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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](mailto:Dean.Brockbank@PacifiCorp.com)

Brian Dickman  
PacifiCorp  
201 South Main Street, Suite 2300  
Salt Lake City, Utah 84111  
[Brian.Dickman@PacifiCorp.com](mailto: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](mailto: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 15<sup>th</sup> 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<br>Attorney at Law<br>Community Action Partnership Association<br>of Idaho<br>2019 N. 17 <sup>th</sup> Street<br>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**

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**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

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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 19<sup>th</sup> 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**

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**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

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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<br>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<sup>®</sup>-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.<sup>1</sup>

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.

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

