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February 9, 2016

***VIA ELECTRONIC FILING  
AND HAND DELIVERY***

Public Service Commission of Utah  
Heber M. Wells Building, 4<sup>th</sup> Floor  
160 East 300 South  
Salt Lake City, UT 84114

Attn: Gary Widerburg  
Commission Secretary

RE: Advice No. 16-03  
Proposed Changes to Schedule 140, Non-Residential Energy Efficiency Program –  
Docket No. 16-035-\_\_

Enclosed for filing are an original and five (5) copies of proposed tariff sheets associated with Tariff P.S.C.U No. 50 of PacifiCorp, d.b.a. Rocky Mountain Power (the “Company”), applicable to electric service in the State of Utah. Pursuant to the requirement of Rule R746-405-2(D), the Company states that the proposed tariff sheets do not constitute a violation of state law or Commission rule. The Company will also provide an electronic version of this filing to [psc@utah.gov](mailto:psc@utah.gov). The Company respectfully requests an effective date of March 10, 2016 for these changes.

Third Revision of Sheet No. 140.2	Schedule 140	Non-Residential Energy Efficiency
Second Revision of Sheet No. 140.4	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.5	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.6	Schedule 140	Non-Residential Energy Efficiency
Second Revision of Sheet No. 140.7	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.8	Schedule 140	Non-Residential Energy Efficiency
Second Revision of Sheet No. 140.9	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.10	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.11	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.12	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.14	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.15	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.16	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.17	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.18	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.19	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.20	Schedule 140	Non-Residential Energy Efficiency

First Revision of Sheet No. 140.21	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.22	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.23	Schedule 140	Non-Residential Energy Efficiency
First Revision of Sheet No. 140.24	Schedule 140	Non-Residential Energy Efficiency
Second Revision of Sheet No. 140.25	Schedule 140	Non-Residential Energy Efficiency

The purpose of this filing is to propose changes to the Non-Residential Energy Efficiency Program (“Program”) administered through Electric Service Schedule No. 140, specifically to decrease lighting incentives and other measure updates as further described below. These tariff changes are proposed for management to targets illustrated in Figure 1 below, and filed in the Demand Side Management November 1<sup>st</sup> Deferred Account and Forecast Report on November 2, 2015, in Docket No. 15-035-48 (“Nov 1<sup>st</sup> Report”). Proposed changes to the Schedule 140 tariff sheets are included as Exhibit A.

**Figure 1 – 2016 Budget and Savings Forecast from Nov 1<sup>st</sup> Report**

<b>***</b>	<b>2016 MWH Savings Forecast</b>	<b>2016 Budget Forecast</b>
<b>wattsmart Business</b>	212,316	\$ 35,919,093

**Description of Changes**

Proposed adjustments are listed below, with further necessary explanation provided in subsequent sections.

1. Adjust tariff language to define all prescriptive measure incentives as a maximum not-to-exceed, or “up-to” amount. Implementing a maximum incentive rate, with an associated adjustable offered incentive rate will allow the Program to adjust incentives rapidly in response to changes to efficiency standards and market costs, and to align with available Program budgets.
2. Exclude lighting energy efficiency projects from Bill Credit eligibility since it pays a disproportionately higher level of customer project costs (80%) than necessary to influence a customer to implement a lighting project or is paid by prescriptive lighting incentives.
3. Change retrofit lighting incentives for all technologies to a pay-for-savings rate (\$/annual kWh saved), excluding re-lamp measures which will continue to be paid per lamp replaced. To better align incentives with savings, customers will receive a higher incentive for lighting configurations and technologies that save more energy.
4. In response to declining costs for mainstream commercial LED technologies, reduce lighting incentives to target an average of 30-40% of customer incremental project costs.
5. Adjust incentives or measure caps for the following listed measures in response to changes in costs, eligibility criteria, baseline changes, or other market developments: Evaporative pre-cooler, commercial refrigerators and freezers, network PC power management, milk pre-coolers, refrigerator/freezer recycling, and residential room air conditioner/dishwasher/refrigerator/electric water heater/heat pump water heater used in a business.

6. Update tariff language for the midstream delivery channel to enable addition of new Tubular LED (TLED) measure.

### **Explanation of Changes**

*Maximum “Up-to” Incentives* - Enable the ability to make adjustments to the incentives periodically to address market conditions, changes in material costs, product availability, price competition and budgets. Maximum incentive amounts will be included in Schedule 140, however current offered incentive amounts for approved energy efficiency measures will be explicitly defined on the Company website. Incentive levels within the maximum incentive range may change with a minimum 45 days’ notice, which will be prominently displayed on the program website and will be communicated to stakeholders. Retailers and trade allies who participate in the Program will be notified preceding the date of the change. The Company proposes to establish maximum incentive levels in this filing as well as set initial offered incentive levels below the maximum range. Subsequent offered incentive levels will be adjustable within the maximum incentive range via the 45 days’ notice process as described above. The c/e analysis, attached hereto as Exhibit B, was based on the maximum “up to” incentive levels.

### **Changes to Lighting Measures**

LED technology has become the predominant lighting technology in energy efficiency projects, and the Company anticipates this trend to continue. Long lamp life (30,000 hrs+), reduced lifetime maintenance costs, absence of hazardous materials (i.e. mercury), controllability, and higher efficacy (lumens/watt) and decreasing costs relative to traditional technologies have contributed to a shift toward using LED products on most energy efficiency projects. To address the continuing and rapid shift to more efficient LED technologies, the Company proposes to restructure the form and value of lighting incentives listed in Table 1a, 1b and 1c of schedule 140 as described below.

**Table 1a - Retrofit Lighting Energy Efficiency Measures**

<b>Measure</b>	<b>Category</b>	<b>Eligibility Requirements</b>	<b>“up to” Incentive</b>	<b>Offered Incentive</b>
Interior Lighting	Lighting Retrofits		\$0.15/kWh	\$0.10/kWh
	TLED Relamp	Lamp wattage reduction of $\geq 10$ Watts, No ballast or driver retrofit.	\$10/lamp	\$6/lamp
	Fluorescent Relamp	Lamp wattage reduction of $\geq 3$ Watts, No ballast retrofit.	\$1/lamp	\$1/lamp
Exterior Lighting	Lighting Retrofits		\$0.15/kWh	\$0.08/kWh
	Street/Pole		\$0.15/kWh	\$0.05/kWh

All retrofit lighting technologies will continue to be managed through qualified equipment lists. This requirement will continue to allow the program to pay only for lighting products that meet quality and safety standards.

**Interior Lighting Retrofit Incentives.** Add an Interior Lighting Retrofits category to pay a maximum of \$0.15/annual kWh savings, replacing the prior prescriptive incentives offered by lighting technology. The initial offered incentive rate will be \$0.10/kWh.

- To encourage the best lighting retrofit systems based on individual customer lighting needs, cost tolerance, and energy savings goals, and to incent all lighting technologies equally based on claimed energy savings, all retrofit lighting incentives are being adjusted to a pay for savings rate, excluding re-lamp measures. This incentive adjustment is anticipated to keep the Company on target with the energy savings targets and budget listed in Figure 1 above.

**Tubular LED and Fluorescent Re-lamps.** Add a Tubular Light Emitting Diode (TLED) Relamp category to pay a maximum of \$10/lamp installed. The initial offered incentive rate of \$6/lamp installed.

- TLED lamps designed to fit in existing fluorescent lamp fixtures with existing fluorescent ballasts are a simple and cost effective option for many customers. Due to the maintenance nature of this measure, a per lamp incentive is recommended. TLED with ballast replacements provide more persistent, reliable savings and will be included in the retrofit lighting measure at the pay for savings rate.
- The Company will continue to offer a Fluorescent Relamp category to pay a maximum of \$1/lamp installed. Incentives for fluorescent relamps continue to provide low capital cost energy savings.

**General Exterior Lighting Retrofit Incentives.** Add an Exterior Lighting Retrofit measure to pay a maximum of \$0.15/annual kWh savings. The initial offered incentive rate will be \$0.08/kWh.

- Exterior lighting retrofits do not significantly affect utility demand savings, yet continue to provide energy savings to both the utility and customer. The incentive rate is lower than interior offerings to account for lower benefit to the program. This incentive adjustment is anticipated to keep the Company on target with the energy savings targets and budget listed in Figure 1 above.

**Street/Pole Exterior Lighting Retrofit Incentives.** Add a street/pole measure to pay a maximum of \$0.15/annual kWh savings. The initial offered incentive rate will be \$0.05/kWh.

- Street/Pole retrofits do not significantly affect utility demand savings, yet continue to provide energy savings. LED street and pole lighting project economics are favorable to customers and a lower incentive than the general exterior lighting measure is appropriate.

**Table 1b – Lighting Controls and Non-General Illuminance Incentives (Retrofit Only)**

Measure	Category	Eligibility Requirements	“up to” Incentive	Offered Incentive
Interior Lighting Control	Occupancy Control	PIR, Dual Tech, or Integral Sensor	\$0.30/Watt controlled	\$0.30/Watt controlled
	Daylighting Control	Must control interior fixtures with Continuous, Stepped, or Bi-level ballast or automated control that dims 50% or more of the fixture in response to daylight.	\$0.34/Watt controlled	\$0.34/Watt controlled
	Advanced Daylighting Control	Must incorporate both an occupancy sensor and daylighting sensor operating as part of the same control sequence in the same interior space.	\$0.38/Watt controlled	\$0.38/Watt controlled
Exterior Lighting Control	Exterior Dimming Control	Must control LED technology in an exterior lighting application. Control must be integral to LED fixture or fixture-mounted and reduce fixture power by 75% or more for a minimum of 6 hrs per night or when the space has been unoccupied for 15 minutes or less.	\$0.34/Watt controlled	\$0.34/Watt controlled
Non-General Illuminance	Exit Sign	LED or photoluminescent replacing incandescent or fluorescent	\$15/Sign	\$15/Sign
	LED Message Center Sign	LED replacing existing incandescent signage	\$5/Lamp	\$5/Lamp
	LED Channel Letter Sign	LED replacing existing neon or fluorescent signage	\$5/Linear Foot	\$5/Linear Foot
	LED Marquee/Cabinet Sign	LED replacing existing fluorescent signage	\$5/Linear Foot	\$5/Linear Foot
	LED Case Lighting – Reach-in Case	LED replacing fluorescent lamp in refrigerated cases. LED must be listed on qualified equipment list.	\$10/linear foot	\$10/linear foot
	LED Case Lighting – Open Case		\$10/linear foot	\$10/linear foot
	Refrigerated Case Occupancy Sensor	Installed in existing refrigerated case with LED lighting	\$1/linear foot	\$1/linear foot
Custom	Custom	Not listed above	\$0.15/kWh annual energy savings	\$0.10/kWh annual energy savings

**Interior Lighting Controls.** Adjust the existing Lighting Control to reflect interior and exterior applications separately.

- Through adding “Interior” to the existing lighting control measure it will classify occupancy, daylighting, and advanced daylighting lighting control categories as specific to interior lighting applications.
- The Company will revise control savings factor values used for calculating energy savings for lighting controls measures. Recent program evaluations and a review of

control savings factors (CSF) from the Department of Energy (DOE), Regional Technical Forum (RTF), and Lawrence Berkeley National Labs (LBNL) has shown that current values for most incented control types are within industry standards, but integral occupancy sensors and advanced daylighting control CSFs should be increased.

**Exterior Lighting Control, Exterior Dimming Control.** Add a new incentive offering for exterior LED dimming controls.

- LED lighting technology has increased the lighting control options in the market. Exterior dimming controls have high savings potential due to long hours of use. Savings will be calculated using a programmed control savings fraction in the lighting calculator tool. The incentive will be based on connected wattage in alignment with other retrofit lighting control offerings.

**LED Case Lighting.** Move this incentive offering from the food service category where incentives are not capped to the Non-General Illuminance Lighting category where project incentive caps apply. The Company also will define sub-categories for reach-in and open cases and revise eligibility requirements.

- LED prices continue to drop and the program is beginning to see “snap-in” LED tubes being used to replace fluorescent lighting in refrigerated cases. These LED products can function on existing fluorescent ballasts and are less expensive than LED fixtures. Adding incentive caps aligns with the intent for this measure to have incentives cover a portion but not all of the measure cost. Through the creation of measure sub-categories the program will align with Regional Technical Forum (RTF) Uniform Energy Savings values for each case type. The Company will also add the requirement that LEDs be listed on a qualified equipment list to align with other LED offerings and industry best practice.

**Refrigerated Case Occupancy Sensor.** Move the incentive offering from the food service category to the Non-General Illuminance Lighting category. This move will be to keep the refrigerated case measures in one incentive table.

The Lighting Controls and Non-General Illuminance Lighting Table notes will be modified to include exterior dimming controls and add a note describing the location of the qualified equipment list.

**Table 1c – New Construction/Major Renovation Lighting Incentives**

Measure	Category	Eligibility Requirements	Maximum Incentive	Offered Incentive
Interior Lighting	Lighting and Lighting Control	1. The total connected interior lighting power for New Construction/Major Renovation projects must be at least 10% lower than the interior lighting power allowance calculated under the applicable version of the state energy code. For New Construction/Major Renovation projects not included in the state energy code, the total connected lighting power must be at least 10% lower than common practice as determined by the Company. 2. Energy savings is subject to approval by the Company	\$0.08/kWh annual energy savings	\$0.08/kWh annual energy savings
Exterior Lighting	Induction Fixture	All Wattages, New Fixtures Only	\$75/Fixture	\$25/Fixture
	LED Outdoor Pole/Roadway, decorative	<75W; LED must be listed on qualified equipment list	\$75/Fixture	\$25/Fixture
	LED Outdoor Pole/Roadway	≤200W; LED must be listed on qualified equipment list	\$100/fixture	\$50/fixture
		>200W; LED must be listed on qualified equipment list	\$400/fixture	\$175/fixture
	LED Canopy/Soffit	LED must be listed on qualified equipment list	\$125/fixture	\$50/fixture
	LED Wall Packs	<50 Watts; LED must be listed on qualified equipment list	\$50/fixture	\$50/fixture
		≥50 Watts; LED must be listed on qualified equipment list	\$75/fixture	\$50/fixture
	LED Flood Lights	<100 Watts; LED must be listed on qualified equipment list	\$75/fixture	\$50/fixture
		≥100 Watts; LED must be listed on qualified equipment list	\$150/fixture	\$100/fixture
	CFL Wall Pack	All Wattages, Hardwire Fixtures Only	\$30/Fixture	\$10/Fixture
Custom	Not listed above	\$0.08/kWh annual energy savings	\$0.08/kWh annual energy savings	
Exterior Dimming Control	Must control LED technology in an exterior lighting application. Control must be integral to LED fixture or fixture-mounted and reduce fixture power by 75% or more for a minimum of 6 hrs per night or when the space has been unoccupied for 15 minutes or less.	\$0.34/Watt controlled**	\$0.34/Watt controlled**	

**Exterior Lighting Fixtures.** Change all incentives to a maximum, not-to-exceed, “up-to” incentive. Exterior LED costs have declined between 20-40% since the initial tariff offering for exterior LED measures. The offered incentive rates have been reduced to reflect the changes in costs.

**Exterior Lighting Control, Exterior Dimming Control.** Add a new incentive offering for exterior LED dimming controls.

- LED lighting technology has increased the lighting control options. Exterior dimming controls have a high savings potential due to long hours of use. The savings will be calculated using a programmed control savings fraction in the lighting calculator tool and the incentive will be based on connected wattage in alignment with other retrofit lighting control offerings.

### **Changes to HVAC Equipment and Controls Incentives**

**Evaporative Pre-cooler.** Apply project incentive caps to this measure. In some cases incentives may cover the entire cost of the evaporative pre-cooler measure. Adding incentive caps aligns with the intent for this measure to have incentives cover a portion but not all of the measure cost.

### **Changes to Food Service Incentives**

**Commercial Refrigerators and Freezers.** Add a sunset date to this measure. More stringent federal standards for commercial refrigerators and freezers will be in effect for equipment manufacturers on March 27, 2017. Measure savings will be significantly reduced relative to the new federal standards baseline.

### **Changes to Appliance Incentives**

**Electric Water Heater, residential used in a business.** Remove this measure. Due to federal standards changes as of April 15, 2015 this measure is no longer eligible for incentives in the Home Energy Savings program and in alignment with the residential offering changes, this measure will be removed.

**Heat Pump Water Heater, residential used in a business.** Add this as a new incentive measure in alignment with the proposed addition of this measure in Home Energy Savings. This will allow business customers who may wish to install a residential heat pump water heater at their business to receive the same incentive and meet the same requirements as would be available to a residential customer.

### **Changes to Office Incentives**

**Network Power PC Management.** Remove this measure. RTF has recently determined that Network PC Power Management software has become the industry standard and software is often available for little or no cost. The measure is removed in alignment with recent RTF evaluation.

### **Changes to Farm and Dairy**

Change eligibility for milk pre-coolers to retrofit only as well as UES for variable frequency drives for dairy vacuum pumps based upon updated analysis. The proposed changes to align with industry and federal standards can be found in Exhibit A. These changes are not forecast to materially impact cost effectiveness.



**Mid-Market Incentives**

**Tubular light emitting diodes (TLEDs).** Add as an eligible measure within the midmarket incentive channel. Market acceptance of this technology has reached a point of standard customer replacements. This will allow business customers who may wish to install TLEDs through maintenance budgets over extended periods of time access to this incentive channel.

**Cost Effectiveness**

Tables 2 and 3 below, pulled from Exhibit B, present the expected cost-effectiveness of the revised *wattsmart* Business program, revised trade ally lighting delivery channel, and Mid-Market channel with its current measure offerings. Detailed inputs and results, including sensitivity analysis, are presented in Exhibit B. The program is expected to remain cost-effective from the Utility Cost Test and the Total Resource Cost Test perspectives under all scenarios.

**Table 1. 2016-17 Wattsmart Business Program Costs**

Measure	Year	Admin	Delivery	Incentives	Total Utility Costs	Participant Incremental Cost
Business as Usual	2016-2017	\$1,600,000	\$15,639,746	\$62,883,463	\$80,123,208	\$146,429,541
Proposed with Changes	2016-2017	\$1,600,000	\$15,639,746	\$50,290,840	\$67,530,585	\$138,505,053
Proposed with Changes +10% Participation	2016-2017	\$1,600,000	\$17,203,720	\$55,319,924	\$74,123,644	\$152,355,559
Proposed with Changes -10% Participation	2016-2017	\$1,600,000	\$14,075,771	\$45,261,756	\$60,937,527	\$124,654,548
Lighting Only – Business as Usual	2016-2017	\$400,000	\$4,811,285	\$29,344,849	\$34,556,134	\$71,333,845
Lighting Only with Proposed Changes	2016-2017	\$400,000	\$4,811,285	\$16,772,904	\$21,984,189	\$63,458,651
Lighting Only with Proposed Changes +10% Participation	2016-2017	\$400,000	\$5,292,413	\$18,450,195	\$24,142,608	\$69,804,516
Lighting Only with Proposed Changes -10% Participation	2016-2017	\$400,000	\$4,330,156	\$15,095,614	\$19,825,770	\$57,112,786

**Table 2. 2016-17 UT Wattsmart Business Program Annual Savings**

Measure	Year	Gross KWh Savings	Realization Rate	Adjusted KWh Savings	Net-to-Gross Percentage	Net KWh Savings	Measure Life
Business as Usual	2016-2017	451,861,903	95%	428,470,236	86%	369,433,382	12.2
Proposed with Changes	2016-2017	430,457,930	95%	409,848,779	87%	354,849,367	12.2
Proposed with Changes +10% Participation	2016-2017	473,503,723	95%	450,833,657	87%	390,334,304	12.2
Proposed with Changes -10% Participation	2016-2017	387,412,137	95%	368,863,901	87%	319,364,430	12.2
Lighting Only – Business as Usual	2016-2017	180,919,492	88%	159,804,959	80%	128,206,829	13.0
Lighting Only with Proposed Changes	2016-2017	159,937,059	89%	141,550,242	80%	113,789,474	13.0
Lighting Only with Proposed Changes +10% Participation	2016-2017	175,930,765	89%	155,705,266	80%	125,168,421	13.0
Lighting Only with Proposed Changes 10% Participation	2016-2017	143,943,353	89%	127,395,218	80%	102,410,527	13.0

The Program is funded through the Schedule 193 – DSM Cost Adjustment. Any proposed adjustment to Schedule 193 will be informed by the next tariff rider analysis, which will examine the combined effect of the current balance, forecasted revenues and forecasted expenditures for all programs. The Company is not recommending an adjustment to Schedule 193 as part of this filing.

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

By E-mail (preferred): [datarequest@pacificorp.com](mailto:datarequest@pacificorp.com)  
[michael.snow@pacificorp.com](mailto:michael.snow@pacificorp.com)

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

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Informal inquiries regarding this matter may be directed to Michael Snow, DSM Regulatory Manager, at (801) 220-4214.

Sincerely,

Bill Comeau  
Director, Demand Side Management

Enclosures

cc: Division of Public Utilities  
Office of Consumer Services