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UTILITIES COMMISSION

1407 W. North Temple, Suite 330
Salt Lake City, Utah 84116

November 27, 2017

VIA ELECTRONIC FILING

Diane Hanian
Commission Secretary
Idaho Public Utilities Commission
472 W. Washington
Boise, ID 83702

Re: Tariff Advice No. 17-01
Modify Electric Service Schedule 21 – Low Income Weatherization Services

Dear Ms. Hanian:

PacifiCorp, d.b.a. Rocky Mountain Power (the “Company”), hereby submits Tariff Advice No. 17-01 for electronic filing with the Idaho Public Utilities Commission requesting authority to modify Electric Service Schedule No. 21 – Low Income Weatherization Services (“LIW Program”) with an effective date of February 1, 2018.

Attached hereto as Exhibit A are clean and legislative copies of the modified tariff sheets. Below is a summary of the sheets modified and a description of the changes to them.

Third Revision of Sheet No. 21.5 Schedule 21 Low Income Weatherization Services

Changes to Supplemental Measures

The Company proposes to add Ductless Heat Pumps (“DHP”) as an eligible supplemental measure to the LIW Program in homes with permanently installed electric heat. DHPs can save 30-40 percent off energy costs of a forced air system, and have become an energy efficient choice for newly constructed houses and additions, as well as houses with no existing ductwork. Eastern Idaho Community Action Partnership and SouthEastern Idaho Community Action Agency are already installing DHPs in homes using other funds, and will be able to install even more if funding is provided by the Company through the LIW Program. By adding DHPs to the LIW Program, additional kWh savings will be achieved.

Cost Effectiveness

The cost-effectiveness analysis for the LIW Program, attached hereto as Exhibit B, was based on an annual funding cap of \$300,000, with funds available for up to 85 percent of total eligible costs for each individual project, pursuant to Order No. 32196, issued February 28, 2011, in Case No. PAC-E-10-07. Tables 4 and 5 below, pulled from Exhibit B, present the expected cost-effectiveness of weatherization measures and DHPs, as well as the overall LIW Program for 2018, assuming the proposed changes in this filing. Additional detailed inputs and results are provided in Exhibit B.

Table 4 - Benefit/Cost Ratios - Low Income Weatherization

Measure	PTRC	TRC	UCT	RIM	PCT
Weatherization - 85%	0.12	0.11	0.11	0.09	n/a
Ductless Heat Pumps - 85%	0.43	0.39	0.39	0.20	n/a
All Measures	0.16	0.15	0.15	0.11	n/a

Table 5 – LIW Program Level Cost-Effectiveness Results – PY2018

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.3284	\$361,100	\$57,831	-\$303,270	0.16
Total Resource Cost Test (TRC) No Adder	\$0.3284	\$361,100	\$52,573	-\$308,527	0.15
Utility Cost Test (UCT)	\$0.3284	\$361,100	\$52,573	-\$308,527	0.15
Rate Impact Test (RIM)		\$489,651	\$52,573	-\$437,078	0.11
Participant Cost Test (PCT)		n/a	n/a	n/a	n/a
Lifecycle Revenue Impacts (\$/kWh)				\$0.0000047978	
Discounted Participant Payback (years)					n/a

The Company reviewed the most recent LIW Program evaluation, cost-effectiveness, and the addition of DHPs with Commission Staff on October 12, 2017.

If you have questions regarding this filing, please contact me at (801) 220-4214.

Sincerely,



Michael S. Snow
 Manager, DSM Regulatory Affairs

Enclosures

Exhibit A

ELECTRIC SERVICE SCHEDULE NO. 21 - Continued

C. Energy Conservation Measures: (Continued)

Supplemental Measures – Electric Heating System Required (continued)

6. Timed thermostats on centrally controlled multi-room heating/cooling systems except when used with heat pumps and Smart thermostats with occupancy sensors. Heat anticipating type thermostats for zonal electric resistance heating systems.
7. Electric furnace repair and replacement.
8. Ductless heat pumps.

Additional Measures – No Electric Heating System Requirement:

1. Pipe insulation, energy efficient showerheads and aerators where electric water heaters are present.
2. Light emitting diodes (LED) and/or compact fluorescent (CFL) light bulbs applicable in all homes – Energy Star certified bulbs placed in fixtures that are on 2 hours or more per day.
3. LED light fixtures.
4. Existing Refrigerator with monitored results listed in the Weatherization Assistance Program Technical Assistance center database with a savings to investment ration of 1.0 or greater may be replaced with an Energy Star model. Replaced refrigerators must be removed and recycled in accordance with EPA guidelines.
5. Electric water heater repair and replacement.
6. Measures that promote health and safety related to electricity usage.

D. Provisions of Service for Energy Conservation Service to Low Income Customers:

1. Measures installed are intended to improve upon the electric efficiencies of participating homes and must be included in the U.S. Department of Energy's Weatherization Assistance Program available to Agency.

(Continued)

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7. Electric furnace repair and replacement.

~~8.~~ Ductless heat pumps.

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1. Pipe insulation, energy efficient showerheads and aerators where electric water heaters are present.

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4. Existing Refrigerator with monitored results listed in the Weatherization Assistance Program Technical Assistance center database with a savings to investment ration of 1.0 or greater may be replaced with an Energy Star model. Replaced refrigerators must be removed and recycled in accordance with EPA guidelines.

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1. Measures installed are intended to improve upon the electric efficiencies of participating homes and must be included in the U.S. Department of Energy's Weatherization Assistance Program available to Agency.

(Continued)

Exhibit B



Memorandum

To: Angela Long, PacifiCorp/Rocky Mountain Power
From: David Basak, Navigant
Date: October 24, 2017
Re: Cost-Effectiveness Results for the Idaho Low Income Weatherization Program Year 2018 -with Federal Incentives

This memo presents the cost effectiveness findings for Navigant's analysis of the Idaho Low Income Weatherization Program for program year 2018. Each scenario is analyzed using modeled assumptions provided by PacifiCorp.

All scenarios utilize the following assumptions:

- **Avoided Costs:** Navigant performed a custom analysis of calculating avoided costs by using the 2017 Decrement and applied against end-use specific load shapes.
- **Modeling Inputs:** Navigant utilized program level savings and administration costs provided by PacifiCorp in the file *ID LIWX.xlsx*.
- **Benefit/Cost Tests:** Multiple benefit/cost tests are reported including; PacifiCorp Total Resource Cost Test (PTRC), Total Resource Cost Test (TRC), Utility Cost Test (UCT), Rate Impact Test (RIM), and Participant Cost Test (PCT).
- **Customer Costs/Incentives:** The analysis is run assuming PacifiCorp pays 85% of the measure costs which are considered incentives and the remaining 15% is covered by Federal incentives. Since there are assumed to be no customer costs, the TRC and PTRC include incentives on the cost side of the equation.

This memo will begin by addressing the program level results for program year 2018. The cost-effectiveness inputs are as follows:

Table 1 – Low Income Weatherization Inputs

Parameter	Input
Discount Rate	6.66%
Residential Line Loss	11.47%
Residential Energy Rate 2018 ¹ (\$/kWh)	\$0.1088
Inflation Rate	2.22%

¹ Future rates determined using a 2.22% annual escalator.

Table 2 – Low Income Weatherization Annual Program Costs – with Federal Incentives

Measure	Agency Admin Fee	Energy Education	Utility Admin	Incentives	Total Utility Costs	Gross Customer Costs
Weatherization - 85%	\$15,628	\$16,914	\$8,795	\$271,429	\$312,767	\$0
Ductless Heat Pumps - 85%	\$7,472	\$8,086	\$4,205	\$28,571	\$48,333	\$0
All Measures	\$23,100	\$25,000	\$13,000	\$300,000¹	\$361,100	\$0

¹ Assumes a cap of \$300,000 for incentives paid by PacifiCorp.

Table 3 – Low Income Weatherization Annual Program Savings

Measure	Gross kWh Savings	Realization Rate	Adjusted Gross kWh Savings	Net to Gross Ratio	Net kWh Savings	Measure Life
Weatherization - 85%	78,210	100%	78,210	100%	78,210	25
Ductless Heat Pumps - 85%	37,390	100%	37,390	100%	37,390	15
All Measures	115,600	100%	115,600	100%	115,600	22

Table 4 - Benefit/Cost Ratios - Low Income Weatherization

Measure	PTRC	TRC	UCT	RIM	PCT
Weatherization - 85%	0.12	0.11	0.11	0.09	n/a
Ductless Heat Pumps - 85%	0.43	0.39	0.39	0.20	n/a
All Measures	0.16	0.15	0.15	0.11	n/a

The following tables provide the cost-effectiveness results for the overall program forecast in 2018.

Table 5 – LIW Program Level Cost-Effectiveness Results – PY2018

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.3284	\$361,100	\$57,831	-\$303,270	0.16
Total Resource Cost Test (TRC) No Adder	\$0.3284	\$361,100	\$52,573	-\$308,527	0.15
Utility Cost Test (UCT)	\$0.3284	\$361,100	\$52,573	-\$308,527	0.15
Rate Impact Test (RIM)		\$489,651	\$52,573	-\$437,078	0.11
Participant Cost Test (PCT)		n/a	n/a	n/a	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.0000047978
Discounted Participant Payback (years)					n/a

The following tables provide the cost-effectiveness results for each measure category.

Table 6 – LIW Program Level Cost-Effectiveness Results – Weatherization

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.4490	\$312,767	\$37,248	-\$275,519	0.12
Total Resource Cost Test (TRC) No Adder	\$0.4490	\$312,767	\$33,861	-\$278,905	0.11
Utility Cost Test (UCT)	\$0.4490	\$312,767	\$33,861	-\$278,905	0.11
Rate Impact Test (RIM)		\$394,226	\$33,861	-\$360,364	0.09
Participant Cost Test (PCT)		n/a	n/a	n/a	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.0000035118
Discounted Participant Payback (years)					n/a

Table 7 – LIW Program Level Cost-Effectiveness Results – Ductless Heat Pumps

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.1199	\$48,333	\$20,583	-\$27,750	0.43
Total Resource Cost Test (TRC) No Adder	\$0.1199	\$48,333	\$18,712	-\$29,621	0.39
Utility Cost Test (UCT)	\$0.1199	\$48,333	\$18,712	-\$29,621	0.39
Rate Impact Test (RIM)		\$95,426	\$18,712	-\$76,714	0.20
Participant Cost Test (PCT)		n/a	n/a	n/a	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.0000011448
Discounted Participant Payback (years)					n/a