Planned Changes to wattsmart Business in California
Effective Date of August 26, 2019

PacifiCorp (Pacific Power) is planning modifications to the wattsmart Business energy efficiency incentive program, which is offered through Schedule A-140. The proposed changes will continue to improve the program and help customers achieve greater cost savings through energy efficiency and energy management. Consistent with the change process for the wattsmart Business program documented in Advice Letter 518-E approved April 30, 2015, notice of the changes will be posted on the program website[1] 45 days prior to implementation. Proposed changes to the incentive tables are included in Exhibit A.

Background

The wattsmart Business program is available to the Company's commercial, industrial, and agricultural customers in California[2] and offers incentives and technical assistance for prescriptive/typical, custom, and energy management measures. Incentives are available for both retrofit projects and new construction/major renovation projects. There is also an enhanced incentive offer for existing small business customers.

The program in California was last updated in May 2017. The prescriptive/typical measures in the program periodically require updates to maintain alignment with energy code, standards, third-party specifications, California's Database for Energy Efficient Resources (DEER) and market data that change over time. The program is also periodically expanded to include new measures. As part of this set of program changes, the Company is incorporating the appropriate updates for 2019.

Description of Planned wattsmart Business Changes

These changes are intended to

a) Improve program cost-effectiveness and reduce program delivery costs by
    a. Adopting a non-residential lighting dual baseline savings and cost calculation methodology for lighting retrofits and small business lighting
    b. Removing measures that have low participation and/or are no longer very cost-effective
    c. Streamlining program participation processes for customers and trade allies
b) Restructure and align lighting retrofit incentives to reflect the continuing market shift to LED lighting technology
c) Add new measures to the incentive tables, update some existing measures based on current market analysis
d) Improve the enhanced incentives for small businesses by adding many LED measures (and removing the fluorescent measures)
e) Make other minor administrative changes

[1] https://www.pacificpower.net/bus/se/california.html
[2] The wattsmart Business program is available in California, Washington, Idaho, Utah and Wyoming with some variation by state.

Explanation of Changes

The planned program changes are listed and explained in the tables below. For additional details, refer to the revised wattsmart Business incentive tables and information, attached as Exhibit A. Exhibit A is marked in redline form to show the planned changes relative to the current program[3].

General Information and INCENTIVES Table, Exhibit A pages 1-3		
Measure	**Description of Change**	**Reason for Change**
Lighting	Remove baseline wattage language	The calculation methodology for lighting retrofits and small business lighting is being revised to better account for existing system conditions as well as current market conditions. Savings will be claimed and incentives paid based on existing site conditions. Additionally, a second period of savings and costs based on market conditions will be recorded for cost-effectiveness purposes. More information on this change is included later in this document. As a result of this change, the language in the baseline adjustments section regarding baseline wattages is no longer applicable.
Prescriptive Incentives (Typical Upgrades) - Lighting	Add footnote to clarify for Schedule LS-51 and LS-52 Street Lighting Service, the street lighting owner (Pacific Power) is not eligible for incentives.	Pacific Power is preparing an Advice Letter filing to request to add Street Lighting Service Rate Schedules LS-51 and LS-52 to the list of rate schedules eligible for the wattsmart Business program. Schedule LS-51 and LS-52 customers, who are served by utility-owned street lights, may request that the Company replace functioning existing street lighting systems with Light Emitting Diode (LED) technology. These customer-requested upgrades are performed at the customer's expense. The footnote makes it clear the street light owner (Pacific Power) is not eligible for incentives (the customer is eligible for the incentive).

[3] For reference, the current program and incentive tables can be found at https://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/CA_wattsmartBusiness_Definitions_Incentive_Tables_Information.pdf

Irrigation	Change from reporting actual costs to reporting deemed costs for irrigation water distribution measures.	Costs for the irrigation water distribution measures are well-established from years of program data as well as Regional Technical Forum data. This change streamlines program operation and reduces program delivery costs.
	Remove project incentive caps for irrigation water distribution measures. Add "Pump VFD" to the Irrigation measure in the table that continues to have project incentive caps. Add "Irrigation Water Distribution" to the table for the measures that will no longer have project incentive caps.	Capping incentives isn't necessary for deemed cost measures since incentives are set to align with deemed costs. This change streamlines program operation by removing the need to check projects against the project incentive caps and simplifies the messaging for customers and trade allies. The irrigation pump VFD measure isn't a deemed measure, so incentive caps are still needed to align with the intent for this measure to have incentives cover a portion but not all of the measure cost.

Retrofit Lighting, Exhibit A, page 4-5		
Measure	**Description of Change**	**Reason for Change**
Retrofit Interior Lighting Retrofit Exterior Lighting	Restructure Lighting Retrofit Offerings	The intent of this restructuring is to encourage customers to install controls with lighting retrofits. This change combines control measures with lighting retrofit measures, to create a single offering structure for interior and exterior lighting retrofits that promotes controllability. While replacement lamps currently offered are a good option, replacement lamps typically provide lower savings, life, and costs than full fixture replacements. Either replacement lamps or fixture replacements with controls (where applicable) are a better option than the replacing lamps or fixtures alone. This new combined approach is intended to augment prudent spending on lighting incentives by paying for energy savings that adopt basic or advanced controls, while still allowing customers to select LED products that best fit their lighting needs and budgets. With the restructuring, incentives for full fixture replacements with an upgrade to advanced

		controls are increased and incentives for most other lighting retrofit measures are reduced.

Lighting Controls and Non-General Illuminance (Retrofit only), Exhibit A, page 6		
Measure	**Description of Change**	**Reason for Change**
Exit Sign	Remove exit sign measure and make it ineligible for incentives	This measure has become common practice and no longer requires incentives.
LED Message Center Sign LED Channel Letter Sign LED Marquee/Cabinet Sign	Remove measures from the incentive tables and instead provide incentives on a $/kWh basis per the custom lighting measure	Contractors and customers often install both general and non-general illumination measures in a single project. Moving to a $/kWh incentive aligns the incentive structure of these measures with the general illuminance measures in the Lighting Retrofit Incentive table and streamlines the incentive offering.
LED Case Lighting Refrigerated Case Occupancy Sensor Non-General Illuminance Custom	Move case lighting measures and custom non-general illuminance from Non-General Illuminance Lighting table to Lighting Retrofit table	With the changes above, consolidating the remaining non-general illuminance lighting retrofit measures in the lighting retrofit table streamlines the lighting retrofit incentive offer.

HVAC Equipment, Exhibit A, page 9-12		
Measure	**Description of Change**	**Reason for Change**
Unitary Commercial Air Conditioners, Air-Cooled	Remove CEE Tier 1 equipment from the incentive offerings. Add available DEER-defined equipment and align incentives to match the existing offerings for equipment exceeding CEE Tier 2.	To align with savings defined by DEER for the available equipment.
Heat Pumps, Air-cooled	Remove CEE Tier 1 equipment from the incentive offerings.	To align with savings defined by DEER for the available equipment.

	Add available DEER-defined equipment and align incentives to match the existing offerings for equipment exceeding CEE Tier 2.	
Heat Pumps, Water-source	Expand eligible equipment size range to all equipment sizes.	To align with savings defined by DEER for the available equipment.

Other HVAC Equipment and Controls Incentives, Exhibit A, page 13-14		
Measure	**Description of Change**	**Reason for Change**
Advanced Rooftop Unit Control (DCV Only)	Add new measure	On occasion, existing rooftop units have variable speed motor controls, but are lacking the sensors and economizer controls. To provide comprehensive control options to customers considering advanced rooftop unit controls (ARC) on all existing rooftop units, the program is proposing a variation of ARC that will allow a prescriptive incentive to be paid on rooftop units with existing motor controls. Savings will be calculated based on site specific information including annual building operation hours. Measure costs reported will be actual material and labor costs from customer invoices. Incentives are intended to offset 30 to 40% of implementation costs and vary based on the cooling capacity of existing rooftop units. Actual measure costs will monitored so incentives can be adjusted as costs for the advanced rooftop unit controls change. Additional eligibility requirements will be described on the program website and in the customer incentive application to ensure appropriate measure savings.
Advanced Rooftop Unit Control (New Unit)	Add new measure	Significant energy savings can be achieved by incorporating motor and economizer controls into new rooftop units.

		Savings will be calculated based on site specific information including annual building operation hours. Measure costs reported will be actual material and labor costs from customer invoices. Incentives are intended to offset 30 to 40% of implementation costs and vary based on the cooling capacity of existing rooftop units. Actual measure costs will monitored so incentives can be adjusted as costs for the advanced rooftop unit controls change. Additional eligibility requirements will be described on the program website and in the customer incentive application to ensure appropriate measure savings.

Food Service Equipment Incentives, Exhibit A, pages 17-18		
Measure	**Description of Change**	**Reason for Change**
Electric Insulated Holding Cabinet	Increase incentive for largest size category	Increased savings as well as measure costs for this measure based on measure analysis performed by RTF. Increasing the incentive to align with measure review assumptions.
Electric Steam Cooker	Collapse the Energy Star Tier 1 and Tier 2 into a single category. Expand incentives to all equipment sizes.	The program is aligning with the savings calculations methodology and efficiency criteria set in approved work-paper: PGECOFST104 R6 Steam Cookers Comm MD. Incentive offerings are set to align with the revised savings and efficiency criteria.
Electric Griddle	Change the incentive structure to $/linear foot	The program is aligning with the savings calculations methodology and efficiency criteria set in approved work-paper: PGECOFST103 R7-Com Griddle. Incentive offerings are set to align with the revised savings and efficiency criteria.
Electric Convection Oven	Change equipment category to full size ovens only. Reduce incentive.	Based on the most recent measure analysis, half size convection ovens are no longer cost-effective. The program will no longer offer incentives for half size ovens. Additionally, the measure savings and costs for the full size ovens has decreased since the

		previous analysis. Incentives for full size units will be reduced in alignment with reduced incremental costs and savings.
Electric Combination Oven	Reduce incentive for 6-15 pan size category Increase incentive for 16-20 pan size category	Based on the most recent measure analysis, incremental costs and savings have been reduced for the 6-15 pan size units and increased for the 16-20 pan size units.
Electric Commercial Fryer	Remove measure and make it ineligible for incentives	Based on the most recent measure analysis the electric commercial fryer is not very cost effective.
Ice Machines (Air-Cooled Only)	Replace the previous Tier 1 and Tier 2 categories and sizes with new equipment size ranges. Set incentives for the new equipment ranges.	The new size range is more closely aligned with the recent changes to California Title 20 requirements and Energy Star specifications effective beginning 2018.
Commercial Transparent Door Refrigerator Commercial Transparent Door Freezer	Remove measures and make them ineligible for incentives.	Based on the most recent measure analysis the commercial refrigerator and freezer measures do not provide enough energy savings to be cost effective.

Appliances, Exhibit A, page 19		
Measure	**Description of Change**	**Reason for Change**
High Efficiency Clothes Washer	Change equipment category to include commercial washers with electric clothes dryers	Recent measure analysis includes calculations for commercial washers used in conjunction with electric clothes dryers.

Irrigation Incentives for Wheel Line, Hand Line or Other Water Distribution Portable Systems – Exhibit A, pages 21-22		
Measure	**Description of Change**	**Reason for Change**
Incentive table title	Add “Water Distribution” to the title of the table	To align with the naming convention in the INCENTIVES table that defines incentive cap applicability.

New rotating sprinkler replacing worn or leaking impact or rotating sprinkler	Increase incentive	DEER doesn't include unit energy savings values for irrigation hardware measures. The program relies instead on the Regional Technical Forum's (RTF) March 2018 updated irrigation hardware measure analysis. RTF does not list the rotator sprinkler specifically. PacifiCorp has offered the rotator for wheel lines to provide the option of replacing impacts with rotators. Savings is assumed to be the same as savings for impact sprinklers. As described below, the RTF updated savings for impact sprinklers. Incentive is increased in alignment with increased savings.
New or rebuilt impact sprinkler replacing worn or leaking impact sprinkler	Remove rebuilt option Increase incentive	The RTF savings value for rebuilt sprinklers is very low, so removing rebuilt option for cost-effectiveness reasons. Incentive for new sprinklers increases because savings for new sprinklers increased, per RTF 2018.
New nozzle replacing worn nozzle of same design flow or less on an existing sprinkler	Remove requirement that all nozzles on the wheel line or hand line have to be replaced	Common practice is not uniform when replacing nozzles. In some cases growers replace all nozzles on a line. In others they do not. Replacing only the worst offenders is beneficial and so should not be ineligible.
New flow control nozzle	Remove measure and provide incentive per the new nozzle measure	Measure is not very cost-effective, participation is low and list can be streamlined by consolidating this measure with the nozzle measure.
New gasket replacing leaking gasket New drain replacing leaking drain	Reinstate measures	These measures were removed from the program in May 2017 because their high savings and low costs triggered the one-year payback cap (resulting in no customer incentive) unless only a few gaskets and drains are purchased together with other equipment with a longer payback. For 2019, the program will report deemed costs for the irrigation hardware measures (including gaskets and drains) and incentive caps are no longer needed. Given the gasket and drain measures are cost-effective, the measures can

		now be reinstated to improve participation and program cost-effectiveness.
New or rebuilt wheel line feed hose replacing leaking wheel line feed hose	Remove measure	Not very cost-effective with new decrement values, low participation.
New Thunderbird wheel line hub replacing leaking wheel line hub	Remove measure	Not very cost-effective with new decrement values, low participation.

Irrigation Incentives – Measures for Pivots and Linear Water Distribution Systems – Exhibit A, page 23		
Measure	**Description of Change**	**Reason for Change**
Incentive table title	Add "Water Distribution" to the title of the table	To align with the naming convention in the INCENTIVES table that defines incentive cap applicability.
Gooseneck as part of conversion to low pressure system	Remove measure	Low participation in the past. Following RTF, the savings has been reduced. The incentive that would be appropriate for the revised savings level is low. Removing the measure in the interest of streamlining and maintaining incentives that are meaningful in the eyes of customers.
Drop tube (3 ft minimum length)	Remove measure	Low participation in the past. Following RTF, the savings has been reduced. The incentive that would be appropriate for the revised savings level is low. Removing the measure in the interest of streamlining and maintaining incentives that are meaningful in the eyes of customers.
New center pivot base boot gasket replacing leaking base boot gasket	Remove measure	Measure has had low participation.
New tower gasket replacing leaking tower gasket	Remove measure	Not very cost-effective with new decrement values, low participation.

Irrigation Incentives for Any Type of System – Exhibit A, page 24		
Measure	**Description of Change**	**Reason for Change**
Irrigation Pump VFD	Move note 4 into the limitations column	With the above changes to remove incentive caps for water distribution measures, the only irrigation measure where project incentive caps apply is the irrigation pump VFD. Moving note 4 text to the limitations column makes it clear this text now only applies to the irrigation pump VFD measure.

Compressed Air Incentives – Exhibit A, page 27-28		
Measure	**Description of Change**	**Reason for Change**
Low pressure drop filters	Remove from Typical incentive offer.	Not very cost-effective with new decrement values, no participation.
Compressed air end use reduction	Remove from Typical incentive offer. Measure is eligible for custom non-lighting or energy management incentives.	In some instances, compressed air end use reduction is an appropriate Energy Management measure, in other instances capital equipment replacement is required. This measure is better administered as an energy management measure or custom non-lighting measure depending on the nature of the upgrade (energy management or capital upgrade).

Enhanced Incentives for Small Businesses – Lighting – Exhibit A, pages 29-32		
Measure	Description of Change	Reason for Change
T8 Fluorescent, T5 Fluorescent	Remove all fluorescent options	The lighting industry is no longer retrofitting fixtures from old fluorescent technology to newer lower wattage fluorescent technology. Additionally, LED technology provides higher savings per cost of upgrade and will promote greater energy efficiency and improve cost-effectiveness.
LED	Add new categories and update incentives	To replace the offerings for fluorescent technologies and to provide higher savings for small business customers, LED lamp and fixture incentives have been added to the program. The new LED offerings are expected to achieve higher savings than the previous fluorescent offerings at similar costs.

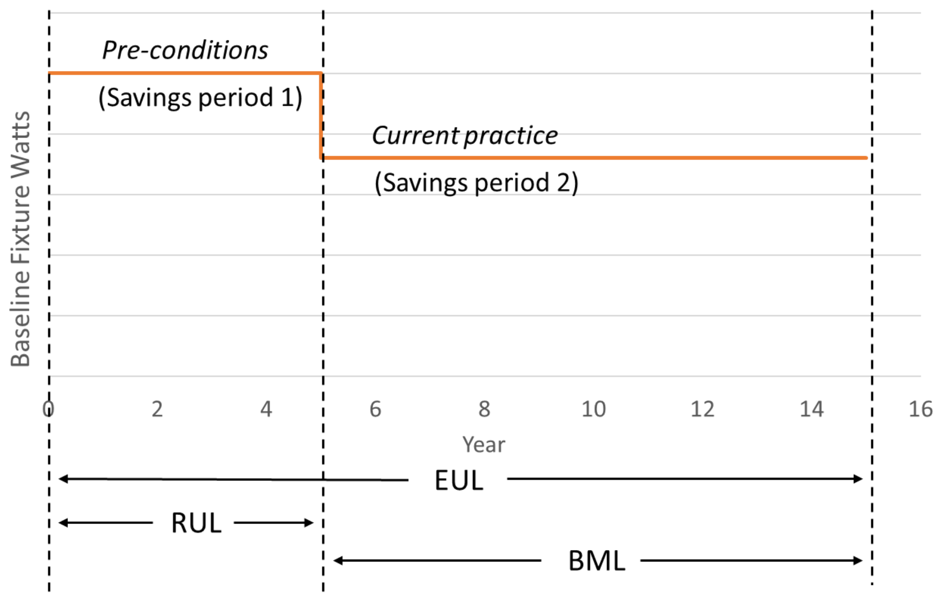
Enhanced Incentives for Small Businesses – Non-Lighting – Exhibit A, page 32		
Measure	Description of Change	Reason for Change
Thermostat Reprogramming	Remove measure	There was not interest among the approved small business contractors to provide this service.
Smart Plug Strips	Remove measure	There was unexpected difficulty in helping the contractors procure the smart plug strips. None of their preferred vendors carried them, and the contractors were reluctant to order online. Since then, the original smart strip technology has almost disappeared, and the majority of the strips that would have been eligible (motion sensing, load sensing, etc.) have been replaced by higher cost Bluetooth devices.

Mid-Market Incentives – Exhibit A, page 32-33, Exhibit B		
Measure	**Description of Change**	**Reason for Change**
A-19 Lamp A-21 Lamp PAR Reflector Lamp BR Reflector Lamp Decorative Lamp	Add a sunset date for listed general service lamps	New federal efficiency standards are set to take effect for general purpose lamps January 1, 2020. The new standards will effectively make LEDs the default technology for these measures. A December 31, 2019 sunset date is being added to these measures. Incentives will not be available for these measures after December 31, 2019. CA efficiency standards were put into effect earlier than the Federal standards, however, the CA standards were listed as a manufacturing standard allowing for the applicable lamp types to continue to be sold while current stock existed. The Federal standards are a sales standard limiting the sale of even existing stock. To allow customers to continue participating using the existing stock of these lamps, the program will continue offering incentives for

		these lamps until the Federal sales standard goes into effect.
LED	Add measures Break-out additional types within existing measures	In alignment with changes being made to the Typical lighting incentive offerings, new and expanded replacement lamp measures are being added to the mid-market offer. The expanded selection is intended to offer customers "good" lighting upgrades, through a simplified and most cost-effective and least administrative cost participation process. The added/expanded replacement lamp measures offer incentives for the majority of lamp replacement types. Deemed unit energy savings and incremental costs for 2019 are updated to align with DEER where applicable.
Reduced Wattage T8 and T5 HO Lamps	Remove and make ineligible for incentives	These measures were added to the program to align with the Northwest Energy Efficiency Alliance's reduced wattage lamp replacement initiative. The market has transformed and NEEA is moving this initiative to long term monitoring status. Removing these measures from wattsmart Business in alignment with NEEA.
LED Measures	Update incentives	All mid-market lighting measure were reviewed for participation and market trends, including baseline and efficient case costs and efficacies. Measure incentives have been revised to align with market and participation trends. See Exhibit B for mid-market incentive changes marked in redline form.

Retrofit Lighting Calculation Methodology

To improve program cost-effectiveness, the program will be adopting a revised lighting retrofit calculation methodology. The revised methodology will account for two measure baselines: one defined by pre-conditions for the remaining useful life of the existing lighting system and the second defined by current practice. The graphic below illustrates the two baseline periods.



Graphic is from the Regional Technical Forum's Standard Protocol for Estimating Energy Savings of Non-Residential Lighting Retrofits, May 3, 2018, page 7

To align with this methodology change, the following changes will be implemented for the 2019 version of the program:

- The wattsmart Business program will report energy savings from the first baseline period and use an adjusted measure life to account for the savings reduction from baseline period 1 to period 2 such that the lifetime savings is correct.
- Reported project costs will be incremental costs as calculated by taking the difference between actual total eligible project cost to install the efficient lighting and the present value of the cost to upgrade to the efficient lighting from a current practice baseline. Project incentive caps will be applied to the actual project costs.

Other aspects of the lighting calculation methodology will remain the same including the use of site specific hours of operation, control saving factors, HVAC interactive effects based on building use type, etc.

Database of Energy Efficient Resources (DEER) Alignment Review

Commission Decision D.14-04-008 included an order[4] related to use of unmodified DEER values for measures where DEER values are available. Recent updates to unit energy savings (UES) measures posted on the DEER website were reviewed for the wattsmart Business measures for alignment with DEER. The results of this review can be found in Exhibit C.

Transition Plan for Projects in Progress

For projects where pre-approval is required (e.g. custom measures), the version of the program that applies is based on the incentive offer issue date.

[4] In future applications for approval of energy efficiency programs, PacifiCorp shall use unmodified Database of Energy Efficiency Resource (DEER) values for measures where the DEER values are available.

For projects where pre-approval is not required, the version of the program is based on the equipment purchase order/invoice date for the first item(s) purchased for the project.

Cost-Effectiveness

Cost effectiveness is performed using a company specific modeling tool, created by a third party consultant. Based on Decision 18-11-033, PacifiCorp's model[5] was revised in 2018 to include a greenhouse gas adder for the incremental value of avoided greenhouse gas emissions. The tool is designed to incorporate PacifiCorp data and values such as avoided costs, and generally follows the methodology specified in California's Standard Practice Manual. PacifiCorp's modeling tool conducts cost effectiveness analysis on all four tests described in the Standard Practice Manual[6] as well as an additional fifth test[7].

Portfolio and program cost effectiveness is provided in the file "PacifiCorp Benefit-Cost Memo_California Portfolio – 22May2019.docx". The portfolio with the planned changes is forecasted to be cost effective with a TRC benefit cost ratio of 1.12 and a PAC benefit cost ratio of 1.42.

Evaluation Plan

The Company offers ***watt***smart Business in its other service territories. Evaluations are conducted at the program level with reports prepared for each state. Consistent evaluation plans throughout PacifiCorp's system-wide territory reduce administrative costs for the program. The most recent evaluation[8] was for the 2016-2017 program. The next evaluation of PacifiCorp's business programs will be for program years 2018-2019, and this evaluation is scheduled for 2020.

Exhibits Provided

Exhibit A – *watt*smart Business incentive tables and information – with changes from the current program (effective 5/1/2017) marked in redline form.
Exhibit B – wattsmart Business Lighting Instant Incentive (mid-market) offer changes marked in redline form.
Exhibit C – DEER alignment review
Cost-Effectiveness analysis - PacifiCorp Benefit-Cost Memo_California Portfolio – 22May2019.docx

[5] In 2017, the Company transitioned from California's E3 Calculator to the PacifiCorp cost effectiveness model. The change in models was a coordinated effort between the Company, Commission Staff and its third party consultant, Itron. Additional information regarding PacifiCorp's transition to its company specific cost effectiveness model can be found in Application No. 17-09-010.
[6] Total Resource Cost test ("TRC"), Program Administrator Cost test ("PAC"), Ratepayer Impact ("RIM"), and Participant Cost Test ("PCT").
[7] PacifiCorp TRC ("PTRC"), total resource costs test with an additional 10% added for the non-quantified environmental and non-energy benefits.
[8] http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/2018/California_2016-2017_WSB_Evaluation.pdf