q. What are your current responsibilities as Manager of Idaho Regulatory**
16 **Affairs for Rocky Mountain Power?**

17 A. My current responsibilities are focused on managing the Company's regulatory
18 filings in Idaho. I am involved in regulatory planning and analysis and serve as
19 PacifiCorp's external contact for regulatory issues in Idaho.

20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my testimony is to support the Company's petition for a
22 declaratory order to determine the appropriate payment structure of Schedule
23 No. 21.

1 **Q. Why is the Company petitioning the Commission for such an order?**

2 A. PacifiCorp had previously committed to the Community Action Partnership
3 Association of Idaho (“CAPAI”) that it would make a filing with the Commission
4 to address the structure of funding provided by the Company for low-income
5 weatherization services under Schedule No. 21.

6 In Commitment I13b, adopted in Order No. 29998, Case No. PAC-E-05-8,
7 the Company agreed to include in the direct testimony of its next general rate case
8 an analysis of the costs and benefits of changing its current practice of matching
9 50 percent of federal contributions for low-income weatherization measures to
10 matching at a higher percentage amount. Commitment I13b was accepted, based
11 on a previous stipulation in Case No. PAC-E-05-1, Order No. 29833, which
12 proposed a general rate case was to be filed by the Company, no later than April
13 29, 2006, to address an unresolved and unrelated cost of service issue.

14 On June 21, 2006, the Company made three applications with the
15 Commission to adjust rates for tariff Schedule Nos. 10, 400, and 401 (Case Nos.
16 PAC-E-06-4, PAC-E-06-8, and PAC-E-06-9). The above applications are based
17 on settlement agreements reached between PacifiCorp and the representatives of
18 customers served under the respective rate schedules. PacifiCorp contends that,
19 pending Commission approval of the applications, a general rate case would no
20 longer be needed during 2006.

21 In an attempt to honor its commitment made in Case No. PAC-E-05-8, the
22 Company sought agreement from CAPAI to address the issues raised in
23 Commitment I13b in a filing other than a general rate case. Such an agreement

1 was reached and, on June 19, 2006, the Company and CAPAI executed the
2 stipulation attached hereto as Exhibit 1. As part of the stipulation PacifiCorp
3 agreed to make a filing before the Commission no later than September 1, 2006.

4 **Q. Did the Company agree to anything else in exchange for CAPAI's agreement**
5 **to forgo a general rate case?**

6 A. Yes. PacifiCorp agreed to (1) contribute \$10,000 each to SouthEastern Idaho
7 Community Action Agency ("SEICAA") and Eastern Idaho Community Action
8 Partnership ("EICAP") to be used as energy assistance for the Lend-a-Hand
9 program during the 2006-2007 heating season, and (2) support legislation,
10 sponsored by CAPAI during the 2007 Idaho general legislative session, that
11 would give the Commission authority to approve discounted rates for low-income
12 customers if requested by a utility. An example of such legislation is included as
13 an attachment to the stipulation provided in Exhibit 1. The proposed legislation
14 would give the Commission authority at its discretion to establish a preferential
15 rate for low-income customers, with program costs recovered from other utility
16 customers. While the Company has committed to support the proposed
17 legislation, it has not committed to request or establish such a bill discount
18 program in Idaho.

19 **Q. Please describe PacifiCorp's initiatives to assist low-income customers in its**
20 **service territory.**

21 A. PacifiCorp has had a variety of programs in place to assist households in financial
22 crisis with their energy needs for many years. Its Low-Income Weatherization
23 program has been in effect since 1988, with over 600 homes completed to date.

1 The Company has also donated, and solicited donations, to the Lend-a-Hand
2 energy assistance program for many years through envelopes distributed in
3 November and February billings. PacifiCorp has matched all contributions to
4 Lend-a-Hand since November 2000. PacifiCorp recognizes the importance of
5 providing services to households with limited income.

6 The Low-Income Weatherization Program is a demand side management
7 (“DSM”) program intended to reduce electricity consumption and monthly bills
8 by increasing the efficiencies of low-income homes. PacifiCorp partners with
9 EICAP in Idaho Falls and SEICAA in Pocatello to provide energy efficiency
10 services, at no cost to income-qualifying households, through Schedule No. 21.
11 PacifiCorp reimburses the agencies 50 percent of the cost of installing approved
12 cost-effective measures. Federal funding is available to the agencies that cover the
13 remaining costs so that the services are provided at no charge to participating
14 households.

15 The Company’s dedication to its low-income customer programs is further
16 illustrated by the commitments made as part of the MidAmerican Energy
17 Holdings Company purchase of PacifiCorp, Case No. PAC-E-05-8. In
18 Commitment I14, PacifiCorp committed to a total contribution level from all
19 sources to low-income bill payment assistance in Idaho of \$40,000 annually for a
20 five year period beginning July 1, 2006. This ongoing contribution will
21 substantially increase annual contribution levels. Through Commitment I15
22 PacifiCorp will provide shareholder funding to study an arrearage management
23 project. In Commitment I41, PacifiCorp agreed to initiate a collaborative effort to

1 track low-income issues by identifying and collecting data pertinent to low-
2 income customers in the Company's Idaho service area.

3 **Q. Has PacifiCorp made any recent changes to Schedule No. 21?**

4 A. Yes. Pursuant to Commitment I13a, Case No. PAC-E-05-8, and as approved by
5 the Commission in Tariff Advice 06-03, effective August 1, 2006, PacifiCorp will
6 reimburse the agencies up to 100 percent of the cost of installing approved
7 measures if government funds are exhausted. Also, effective August 1, 2006, the
8 previous maximum average investment per household of \$1,500 is no longer
9 applicable. Instead, PacifiCorp will reimburse costs as described above with no
10 per household maximum or average payment applied, providing the partnering
11 agencies more flexibility in administering the program. The Company will
12 continue to reimburse its partnering agencies 15 percent of the Company's rebates
13 on each completed home to cover their administrative costs. Total PacifiCorp
14 funding available continues to be subject to a cap of \$150,000 annually.

15 **Q. Why is it important that the Low Income Weatherization Program be cost**
16 **effective?**

17 A. As stated earlier, the Low-Income Weatherization Program is a DSM program
18 intended to reduce electricity consumption and monthly bills by increasing the
19 efficiencies of low-income homes. Not only do individual customers benefit from
20 weatherization services, but all PacifiCorp customers in Idaho benefit from the
21 reduced electricity demand on PacifiCorp's system, which results in lower
22 incremental power supply costs. As a DSM program, funding for Schedule No. 21
23 is recovered from customers through the Schedule No. 191 Customer Efficiency

1 Services Rate Adjustment. It is important that the funding burden of the program
2 is matched with the benefit of reduced energy usage and net power costs.

3 **Q. What services are provided to customers through the Low Income**
4 **Weatherization Program?**

5 A. PacifiCorp provides financial assistance to its partnering agencies on approved
6 measures under Schedule No. 21. The agencies use a Department of Energy
7 approved audit to determine if shell measures, including insulation and window
8 replacements, are cost effective in electrically heated homes. Other measures are
9 available to increase electric efficiencies such as water heating measures in homes
10 with electric water heaters and efficient lighting and refrigerators in all homes.

11 **Q. Has the Company provided the Commission with an analysis of the**
12 **program's cost effectiveness?**

13 A. Yes. PacifiCorp previously provided the Commission an analysis of the Low
14 Income Weatherization Program in support of proposed program revisions in
15 September 2005. That analysis included the results of a cost effectiveness study
16 based on estimated kWh savings and number of installations by measure and is
17 provided as Exhibit 2 of my testimony (refer to page II-2 for cost effectiveness
18 calculations). At that time and under the reimbursement policy of 50 percent
19 matching rebates, the program narrowly passed the Utility Cost Test under the
20 Integrated Resource Plan ("IRP") Decrement approach for quantifying the
21 expected benefits.

22 If the reimbursement portion is increased, the Company is concerned that
23 fewer PacifiCorp customers will be provided weatherization services. An increase

1 in the Company's reimbursement would mean a larger percentage of program
2 costs would be covered through funds collected from Schedule No. 191 and a
3 smaller percentage through federal tax funds. Because total program expenditures
4 are capped, the total cost to the utility would remain relatively unchanged, but the
5 benefits of the program would be reduced, due to fewer homes receiving installed
6 measures. Not only would fewer low-income customers in the Company's service
7 area receive energy efficiency services, but the benefit of reduced energy usage
8 and lower incremental power costs would no longer be shared by PacifiCorp's
9 Idaho customers, making the program less cost effective. In fact, the benefits of
10 the energy efficiency services could be shifted to customers of another gas or
11 electric provider through federal funds no longer available to PacifiCorp
12 customers. PacifiCorp believes that the costs and the benefits of the
13 weatherization program should be aligned and that the cost effectiveness of the
14 program should be maintained.

15 As an example, if on average the cost of completing energy efficiency
16 services on a qualifying home is \$3,000, the Company's reimbursement for
17 measures plus the 15 percent administrative cost rebate would total \$1,725. At
18 this rate, 87 homes could be completed with PacifiCorp's annual budget of
19 \$150,000. Reimbursement of 75 percent of costs under this scenario results in the
20 potential completion of 58 homes, and reimbursement of 100 percent of costs
21 results in only 45 homes completed annually. This example illustrates that
22 considerably fewer PacifiCorp customers would benefit from these energy
23 efficiency services if the funding policy is revised.

1 **Q. Has the Company analyzed the program's cost effectiveness since September**
2 **2005?**

3 **A. Yes. An updated cost effectiveness analysis is provided as Exhibit 3. This update**
4 **provides cost effectiveness results under three reimbursement scenarios:**

- 5 **▪ PacifiCorp reimburses 50% of costs, federal funding covers 50%**
- 6 **▪ PacifiCorp reimburses 75% of costs, federal funding covers 25%**
- 7 **▪ PacifiCorp reimburses 100% of costs, federal funding covers 0%**

8 **As shown in Table 3 of Exhibit 3, under a 50 percent reimbursement**
9 **scenario the program continues to pass the Total Resource Cost Test and the**
10 **Utility Cost Test. Under a 75 percent reimbursement scenario, the program no**
11 **longer passes the Utility Cost Test (Table 6). And finally, under a 100 percent**
12 **reimbursement scenario, the program fails both the Total Resource Cost Test and**
13 **the Utility Cost Test (Table 9). Costs included in the calculations are those**
14 **provided by PacifiCorp only. Federal funds aren't included because Quantec**
15 **includes only local funding in their calculations which could include utility**
16 **contributions as well as any other funding from state and local entities.**

17 **Q. Does the Company plan to monitor the program in the future?**

18 **A. Yes. As stated in Section III of Exhibit 2, PacifiCorp plans to have an impact**
19 **evaluation completed on program results once the Low Income Weatherization**
20 **Program revisions approved in January 2006 (Order No. 29952) have been in**
21 **place for two years. The evaluation plan is included in Section III of Exhibit 2.**
22 **The Company will review these results in 2008 to determine if program changes**
23 **should be made, including changes to the reimbursement policy. In addition, the**
24 **Company will file a report by May 1 of each year, beginning May 1, 2007,**

1 detailing its Idaho DSM activities and program cost effectiveness, including the
2 Low Income Weatherization Program.

3 **Q. What does PacifiCorp recommend with respect to the reimbursement levels**
4 **provided under Schedule No. 21?**

5 A. The Company recommends no change to the current structure of Schedule No. 21,
6 including the level of reimbursement provided in relation to available federal tax
7 money.

8 Providing weatherization services is an important component in the
9 Company's mix of low-income program offerings. The current 50 percent
10 reimbursement policy is consistent with the low-income weatherization programs
11 the Company offers in its other service areas. This policy allows customers to
12 receive benefits from their tax dollars as well as cost-effective services from this
13 demand side management program. Using federal grants to cover 50 percent of
14 program costs provides benefits to all PacifiCorp customers in Idaho, regardless
15 of income or participation in the Low Income Weatherization Program, because
16 all customers benefit from cost effective energy efficiency investments.

17 PacifiCorp requests that the Commission determine the current payment structure
18 is appropriate based on the reasons stated above.

19 **Q. Does this conclude your testimony?**

20 A. Yes.

Case No. PAC-E-06-10
Exhibit No. 1

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

PACIFICORP

Stipulation and Agreement

September 2006

STIPULATION AND AGREEMENT

This Stipulation and Agreement (“Stipulation”) is entered into by and between PacifiCorp, doing business as Rocky Mountain Power (“PacifiCorp” or the “Company”) and the Community Action Partnership Association of Idaho (“CAPAI”) (collectively referred to as the “Parties”) as of June 19, 2006.

I. INTRODUCTION

1. The terms and conditions of this Stipulation are set forth herein. The Parties agree that this Stipulation represents a fair, just and reasonable compromise of the issues raised between the Parties.

II. BACKGROUND

2. In the Stipulation settling the general rate case filed by the Company in Docket No. PAC-E-05-1, PacifiCorp proposed that certain cost of service issues would be addressed in a general rate case that was anticipated to be filed no later than April 29, 2006. PacifiCorp desires to not file a general rate case in Idaho in 2006 and anticipates making a filing to address certain price changes on a limited basis rather than through a general rate case. If the Idaho Public Utilities Commission (the “Commission”) approves a limited issue application, then the Company will not have the need to file a general rate case in 2006. CAPAI is willing to support PacifiCorp in its approach to avoid the need for a general rate case in 2006. This Stipulation sets forth the terms and conditions under which the Parties agree to be bound with respect to PacifiCorp’s approach to a limited issue filing and avoidance of the need to file a general rate case in 2006.

3. In anticipation of executing this Stipulation, representatives of PacifiCorp and CAPAI have held discussions several times pursuant to IDAPA 31.01.01.271 and engaged in settlement discussions with a view toward resolving the issues raised herein. Based upon the settlement discussions between the Parties, as a compromise of the Parties’ positions on the

subjects discussed herein, and for other consideration as set forth below, the Parties agree to the following terms:

III. TERMS OF THE STIPULATION

4. No later than August 31, 2006, PacifiCorp shall make a one-time cash contribution of shareholder money of ten-thousand dollars (\$10,000) to each of SouthEastern Idaho Community Action Agency ("SEICAA") and Eastern Idaho Community Action Partnership ("EICAP") (for a total aggregate contribution of twenty-thousand dollars (\$20,000)) to be used as funding assistance for the Lend-A-Hand program for the 2006-2007 heating season.

5. No later than September 1, 2006, PacifiCorp shall make a formal filing before the Commission to address those issues that PacifiCorp and the MidAmerican Energy Holdings Company agreed to address pursuant to Commitment No. I 13(b) in Docket No. PAC-E-05-8.

6. PacifiCorp agrees to provide support for legislation sponsored by CAPAI during the 2007 general Idaho legislative session that would give the Commission authority to approve discount rates for low income customers that are requested by utilities. The Company's support is limited to legislation allowing: 1) a utility to propose bill discounts on a strictly voluntary basis and subject to Commission approval, and 2) the costs and lost revenue from such discounts to be included in the utility's cost of service to be recovered in rates from other customers. An example of such legislation is attached as Exhibit A to this Stipulation and is subject to modification and approval by the Idaho legislature. The terms of this Stipulation shall not bind the Company to request or agree to establish such a bill discount in Idaho.

7. CAPAI agrees to waive the Company's commitment to file a general rate case per the Stipulation in Case No. PAC-E-05-1 and will not make any objection to the Company's applications seeking rate increases for Monsanto Corp., Nu-West Industries, Inc. and PacifiCorp's irrigation customers. In addition, CAPAI agrees that Commitment No. I 13(b) in

Docket No. PAC-E-05-8 will be addressed in the filing referenced in paragraph 5 of this stipulation rather than in a general rate case.

8. The Parties agree that this Stipulation represents a compromise of the positions of the Parties on the issues addressed herein. Other than the above referenced positions and any testimony filed in support of PacifiCorp's Application and except to the extent necessary for a Party to explain before the Commission, if necessary, its own statements and positions with respect to the Stipulation, all negotiations relating to this Stipulation shall not be admissible as evidence in any legal or regulatory proceedings regarding this subject matter.

9. No Party shall be bound, benefited or prejudiced by any position asserted in the negotiation of this Stipulation, except to the extent expressly stated herein, nor shall this Stipulation be construed as a waiver of the rights of any Party unless such rights are expressly waived herein. No findings of fact or conclusions of law other than those stated herein shall be deemed to be implicit in this Stipulation. This Stipulation shall be governed in accordance with the laws of the State of Idaho.

DATED this 19th day of June, 2006.

PacifiCorp

By 
Mark Moench
Sr. Vice President and General Counsel
PacifiCorp, dba Rocky Mountain Power

**Community Action Partnership Association
of Idaho**

By 
Brad Purdy
Attorney for CAPAI

TITLE 61
PUBLIC UTILITY REGULATION
CHAPTER 5
POWERS AND DUTIES OF
PUBLIC UTILITIES COMMISSION

61-502C. RATES – LOW-INCOME CUSTOMERS. Upon request by a water, gas or electric public utility, the Commission may approve rates, charges, services and/or facilities at a discount for the utility’s low-income residential customers. Any expenses and lost revenues as a result of these bill discounts shall be included in the utility’s cost of service and recovered in rates to other customers. For purposes of this provision, the term “low-income” is defined as follows: one hundred-fifth percent (150%) of the Poverty Guidelines updated annually in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(s).

No other statute contained within Title 61 shall be construed to prohibit the Commission from approving programs as set forth herein.

Stipulation Exhibit A

TITLE 61
PUBLIC UTILITY REGULATION
CHAPTER 3
DUTIES OF PUBLIC UTILITIES

61-315- DISCRIMINATION AND PREFERENCE PROHIBITED_-
EXCEPTION. No public utility shall, as to rates, charges, service, facilities or in any other respect, make or grant any preference or advantage to any corporation or person or subject any corporation or person to any prejudice or disadvantage. No public utility shall establish or maintain any unreasonable difference as to rates, charges, service, facilities or in any other respect, either as between localities or as between classes of service. The commission shall have the power to determine any question of fact arising under this section.

Nothing in this provision shall act to prohibit a public utility from seeking approval for, and operating, low-income residential bill discounts pursuant to Idaho Code Section 61-502C.

TITLE 61
PUBLIC UTILITY REGULATION
CHAPTER 5
POWERS AND DUTIES OF
PUBLIC UTILITIES COMMISSION

61-502. DETERMINATION OF RATES. Whenever the commission, after a hearing had upon its own motion or upon complaint, shall find that the rates, fares, tolls, rentals, charges or classifications, or any of them, demanded, observed, charged or collected by any public utility for any service or product or commodity, or in connection therewith, including the rates or fares for excursions or commutation tickets, or that the rules, regulations, practices, or contracts or any of them, affecting such rates, fares, tolls, rentals, charges or classifications, or any of them, are unjust, unreasonable, discriminatory or preferential, or in any wise in violation of any provision of law, or that such rates, fares, tolls, rentals, charges or classifications are insufficient, the commission shall determine the just, reasonable or sufficient rates, fares, tolls, rentals, charges, classifications, rules, regulations, practices or contracts to be thereafter observed and in force and shall fix the same by order as hereinafter provided, and shall, under such rules and regulations as the commission may prescribe, fix the reasonable maximum rates to be charged for water by any public utility coming within the provisions of this act relating to the sale of water.

Nothing in this provision shall prohibit the Commission from approving low-income residential bill discounts pursuant to Idaho Code Section 61-502C.

Stipulation Exhibit A

TITLE 61
PUBLIC UTILITY REGULATION
CHAPTER 3
DUTIES OF PUBLIC UTILITIES

61-301. CHARGES JUST AND REASONABLE. All charges made, demanded or received by any public utility, or by any two (2) or more public utilities, for any product or commodity furnished or to be furnished or any service rendered or to be rendered shall be just and reasonable. Every unjust or unreasonable charge made, demanded or received for such product or commodity or service is hereby prohibited and declared unlawful.

Nothing in this provision shall prohibit a public utility from seeking approval for, and operating, low-income residential bill discounts pursuant to Idaho Code Section 61-502C.

Case No. PAC-E-06-10
Exhibit No. 2

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

PACIFICORP

**Idaho Low Income Weatherization Program:
Analysis in Support of Tariff Revision**

September 2006

Final

**Idaho Low Income
Weatherization Program:
Analysis in
Support of Tariff Revision**

Prepared for:
PacifiCorp

August 22, 2005

Prepared by:
Brian Hedman
M. Sami Khawaja, Ph.D.
Quantec, LLC

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I. Program Description

The current Low Income Weatherization Program has been in place for over ten years. It is available to Utah Power customers with incomes at or below 150% of federal poverty guidelines that have installed electric heating systems. Services are provided at no cost to participants because partnering agencies are able to leverage Utah Power funding with federal and state funds they receive. Utah Power offers rebates directly to the Eastern Idaho Special Services Agency and the SouthEastern Idaho Community Action Agency (“Agencies”) that administer the Program. The average annual number of completions during the period 2000 through 2004 is 23.

Utah Power in consultation with their two partnering non-profit agencies is proposing revisions to the current program (Schedule 21). There are four goals to this effort.

1. To increase Utah Power customer participation numbers.
2. To provide incentives for the installation of additional cost effective measures.
3. To offer rebates on measures that reduce electricity consumption in homes regardless of heating source.
4. To reimburse agencies for services up to two times per home, one time per measure. This allows the installation of new technologies and/or measures that previously were not considered cost effective.

The agencies provided expected participation rates for the revised program based on their historic weatherization program experience. Estimates are presented in Table I.1.

Table I.1: Expected Annual Participation Rates

Electric Base Load Program Participants	170
Electrically Heated Homes	70

Proposed Rebates: The following summarizes Utah Power’s proposed reimbursement available to the Agencies for the installation of approved measures and reimbursement on administrative costs:

A rebate averaging up to \$1,500 per home annually (April 1 through March 31) will be provided towards the cost of installed qualifying Major and Supplemental Measures. The following measure categories will be eligible for rebates:

- Weatherization Measures in Electrically Heated Homes
- Compact Fluorescent Light Bulbs (CFLs)
- Refrigerator Replacements
- Water Saving Measures in Homes with Electric Hot Water Heaters

Weatherization

Major Measures with a Savings to Investment Ratio (SIR) of 1.0 or greater are required (based on results of the State of Idaho Weatherization Energy Analysis) on homes with an electric heating system that is operable and permanently installed with the capacity to heat at least 51% of the dwelling. If physical barriers exist that prohibit the installation of a measure, the measure is not required. A list of qualifying measures follows. Greater R-values than listed below may be installed as long as audit results show it to be cost effective:

- Insulation up to R-48 for ceilings with less than R-30 in place.
- Floor insulation over unconditioned spaces up to R-30
- Insulation (not urea-formaldehyde) up to R-26 for walls without insulation installed
- Class 40 replacement windows

Supplemental Measures qualify for a rebate when they are determined to be cost effective.

Funding is available on the following Supplemental Measures installed in electrically heated homes:

- Attic ventilation when installed with ceiling insulation
- Ground cover and water pipe insulation when installed with floor insulation
- Forced air electric space heating duct testing, insulation, and sealing in unconditioned spaces
- Weather stripping and/or caulking including blower door assisted air sealing and duct sealing
- Thermal doors
- Timed thermostats on centrally controlled multi-room heating/cooling systems

Funding is available on the following supplemental measures installed in all homes:

- Compact fluorescent light bulbs – limit 8 Energy Star certified bulbs per home placed in fixtures that are on 2 hours or more per day.
- Refrigerators identified in the Weatherization Assistance Program Technical Assistance Center (WAPTAC) database as having mean annual usage of 900 kWh or greater may be replaced with an Energy Star model with estimated annual consumption of 500 kWh or less. Replaced refrigerators must be removed and recycled in accordance with EPA guidelines.
- Pipe insulation, energy-efficient showerheads, and aerators for homes with an electric water heater.

Administrative Cost Reimbursement will be provided at 15% of Utah Power’s reimbursement for Major and Supplemental Measures with a minimum of \$150 on homes with at least one major measure installed and \$50 on homes without the installation of a major measure, not to exceed the following per building (Table I.2).

Table I.2: Program Administration

Dwelling Units/Building	Maximum Payment
Minimum Payment - \$150 w/major measure, \$50 without major measure	
1 to 4	\$350
5 to 10	\$800
11 to 15	\$1,200
16 to 20	\$1,400
21 to 25	\$1,600
26 to 30	\$1,800
31+	\$2,100

Table I.3 displays the assumptions used in the Program design and in conducting cost-effectiveness analysis. The U.S. DOE estimates the average cost per home throughout the nation is \$2,744 (based on the 2005 DOE Weatherization Guideline). The average total cost of homes completed through the Utah Power program in 2004 was \$1,678. Expected savings are based on an Oakridge National Laboratory study of weatherization programs. These savings include the Major Measures and Supplemental Measures with the exception of CFLs, and refrigerator replacements, which are separately estimated below. We used a 30-year economic life for the weatherization component of the Program. Overall weatherization measures were assumed to have a 30-year economic life.

Table I.3: Weatherization Assumptions

Inputs	Data Source	Estimate	Outputs	Calculation
Number of Homes Annually	Agencies	70	Total Annual Savings (kWh)	150,710
National Average Total Cost	U.S. DOE	\$2,744	Total Utah Power Annual Contribution to Admin Cost	\$15,750
Average Total Savings (kWh) *	ORNL /CON-488 02/2003	2,153	Total Utah Power Annual Rebate	\$105,000
Average Admin Cost	Utah Power	\$225	Total Annual Utah Power Cost	\$120,750
Average Rebate per Home	Utah Power	\$1,500	Total Annual Cost	\$192,080

* Includes Major Measures and Supplemental Measures except as noted below.

Compact Fluorescent Light Bulbs (CFL)

Utah Power will pay 50% of the bulb cost for up to eight ENERGY STAR[®]-certified CFLs per home, to be placed in lighting fixtures that are in use for two or more hours/day. Table I.4 displays the assumptions used in the CFL portion of the Program and in conducting cost-effectiveness analysis.

Estimates of CFL cost were derived from several other recent programs. The average wattage of replaced bulbs, installed bulb wattage, and expected number of hours of use were derived from PacifiCorp's evaluation of its CFL program in Utah. The total number of CFLs to be installed is determined by multiplying the expected participation level from Table I.1 (170 households) by eight. The program requirements will limit installations of CFLs to locations with at least two hours of use per day. With a minimum of two hours per day, we assumed an overall average use time of three hours per day across the installed CFLs. Average energy savings as a result of CFL replacement is calculated as the difference in wattage between the average incandescent light bulb (70 Watts) and the replacement CFL (20 Watts), multiplied by hours of use per day (3 hours) and days per year (365). This product is then converted to kWh by dividing by 1,000. The economic life of a CFL light bulb (9 years) is determined by assuming 10,000 hours of burn time divided by the annual hours of use (10,000/(3*365)). Agency administrative payments are limited to 15% of the Utah Power estimated contribution of \$1,700.

Table I.4: CFL Assumptions

Inputs	Data Source	Estimate	Outputs	Calculation
No. CFLs per Home	Program	8	Total Annual No. CFLs	1,360
Average Cost per CFL	Various	\$2.50	Avg. CFL Savings (kWh)	54.8
Average Existing Wattage	Utah Eval.	70	Total Annual Savings (kWh)	74,460
Average New Wattage	Utah Eval	20	Total Utah Power Annual Contribution to Admin Cost	\$255
			Total Utah Power Rebate	\$1,700
Average No Hours per Day	Utah Eval.	3	Total Annual Utah Power Cost	\$1,955
			Total Annual Program Cost	\$3,655
Rebate as % of CFL Cost	Utah Power	50%	Economic Life (Years)	9

Refrigerators

Refrigerators can be replaced where existing models are listed in the WAPTAC database as having annual mean usage of 900 kWh or greater. Replacement refrigerators will be ENERGY STAR-certified models with annual consumption levels of 500 kWh or less. Replaced refrigerators will be removed and recycled according to Environmental Protection Agency (EPA) guidelines.¹

Table I.5 displays the assumptions used in the refrigerator replacement portion of the Program and in conducting cost-effectiveness analysis. The consumption data are based on metered units from a similar program run in Utah during 2003. We assumed a 19-year economic life for a new refrigerator. Utah Power's total annual cost is set at 50% of the cost of replaced refrigerators. As mentioned above, the administration fee is limited to 15% of Utah Power contribution.

¹ Existing refrigerators consuming over 900 kWh annually can be cost-effectively replaced. For detailed information concerning EPA Guidelines, please refer to Appendix A.

Table I.5: Refrigerators Assumption

Inputs	Data Source	Estimate	Outputs	Estimate
Number of Refrigerators Tested	Agencies	153	No. Refrigerators Replaced	68
Proportion of Tested Replaced	Utah Pgm	44%	Avg Annual Savings (kWh)	1,510
Avg Cost per New Unit	Agencies	\$600	Total Annual Savings (kWh)	101,653
Avg Cost Per Tested Unit	Agencies	*	Total Annual Equip Cost	\$40,800
Avg Consumption of Existing Unit (kWh)	Utah Pgm	1,944	Total Annual Testing Cost	*
Avg Consumption of New Unit (kWh)	Utah Pgm	434	Total Utah Power Contribution to Admin Cost	\$3,060
Rebate as % of Unit Cost	Utah Power	50%	Total Utah Power Rebate	\$20,400
Economic Life (Years)		19	Total Annual Utah Power Cost	\$23,460
			Total Annual Cost	\$43,860

* The WAPTAC database will be used in lieu of testing².

Hot Water Measures

Table I.6 displays the assumptions used in the design of the hot water portion of the Program, and in conducting cost-effectiveness analysis. The segment of clients likely to have gas heat with electric hot water was estimated at 10% (approximately 17 households). The program will install low-flow showerheads, kitchen and bathroom aerators and pipe wraps for these customers. Energy savings estimates were obtained from the evaluation of the 2002 California Low Income Energy Efficiency program³. As in the components above, Utah Power's contribution to administration cost will be limited to 15% of the total rebate amount for measures installed.

² Energy use data for over 41,000 refrigerators, refrigerator-freezers, and freezers has been compiled by D&R International, Ltd., for DOE from the Directory of Certified Refrigerators, Freezers, and Refrigerator Freezers published by the California Energy Commission (CEC) from 1979 to 1992. See <http://www.waptac.org/sp.asp?id=70>.

³ *Impact Evaluation of the 2002 California Low Income Energy Efficiency Program*, West Hill Energy and Computing, Inc. October 11, 2004

Table I.6: Hot Water Measure Assumptions

Inputs	Data Source	Estimate	Outputs	Calculation
Percent of Participants with gas heat and electric hot water	Agencies	10%	Annual Participants	17
Showerhead savings (kWh)	2002 CA LIEE	230	Total Annual Savings (kWh)	6,749
Aerators (kWh)	2002 CA LIEE	75	Total Annual Utah Power Contribution to Admin Cost	\$97
Pipe Wrap	2004 CA DEER	92	Total Annual Utah Power Rebate	\$323
Measure Cost	Iowa LI Pgm	\$38	Total Annual Utah Power Cost	\$420
Rebate as % of Unit Cost	Utah Power	50%	Total Annual Program Cost	\$ 743
			Economic Life (Years)	9

Other Program Costs

Table I.7 displays the estimated Utah Power program management and administrative costs as well as the estimated cost of a third party evaluator. Table I.8 summarizes overall expected annual Program costs and savings.

Table I.7: Other Program Costs

Utah Power Labor*	\$10,000
Evaluation	\$10,000

*Includes program management, rebate processing and inspections.

** Evaluation costs are estimated to be \$20,000, with evaluations occurring every two years.

Table I.8: Combined Annual Program Costs and Savings

	Utah Power	Total	KWh
Weatherization	\$120,750	\$192,080	150,710
CFLs	\$1,955	\$3,655	74,460
Refrigerators	\$23,460	\$43,860	102,680
Hot Water	\$420	\$743	6,749
Other	\$20,000	\$20,000	
Total	\$166,585	\$260,338	334,599

II. Cost Effectiveness

Cost-effectiveness tests were run for the Program as designed using the following Standard tests:

- **Total Resource Cost (TRC):** This test examines the program benefits and costs from the Company and its customers' combined perspective. On the benefit side, it includes reduction in supply costs. On the cost side, it includes costs incurred by both Utah Power and the other funders. We also include a TRC test that includes a 10% conservation adder (PTRC).
- **Utah Power (Utility Cost Test; UCT):** From the Company's perspective, the benefits are in the form of avoided supply and line-loss costs. The costs include administration, evaluation, and rebate costs associated with the program.
- **Ratepayers:** All ratepayers (participants and non-participants) may experience an increase in rates to recover lost revenue. This test (entitled Ratepayer Impact Measure, RIM) includes all the Company's program costs as well as first-year lost revenues. On the benefits side, it includes all avoided energy and capacity costs.

The participant test is included but no benefit cost ratio is calculated due to zero participant costs. Cost-effectiveness assumptions are summarized in Table II.1.

Table II.1: Program Cost-Effectiveness Assumptions

Item	Assumptions
Energy Savings	Savings by measure
Retail Rate	Average 2004 Residential Retail Rate
Discount Rate	The US Treasury Long Term Composite bond rate of 4.60% posted on August 10, 2005 was used for the TRC. Utah Power's estimated cost of capital of 7.18% was used for the other tests.
Line Loss	10.23% from the 2004 Utah Power line loss study
Measure Life	Each measure has its own expected life.
Avoided Costs	Primary source is the 2005 Integrated Resource Plan 65% load factor decrement. We also used the June 31, 2005, official Company forward price curve as a secondary data source.
Measure Cost	Each measure has its own expected cost.
Incentive Amount	Varies by element. See previous sections.

Results

The cost effectiveness of the Idaho Low Income Weatherization Program was calculated using Quantec's Demand Impact and Cost Effectiveness (DICE)

model. The model distributes the estimated annual kWh savings across the year based on hourly residential load shapes for each measure. Each of these hourly savings values is multiplied by the associated hourly avoided-costs from PacifiCorp's market price forecasts. These products are all discounted back to the present. This approach accurately captures the hourly differences in the value of a kWh during the year.

Cost effectiveness was calculated based on avoided costs estimated through the August 2005 IRP decrement approach using a 65% load factor and on the Company's official market price forecasts base case for Palo-Verde Hub, dated June 31, 2005.

The proposed Program design passes the utility cost effectiveness tests from the UCT perspective under both the forward price curve scenario and under the IRP decrement⁴. The program passes the TRC under the forward price curve scenario and narrowly fails the TRC under the IRP 65% load factor decrement scenario. Neither scenario reflects the additional benefits associated with low-income weatherization to both the utility and the participant. These additional benefits include decreases in collections and arrearages, improved comfort, improved health, fewer work and school absences, less frequent moves and more money to spend on other necessities.

Table II.2: IRP Decrement (65% Load Factor)

All Measures	AC: 65% Load Factor				
	Levelized \$/kWh	Costs	Benefits	Net Benefit	Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0552	\$260,338	\$243,705	-\$16,633	0.936
Total Resource Cost Test (TRC) No Adder	0.0552	\$260,338	\$221,550	-\$38,788	0.851
Utility Cost Test (UCT)	0.0353	\$166,585	\$177,086	\$10,501	1.063
Rate Impact Test (RIM)		\$325,395	\$177,086	-\$148,309	0.544
Participant Cost Test (PCT)		\$0	\$189,322	\$189,322	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000039059	

Table II.3: June 31, 2005 Base Case Forward Prices

All Measures	AC: Base Case				
	Levelized \$/kWh	Costs	Benefits	Net Benefit	Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0552	\$260,338	\$349,279	\$88,941	1.342
Total Resource Cost Test (TRC) No Adder	0.0552	\$260,338	\$317,527	\$57,189	1.220

⁴ The Utility Cost Test is often considered the appropriate test for low-income weatherization programs since non-utility costs are federally funded.

Utility Cost Test (UCT)	0.0353	\$166,585	\$245,576	\$78,991	1.474
Rate Impact Test (RIM)		\$325,395	\$245,576	-\$79,819	0.755
Participant Cost Test (PCT)		\$0	\$189,322	\$189,322	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000021021	

III. Evaluation Plan

The goals of the evaluation are to:

1. Estimate actual energy (kWh) and demand (kW) savings
2. Analyze Program cost effectiveness

The Company has committed to a process and impact evaluation at the end of the second program year.

Impact Evaluation

The impact evaluation will include collecting key data, selecting a random sample of participants, estimating energy savings, and assessing cost effectiveness. The impact evaluation approach will vary by type of measure installed.

Weatherization/Shell

This is not expected to be a large part of the Program. Energy impacts will be assessed through billing analysis, and demand impacts will be assessed using residential load shapes from secondary sources.

Compact Fluorescent Light bulbs

The analysis will begin with the Program database for the number of CFLs installed, initial and final wattage, and hours of use whenever available.

Program database will be used to verify number of CFLs installed, hours of use, whether the replaced bulbs were in working condition, and number of bulbs removed. It is recommended that this effort be enhanced with a survey of about 100 participants to verify the information in the program database. However, this may also lead to increasing overhead costs to prohibitive levels given the size of this program.

The data collected will be used to estimate the energy (kWh) savings. The evaluator will then use secondary lighting hourly use data to estimate the Program demand (kW) impacts. Actual savings will be verified with billing analysis as described below.

Refrigerators

The evaluator will utilize the metered data collected from the replaced refrigerators for estimating the energy and demand impacts. If conducted,

customer surveys will be used to verify the presence of new refrigerators. Actual savings will be verified with billing analysis as described below.

Savings Analysis

Traditionally, “quasi experimental” research design is the most appropriate method for conducting impact evaluations of demand-side management programs. The approach consists of comparing the change in pre- to post-program energy consumption between the participants and a “comparison” group of customers who, though eligible, did not participate. By accounting for non-program-related factors that can affect energy use from the pre- to the post-program periods, the approach can provide estimates of “net” program impacts.

Census Billing Analysis. A billing analysis will be conducted on all participants that pass the screen for sufficient billing history. These data will be compared to a group of low-income customers that did not participate in the Program.

Princeton Scorekeeping Method⁵ (PRISM), an established weather-normalizing tool, will be used to calculate each individual customer’s annual energy consumption under average weather conditions. Utilizing historical weather data and billing records, PRISM adjusts for the impact of weather variations upon usage during both the pre and post periods. The result is weather-normalized and annualized data that allow for the meaningful interpretation of the true impact of the Program upon energy consumption. The evaluator will use difference-of-means tests to analyze disparities between the participants and non-participant billing data.

The evaluator will also analyze the differences between pre and post PRISM-produced set temperatures for assessment of take back.

Savings by Agency and Measure Type. Utilizing the estimates from the billing analysis and detailed statistical models, the evaluator will stratify savings by agency and measure. This will provide valuable insight into the Program’s operation and overall economic performance. This analysis will provide descriptive statistics on the frequency of installations for specific measures and groups of interrelated measures. It will also provide estimates of savings for groups of measures and can be compared to deemed savings to assess possible discrepancies. Additionally, these data will be stratified by

⁵ In order to produce the most accurate results, PRISM models each participant’s pre and post periods separately, generating an individual normalized consumption record for each period. Employing several stages, PRISM utilizes an iterative process to determine the appropriate model (Heating-Only or Heating & Cooling) that best fits the data based on the usage characteristics exhibited by the participant.

agency to provide additional insight into best practices and areas of improvement.

Quantify Non-Energy Benefits. If surveys are conducted, the evaluator will estimate non-energy benefits, where applicable.

Conduct Cost-Effectiveness Analysis

The evaluator will conduct a cost-effectiveness analysis using traditional tools. The analysis will include the standard perspectives (i.e., utility, ratepayers, participants, and society) and, as much as possible, non-energy and environmental impacts (e.g., carbon dioxide reduction and reduction in forced mobility). The benefits to Utah Power include the reduction in energy consumption and the Company's avoided costs.

Program costs include administration, delivery, and actual payments made to participants. Benefit/cost ratios will be computed from the various perspectives.

Management & Reporting

The evaluator will deliver a draft and final report of findings. The final report will reflect all the comments made by stakeholders. It will provide a complete description of the relevant evaluation objectives and how they were achieved. The final report is to contain the following elements:

- Executive Summary
- Description of the Program, its goals, and objectives
- Statement of the evaluation goals and objectives
- Discussion of methodologies
- Implementation procedures and assumptions for each method
- Data-collection procedures and methods
- Sample design and sample attrition
- Results and their interpretation (demonstrated clearly with charts and tables)

Timeline

A process evaluation of the Program should be conducted approximately one year after Program implementation to assure that the Program is operating as planned. An impact evaluation should be conducted two years after Program implementation to allow sufficient post-implementation billing data to be available.

Appendix A. EPA Guidelines

Safe Disposal Requirements

Under Environmental Protection Agency (EPA) rules, equipment that is typically dismantled on site before disposal (e.g., retail food refrigeration, central residential air conditioning, chillers, and industrial process refrigeration) has to have the refrigerant recovered in accordance with EPA's requirements for servicing. However, equipment that typically enters the waste stream with the charge intact (e.g., motor vehicle air conditioners, household refrigerators and freezers, and room air conditioners) is subject to special safe disposal requirements.

Under these requirements, the final person in the disposal chain (e.g., a scrap metal recycler or landfill owner) is responsible for ensuring that refrigerant is recovered from equipment before the final disposal of the equipment. However, persons "upstream" can remove the refrigerant and provide documentation of its removal to the final person if this is more cost effective. If the final person in the disposal chain (e.g., a scrap metal recycler or landfill owner) accepts appliances that no longer hold a refrigerant charge, that person is responsible for maintaining a signed statement from whom the appliance is being accepted. The signed statement must include the name and address of the person who recovered the refrigerant, the date that the refrigerant was recovered, or a copy of a contract stating that the refrigerant will be removed prior to delivery. EPA does not mandate a sticker as a form of verification that the refrigerant has been removed prior to disposal of the appliance. Such stickers do not relieve the final disposer of their responsibility to recover any remaining refrigerant in the appliance, unless the sticker contains a signed statement that includes the name and address of the person who recovered the refrigerant and the date on which was recovered.

The equipment used to recover refrigerant from appliances prior to their final disposal must meet the same performance standards as equipment used prior to servicing, but it does not need to be tested by a laboratory. This means that self-built equipment is allowed as long as it meets the performance requirements. For MVACs and MVAC-like appliances, the performance requirement is 102 mm of mercury vacuum; for small appliances, the recovery equipment performance requirements are 90% efficiency when the appliance compressor is operational and 80% efficiency when the appliance compressor is not operational.

Technician certification is not required for individuals removing refrigerant from appliances in the waste stream.

Section 608 of the Clean Air Act of 1990

SEC. 608. NATIONAL RECYCLING AND EMISSION REDUCTION PROGRAM.

(a) In General -

- (1) The Administrator shall, by not later than January 1, 1992, promulgate regulations establishing standards and requirements regarding the use and disposal of class I substances during the service, repair, or disposal of appliances and industrial process refrigeration. Such standards and requirements shall become effective not later than July 1, 1992.
- (2) The Administrator shall, within 4 years after the enactment of the Clean Air Act Amendments of 1990, promulgate regulations establishing standards and requirements regarding use and disposal of class I and II substances not covered by paragraph (1), including the use and disposal of class II substances during service, repair, or disposal of appliances and industrial process refrigeration. Such standards and requirements shall become effective not later than 12 months after promulgation of the regulations.
- (3) The regulations under this subsection shall include requirements that-
 - (A) reduce the use and emission of such substances to the lowest achievable level, and
 - (B) maximize the recapture and recycling of such substances.

Such regulations may include requirements to use alternative substances (including substances which are not class I or class II substances) or to minimize use of class I or class II substances, or to promote the use of safe alternatives pursuant to section 612 or any combination of the foregoing.

(b) Safe Disposal.- The regulations under subsection (a) shall establish standards and requirements for the safe disposal of class I and II substances. Such regulations shall include each of the following-

- (1) Requirements that class I or class II substances contained in bulk in appliances, machines or other goods shall be removed from each such appliance, machine or other good prior to the disposal of such items or their delivery for recycling.
- (2) Requirements that any appliance, machine or other good containing a class I or class II substance in bulk shall not be manufactured, sold, or distributed in interstate commerce or offered for sale or distribution in interstate commerce unless it is equipped with a servicing aperture or

an equally effective design feature which will facilitate the recapture of such substance during service and repair or disposal of such item.

- (3) Requirements that any product in which a class I or class II substance is incorporated so as to constitute an inherent element of such product shall be disposed of in manner that reduces, to the maximum extent practicable, the release of such substance into the environment. If the Administrator determines that the application of this paragraph to any product would result in producing only insignificant environmental benefits, the Administrator shall include in such regulations an exception for such product.

(c) Prohibitions. -

- (1) Effective July 1, 1992, it shall be unlawful for any person, in the course of maintaining, servicing, repairing, or disposing of an appliance or industrial process refrigeration, to knowingly vent or otherwise knowingly release or dispose of any class I or class II substance used as a refrigerant in such appliance (or industrial process refrigeration) in a manner which permits such substance to enter the environment. De minimis releases associated with good faith attempts to recapture and recycle or safely dispose of any such substance shall not be subject to the prohibition set forth in the preceding sentence.
- (2) Effective 5 years after the enactment of the Clean Air Act Amendments of 1990, paragraph (1) shall also apply to the venting, release, or disposal of any substitute substance for a class I or class II substance by any person maintaining, servicing, repairing, or disposing of an appliance or industrial process refrigeration which contains and uses as a refrigerant any such substance, unless the Administrator determines that venting, releasing, or disposing of such substance does not pose a threat to the environment. For purposes of this paragraph, the term "appliance" includes any device which contains and uses as a refrigerant a substitute substance and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer.

Case No. PAC-E-06-10
Exhibit No. 3

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

PACIFICORP

**Quantec Memo Regarding Idaho Low Income
Program Cost Effectiveness Analysis**

September 2006



Raising the bar in analytics

Date: August 30, 2006
To: Becky Eberle
From: Brian Hedman
Re: Idaho Low Income Program Cost Effectiveness Analysis

The tables below present the updated assumptions and cost effectiveness findings for the Idaho Low Income Program under three scenarios: 50% cost sharing, 75% cost sharing and 100% funding. The cost sharing is applied regardless of the total cost of the weatherization or measures. The base assumptions were presented in Quantec document dated August 22, 2005 entitled "Idaho Low Income Weatherization Program: Analysis in Support of Tariff Revision".

Cost Effectiveness Assumptions

The discount rates in Table 1 were obtained from two sources. For the TRC, the discount rate used is the US Treasury Long Term Composite bond rate posted on August 28, 2006. The discount rate for the Utility Cost, Rate Impact and Participant Cost tests is the system average used in the 2004 IRP. Rocky Mountain Power also provided the values for line losses and the residential retail energy rate.

Table 1: Common Inputs

Parameter	Value
Discount Rate for TRC test	4.97%
Discount Rate for UTC, RIM, PART tests	7.18%
Line Loss	10.25%
Residential Energy Rate (\$/kWh)	\$0.0404

Scenario 1: 50% cost sharing

**Table 2: Program Costs and Savings
(50% Cost Sharing)**

Category	Participants	Program Cost (*)	Savings (kWh)
Weatherization	70	\$103,243	150,710
CFLs (number of households)	175	\$2,013	76,650
Refrigerators	70	\$24,150	105,700
Hot Water	18	\$445	7,146
Other Administrative Costs		\$20,000	
Total		\$149,850	340,206

(*) Rocky Mountain Power costs only. Exogenous costs (federal) are not included in cost effectiveness determination.

Table 3: 2004 IRP 65% Load Factor Decrement, August 2005 Update

All Measures	AC: IRP 65% Load Factor Decrement				
	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0313	\$149,850	\$303,348	\$153,498	2.02
Total Resource Cost Test (TRC) No Adder	0.0313	\$149,850	\$275,771	\$125,921	1.84
Utility Cost Test (UCT)	0.0361	\$149,850	\$216,872	\$67,022	1.45
Rate Impact Test (RIM)		\$279,506	\$216,872	(\$62,634)	0.78
Participant Cost Test (PCT)		\$0	\$191,806	\$191,806	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000011827	

Table 4: June 2006 Forward Price Curve: Base Case

All Measures	AC: 06/30/06 Base Case PV				
	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0313	\$149,850	\$342,992	\$193,142	2.29
Total Resource Cost Test (TRC) No Adder	0.0313	\$149,850	\$311,811	\$161,961	2.08
Utility Cost Test (UCT)	0.0361	\$149,850	\$250,806	\$100,956	1.67
Rate Impact Test (RIM)		\$279,506	\$250,806	(\$28,700)	0.90
Participant Cost Test (PCT)		\$0	\$191,806	\$191,806	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000005419	

Scenario 2: 75% cost sharing

**Table 5: Program Costs and Savings
(75% Cost Sharing)**

Category	Participants	Program Cost (*)	Savings (kWh)
Weatherization	48	\$102,488	103,344
CFLs (number of households)	120	\$2,070	52,560
Refrigerators	48	\$24,840	72,480
Hot Water	12	\$410	4,764
Other Administrative Costs		\$20,000	
Total		\$149,809	233,148

(*) Rocky Mountain Power costs only. Exogenous costs (federal) are not included in cost effectiveness determination.

Table 6: 2004 IRP 65% Load Factor Decrement, August 2005 Update

All Measures	AC: IRP 65% Load Factor Decrement				
	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0456	\$149,809	\$207,954	\$58,146	1.39
Total Resource Cost Test (TRC) No Adder	0.0456	\$149,809	\$189,050	\$39,241	1.26
Utility Cost Test (UCT)	0.0527	\$149,809	\$148,666	(\$1,142)	0.99
Rate Impact Test (RIM)		\$235,530	\$148,666	(\$86,863)	0.63
Participant Cost Test (PCT)		\$0	\$131,481	\$131,481	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000016402	

Table 7: June 2006 Forward Price Curve: Base Case

All Measures	AC: 06/30/06 Base Case PV				
	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0456	\$149,809	\$235,124	\$85,316	1.57
Total Resource Cost Test (TRC) No Adder	0.0456	\$149,809	\$213,749	\$63,941	1.43
Utility Cost Test (UCT)	0.0527	\$149,809	\$171,923	\$22,114	1.15
Rate Impact Test (RIM)		\$235,530	\$171,923	(\$63,607)	0.73
Participant Cost Test (PCT)		\$0	\$131,481	\$131,481	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000012011	

Scenario 3: 100% Payment**Table 8: Program Costs and Savings
(100% Payment)**

Category	Participants	Program Cost (*)	Savings (kWh)
Weatherization	37	\$101,528	79,661
CFLs (number of households)	92	\$2,116	40,296
Refrigerators	37	\$25,530	55,870
Hot Water	10	\$437	3,970
Other Administrative Costs		\$20,000	
Total		\$149,611	179,797

(*) Rocky Mountain Power costs only. Exogenous costs (federal) are not included in cost effectiveness determination.

Table 9: 2004 IRP 65% Load Factor Decrement, August 2005 Update

All Measures	AC: IRP 65% Load Factor Decrement				
	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0590	\$149,611	\$160,334	\$10,723	1.07
Total Resource Cost Test (TRC) No Adder	0.0590	\$149,611	\$145,758	(\$3,853)	0.97
Utility Cost Test (UCT)	0.0683	\$149,611	\$114,626	(\$34,985)	0.77
Rate Impact Test (RIM)		\$213,423	\$114,626	(\$98,797)	0.54
Participant Cost Test (PCT)		\$0	\$101,375	\$101,375	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000018656	

Table 10: June 2006 Forward Price Curve: Base Case

All Measures	AC: 06/30/06 Base Case PV				
	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0590	\$149,611	\$181,284	\$31,673	1.21
Total Resource Cost Test (TRC) No Adder	0.0590	\$149,611	\$164,804	\$15,193	1.10
Utility Cost Test (UCT)	0.0683	\$149,611	\$132,559	(\$17,052)	0.89
Rate Impact Test (RIM)		\$213,423	\$132,559	(\$80,864)	0.62
Participant Cost Test (PCT)		\$0	\$101,375	\$101,375	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000015269	