BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of PACIFICORP (U 901 E), an Oregon Company, to Continue its Energy Efficiency Programs and the Surcharge to Fund Public Purpose Programs	Application No. 20-12-___ (Filed December 31, 2020)

APPLICATION OF PACIFICORP (U-901-E) TO CONTINUE ITS ENERGY EFFICIENCY PROGRAMS AND THE SURCHARGE TO FUND PUBLIC PURPOSE PROGRAMS

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I. INTRODUCTION

In accordance with Rule 3.2 of the California Public Utilities Commission's (Commission) Rules of Practice and Procedure, PacifiCorp (d/b/a Pacific Power) respectfully files this Application seeking an order: (1) authorizing PacifiCorp to continue operating its energy efficiency programs from 2022 through 2026; and (2) approving a continuation of the Surcharge to Fund Public Purpose Programs ("Surcharge"), tariff Schedule S-191, designated for these programs under Public Utility Code §381 (Section 381); and (3) authorizing PacifiCorp to continue to request adjustments to the Surcharge collection rates via the Tier 2 advice letter process.[1]

PacifiCorp currently offers two energy efficiency programs to its California customers: Home Energy Savings (Schedule D-118), and Wattsmart Business (Schedule A-140), (collectively

[1] The Commission first authorized PacifiCorp to adjust the Surcharge through the advice letter process in Decision (D.)14-04-008.

referred to as Programs).[2] These ongoing Programs,[3] which have been authorized to operate through the end of 2021,[4] offer energy efficiency solutions to residential, commercial, industrial, and irrigation customers. The Programs have been successfully managed since 2007 and kept current by periodically adjusting to marketplace conditions and evolving building energy efficiency codes and standards. In consultation with Energy Division Staff and in preparing this application, the programs were revised significantly in 2020 to align with statewide workpapers consistent with the energy efficiency framework for the state's large investor owned utilities. With these adjustments and using only the California Database for Energy Efficiency Resources (DEER) net-to-gross ratios, the portfolio achieving the savings targets is projected to be cost-effective for the five-year application period overall (2022-2026). A scenario of the portfolio with additional savings from Wattsmart Business is also projected to be cost-effective. This scenario was included to inform the funding authorization request discussed in Section H of the application.

II. BACKGROUND

PacifiCorp is a multi-jurisdictional utility providing electric service to retail customers in California, Idaho, Oregon, Utah, Washington, and Wyoming. PacifiCorp serves approximately 45,000 customers in Del Norte, Modoc, Shasta and Siskiyou counties in Northern California. PacifiCorp's California service territory spans 11,292 square miles and is characterized by very low population density, making our customers hard to reach. PacifiCorp serves on average four customers per square mile. All of PacifiCorp's customers meet the geographic criteria of Hard-to-

[2] In addition to these programs, PacifiCorp offers the Energy Savings Assistance Program to income-qualified customers.
[3] The Home Energy Savings and Wattsmart Business programs are ongoing and PacifiCorp anticipates making commitments under the current programs for projects that may not be completed until a later year, potentially after 2026.
[4] Application of PacifiCorp (U901E), an Oregon Company, to Continue its Energy Efficiency Programs and the Surcharge to Fund Public Purpose Programs, Application 17-09-010, D.20-11-032 (Nov. 19, 2020).

Reach in D.18-05-041 referenced in D.18-11-033. In addition, the percentage of customers who fall into the extremely low to low-income category[5] ranges from 40 percent in Shasta County[6] to 41 percent in Modoc County.[7] The rural nature of PacifiCorp's service territory and lower than average income are barriers outlined in the definition of hard-to-reach customers.

The Commission initially authorized PacifiCorp's energy efficiency programs in D.08-01-041 and subsequently approved PacifiCorp's request to continue administering its energy efficiency programs through 2016, in D.14-04-008. On June 8, 2016, PacifiCorp filed a petition for modification of D.14-04-008 to continue administration and funding of its energy efficiency programs through 2017. The Commission, in D.16-09-052, granted PacifiCorp's petition. On September 15, 2017, PacifiCorp filed a petition for modification of D.16-09-052 to continue administration and funding of its energy efficiency programs through 2018. In D.17-11-020, the Commission authorized PacifiCorp to continue its energy efficiency programs through 2018. Concurrent with its petition for modification of D.16-09-052, PacifiCorp filed Application A.17-09-010 to request Commission authorization to continue administering the programs from 2018-2020. On November 29, 2018, the Commission adopted D.18-11-033 authorizing PacifiCorp's requests to continue operating energy efficiency programs through 2020. On August 13, 2020, PacifiCorp filed a Petition to Modify D.18-11-033 seeking authorization to extend its energy efficiency programs through 2021 in accordance with all findings of D.18-11-033. The

[5] The extremely low to low-income categories are very similar to the income limits in Pacific Power's California Alternate Rates for Energy (CARE) Program Application, which is the criteria for defining hard-to-reach customers based on income in D.18-05-041.

[6] https://www.hcd.ca.gov/community-development/housing-element/docs/shasta_county_regional_housing_need_determination_for_the_sixth_housing_element_update_1.pdf

[7] https://www.hcd.ca.gov/community-development/housing-element/docs/modoc_county_regional_housing_need_determination_and_plan_for_the_sixth_housing_element_update_1.pdf

Commission issued D.20-11-032 on November 23, 2020 authorizing PacifiCorp to 1) continue its energy efficiency programs through 2021, 2) collect $1.9 million through its Public Purpose Programs Surcharge to administer its energy efficiency programs during program year 2021, 3) not exceed $2.4 million in energy efficiency portfolio expenditures during program year 2021, and 4) to file an application no later than December 31, 2020 to continue its energy efficiency programs beyond 2021. This application is being submitted in accordance with that order.

A. Compliance with D.18-11-033

PacifiCorp has complied with the orders in D.18-11-033 as described below.

PacifiCorp reduced its Public Purpose Programs Surcharge effective January 1, 2019.

PacifiCorp has conformed to Overall Portfolio Level metrics requirements in both annual reporting[8] and Annual Budget Advice Letters (ABAL) for 2020 and 2021:

- On September 3, 2019, PacifiCorp filed its ABAL for 2020 (Advice Letter 588-E). The company responded to data requests and communicated by conference call and email with Energy Division Staff from September 2019 to June 2020 to discuss the original ABAL filing made September 3, 2019 and identified the need to revise both programs to align with statewide workpapers which replaced DEER as well as to remove exterior commercial lighting from the program offerings. On July 6, 2020, PacifiCorp filed a supplement to its ABAL for 2020 (Advice 588-E-A) and received a disposition letter for approval on July 9, 2020.
- On March 13, 2020, PacifiCorp issued its 2019 California Annual Review of Energy Efficiency Programs.[9] In compliance with D.18-11-033, this report includes overall portfolio metrics, a breakdown of expenses into cost categories

[8] Available at https://www.pacificorp.com/environment/demand-side-management.html
[9] https://www.pacificorp.com/environment/demand-side-management.html

(administrative costs, direct implementation - incentive payments, direct implementation – non-incentives, investor-owned utilities (IOU's) administered marketing/education/outreach and energy efficiency evaluation, measurement, and verification (EM&V)) and hard-to-reach participation for calendar year 2019.

- On September 1, 2020, PacifiCorp filed its ABAL for 2021 (Advice Letter 627-E) which was later withdrawn because the company was still waiting for an order on its Petition to Modify D.18-11-033 to extend its Programs through 2021. Once an order approving the Petition for Modification was adopted in D.20-11-032, PacifiCorp filed a new ABAL for 2021 (Advice 636-E) on December 17, 2020.

PacifiCorp discontinued incentives for compact fluorescent lights by December 31, 2018.

PacifiCorp submitted ABALs as Tier 2 advice letters for the next year's funding levels for 2020 and 2021 as mentioned above. Each ABAL included the required elements defined in D.18-11-033.

PacifiCorp used only DEER values approved as of September 1 for each ABAL mentioned above. PacifiCorp used its company-specific model and, for the 2021 ABAL, provided a report from Applied Energy Group on updates to the model.

III. PACIFICORP'S ENERGY EFFICIENCY PROGRAMS IN CALIFORNIA

A. Residential Program

The Home Energy Savings program (Schedule D-118) is offered to residential customers using PacifiCorp's Wattsmart® brand. Incentives are available for clothes washers and heat pump water heaters for single family, multi-family and manufactured homes. Incentives are also

available to builders for whole home performance for efficient new single family and manufactured homes that exceed code.[10]

The appliance category of the program includes after-purchase incentives for clothes washers. Customers replacing water heaters are eligible for incentives if they install equipment with heat pump technology. New homes are eligible for incentives if they exceed the applicable version of the Title 24 Code by a minimum of fifteen percent as demonstrated through the performance method using California-approved Title 24 compliance software, such as EnergyPro.

Customers have two options for submitting their incentive applications: using the program's online portal or emailing/mailing paper forms and copies of back-up documentation.

Customers also have access to an online home energy advisory tool[11] which guides customers through questions about their home's features and provides information on additional opportunities for energy savings.

B. Non-Residential Program

PacifiCorp offers Wattsmart Business (Schedule A-140) to non-residential customers in California. The program provides a comprehensive set of financial and service incentives to assist PacifiCorp's non-residential customers in improving the energy efficiency of their facilities.[12]

Listed incentives are offered to commercial, industrial, and irrigation customers for common energy efficiency measures for interior lighting, HVAC, motors and drives, food service

[10] Program details are available on the company's website - https://www.pacificpower.net/savings-energy-choices/home.html
[11] https://survey.wattsmartsavings.net/
[12] Program details such as incentive tables and program definitions are available at https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/california/CA_wattsmartBusiness_Definitions_Incentive_Tables_Information.pdf
The program brochure is available at https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/california/CA_wattsmartBusiness_Brochure.pdf

equipment, compressed air, irrigation and more. Listed incentives may include an expedited energy analysis and incentives based on the equipment installed ($/horsepower, $/ton, etc.) or per kilowatt-hour (kWh) annual energy savings.

Custom incentives and analysis are offered for commercial, industrial, and irrigation customer retrofits and new construction measures not listed in the program incentive tables referenced above. The program includes a vendor-neutral investment grade energy analysis and cash incentives equal to $0.15 per kWh of annual energy savings (up to 70 percent[13] of project costs). There is a cap to prevent incentives from bringing the payback for a project below one year. Custom analysis includes a post-installation verification completed by the program administrator and, if required, the program includes commissioning which includes reviewing the operation of the installed measures and identifying any fine tuning needed to achieve energy performance of the project. The incentive is paid and savings reported based on the final verified results of the project.

The program provides energy project manager co-funding to increase end-user management and engineering human resources available to develop and complete electrical energy projects/activities.

Energy management incentives allow PacifiCorp to partner with customers to ensure ongoing efficiency improvements in the operation and management of facilities and industrial processes. Energy management is a system of practices that create reliable and persistent electric energy savings through improved operations, maintenance and management practices at customer sites. It is designed to complement program offerings for capital improvements and the Energy

[13] The company is proposing to change this cap to 80 percent in 2021.

Project Manager co-funding offer. Savings are site-specific and monitoring of building systems and industrial process controls is used to identify and quantify energy savings.

Optional financing is offered via a third party, National Energy Improvement Fund.

The program is marketed primarily via program staff, Wattsmart Business vendors and PacifiCorp account managers. Other leads come via advertising, word-of-mouth, past participants returning for additional projects, and a combination of other PacifiCorp outreach efforts. There is a periodic postcard outreach campaign specific to Schedule A-25 customers who meet the definition for hard-to-reach based on business size (electric demand less than 20 kilowatts). There is ongoing support for the Wattsmart Business vendor network including program contacts for vendors to call with questions and calculation tools that approved vendors can use to estimate incentives to include in their project proposals for customers.

C. Program Savings

Energy efficiency savings, utility costs and participation information for the incentive programs are available in PacifiCorp's California Demand-Side Management Annual Reports.[14] The programs track hard-to-reach customer participation. For details on this, refer to Exhibit A, Overall Portfolio Metrics – Hard-to-Reach Reporting Descriptions.

IV. TARGET SETTING PROCESS

PacifiCorp contracted with Applied Energy Group (AEG) to define appropriate targets for this Application using the most current and best available forecasted information. AEG's analysis incorporated a current assessment of forward-looking technically achievable energy efficiency potential in PacifiCorp's California service territory, recent guidance from the Commission regarding measures that are eligible to include in PacifiCorp programs, and economic screening

[14] Demand-Side Management Annual Reports available at http://www.pacificorp.com/es/dsm/california.html.

that serves as a proxy for upcoming cost-effective resource selections to result from PacifiCorp's next Integrated Resource Plan (IRP) to be filed in April 2021. AEG's work to define the targets in this Application is documented in Exhibit B, California 2022-2026 Energy Efficiency Target Development.

A. AEG Analysis Results.

Tables 1-17 below are reflective of results from analysis performed by AEG for this Application.

AEG identified the following targets for 2022-2026:

Table 1: 2022-2026 Savings Targets (Gross megawatt-hour (MWh) at Generator)

	2022	2023	2024	2025	2026	Total
Home Energy Savings	84	156	259	399	573	1,471
Wattsmart Business	1,221	1,446	1,646	1,859	2,112	8,284
Total MWH	1,305	1,602	1,905	2,258	2,685	9,755

AEG identified the following incremental measure costs associated with the measures included in the targets. These costs are incurred by program participants (before incentives) to purchase and implement energy efficiency and energy management measures.

Table 2: 2022-2026 Portfolio Incremental Measure Costs to Achieve Targets

2022	2023	2024	2025	2026	Total
$ 641,688	$ 806,247	$ 946,508	$ 1,119,951	$ 1,334,233	$ 4,848,628

AEG also identified the incentive and non-incentive estimated expenditures by sector to achieve the targets in Table 1. These expenditure estimates by program are in Table 3 below.

Table 3: 2022-2026 Expenditures to Achieve Targets

	2022	2023	2024	2025	2026	Total
Home Energy Savings	$ 38,781	$ 71,640	$ 106,643	$ 163,849	$ 236,198	$ 617,110
Wattsmart Business	$ 549,163	$ 667,080	$ 760,591	$ 862,302	$ 986,287	$ 3,825,423
Total Expenditures	**$ 587,944**	**$ 738,720**	**$ 867,234**	**$ 1,026,150**	**$ 1,222,485**	**$ 4,442,533**

PacifiCorp allocated the overall 2022-2026 non-incentive expenditure estimates into the Commission's cost categories as seen in Table 4 using reference points such as the recent ABALs

and the 2019 results. The company notes that these are estimates and the actual allocation of expenses may vary. Refer to Exhibit C for PacifiCorp's Cost Category Reporting Descriptions previously shared with Energy Division Staff.

Table 4: 2022-2026 Estimated Breakdown of Expenditures to Achieve Targets

	2022	2023	2024	2025	2026	Total	%
Administrative Costs	$ 44,916	$ 56,435	$ 66,252	$ 78,393	$ 93,392	$ 339,388	8%
Incentive Payments	$ 243,416	$ 305,839	$ 359,045	$ 424,838	$ 506,123	$ 1,839,259	41%
Direct Implementation - non-incentives	$ 206,640	$ 259,632	$ 304,799	$ 360,652	$ 429,656	$ 1,561,379	35%
IOUs administered marketing, education and outreach	$ 14,041	$ 17,641	$ 20,710	$ 24,505	$ 29,194	$ 106,092	2%
Program Evaluation	$ 78,932	$ 99,174	$ 116,427	$ 137,762	$ 164,120	$ 596,414	13%
Total	$ 587,944	$ 738,720	$ 867,234	$ 1,026,150	$ 1,222,485	$ 4,442,533	100%

B. PacifiCorp Review of AEG's Incremental Measure Costs

As part of the company's review of the AEG results, incremental measure cost assumptions were compared to measure cost forecasts in the 2021 ABAL that incorporates dual baseline incremental costs where appropriate. The company noted AEG's incremental measure costs for the portfolio are 51% higher than the 2021 ABAL reference point.

Table 5: AEG Incremental Measure Costs/kWh Compared to 2021 ABAL Reference Point for the Portfolio

	2021 ABAL	2022-2026 from AEG					
	2021	2022	2023	2024	2025	2026	2022-2026 Total
Incremental Measure Costs	$1,509,148	$ 641,688	$ 806,247	$ 946,508	$1,119,951	$1,334,233	$ 4,848,628
kWh Savings @ generation	4,571,887	1,305,186	1,601,972	1,905,344	2,257,546	2,684,968	9,755,016
Incremental Measure Costs/ kWh	$ 0.33	$ 0.49	$ 0.50	$ 0.50	$ 0.50	$ 0.50	$ 0.50
% difference from 2021 ABAL reference point to AEG Measure Costs/kWh		49%	52%	50%	50%	51%	51%

Table 6: AEG Incremental Measure Costs/kWh Compared to ABAL Reference Point for Wattsmart Business

	2021 ABAL	2022-2026 from AEG					
	2021	2022	2023	2024	2025	2026	2022-2026 Total
Incremental Measure Costs	$1,464,091	$ 599,363	$ 728,058	$ 830,117	$ 941,125	$1,076,444	$ 4,175,107
kWh Savings @ generation	4,484,650	1,221,106	1,445,503	1,646,266	1,858,613	2,112,142	8,283,630
Incremental Measure Costs/ kWh	$ 0.33	$ 0.49	$ 0.50	$ 0.50	$ 0.51	$ 0.51	$ 0.50
% difference from 2021 ABAL reference point to AEG Measure Costs/kWh		49%	53%	53%	53%	54%	53%

The company also compared AEG's incremental measure costs to those for Wattsmart Business from 2015-2019 and found AEG's costs were 32% higher than this reference point and measure costs could be an area to revisit once the cost-effectiveness analysis was complete.

Table 7: Wattsmart Business Incremental Measure Cost/kWh (from Annual Reports)

	2015	2016	2017	2018	2019	2015-2019
Incremental Measure Costs	$ 2,111,565	$ 1,679,883	$ 883,132	$ 1,129,606	$ 2,389,401	$8,193,587
Gross kWh @ generation	3,691,316	3,640,682	2,739,511	4,310,979	7,102,091	21,484,578
Incremental Measure Costs/kWh	$ 0.57	$ 0.46	$ 0.32	$ 0.26	$ 0.34	$ 0.38

Table 8: AEG Incremental Measure Costs/kWh Compared to 2015-2019 Reference Point for Wattsmart Business

	2015-2019	2022-2026
Incremental Measure Costs	$8,193,587	$4,175,107
kWh Savings @ generation	21,484,578	8,283,630
Incremental Measure Costs/ kWh	$ 0.38	$ 0.50
% difference from 2015-2019 reference point to AEG Measure Costs/kWh		32%

The company proceeded with cost-effectiveness analysis using all data from AEG, including the incremental measure costs and determined the portfolio was not cost-effective (2022-2026 portfolio total resource cost (TRC) of 0.85). Given the cost comparison findings from Tables 5 through 8, the Company designed a cost effectiveness analysis scenario by reducing the incremental measure costs for the portfolio by 30 percent based on the reference points above. The

costs before and after adjustment are in Table 9 below. When re-run using the adjusted costs, the 2022-2026 portfolio was cost-effective, resulting in TRC of 1.01. Results for both cost-effectiveness analyses are attached as Exhibits F and G and summarized in the section below.

Table 9: 2022-2026 PacifiCorp Adjusted Incremental Measure Costs to Achieve Targets

	2022	2023	2024	2025	2026	Total
Incremental Measure Costs from AEG	$ 641,688	$ 806,247	$ 946,508	$1,119,951	$1,334,233	$4,848,628
PacifiCorp Adjusted Incremental Measure Costs	$ 449,182	$ 564,373	$ 662,556	$ 783,966	$ 933,963	$3,394,039
Difference	$ 192,507	$ 241,874	$ 283,952	$ 335,985	$ 400,270	$1,454,588

C. Cost-Effectiveness Methodology

The company evaluates program implementation cost-effectiveness (both prospectively and retrospectively) under a variety of tests to identify the relative impact and/or value (e.g., near-term rate impact, program value to participants, etc.) to customers and the company. Program cost-effectiveness is evaluated using a company-specific modeling tool, created by a third-party consultant, Guidehouse Consulting.

In preparation for the recent 2021 ABAL filing, PacifiCorp engaged AEG to review recent relevant CPUC guidance regarding energy efficiency cost-effectiveness methodology and tools and to recommend updates to ensure continued alignment with the Commission's cost-effectiveness practices. AEG's findings and recommendations from this review are provided in Exhibit D, Review of PacifiCorp California Energy Efficiency Cost-Effectiveness Model. To accurately reflect the value of energy efficiency to PacifiCorp's system while aligning with the Commission's guidance on avoided costs, AEG recommended that the company use the 2020 Avoided Cost Calculator (ACC) Excel file available on the Commission website[15] and adjust inputs, as appropriate, to align with PacifiCorp's system and IRP

[15] https://www.cpuc.ca.gov/General.aspx?id=5267

to develop hourly values of avoided costs. These ACC values could then be input to the Guidehouse modeling tool. The resulting recommendations and changes were incorporated into the model used for the 2021 ABAL and this Application for PacifiCorp's 2022-2026 Programs.

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.[16] PacifiCorp's modeling tool conducts cost-effectiveness analysis on all four tests described in the Standard Practice Manual as well as an additional fifth test which includes a 10 percent Conservation Cost credit as per the Northwest Power Act. The company's analysis assesses the costs and benefits of demand-side management programs from different stakeholders' perspectives, including participants and non-participants.

Exhibit E, Description of PacifiCorp Cost-Effectiveness Modeling Tool, contains a comprehensive description of PacifiCorp's cost-effectiveness tool used for this Application.

D. Portfolio Cost-Effectiveness Analysis and Results

PacifiCorp's cost-effectiveness results for the portfolio achieving the targets from AEG's analysis and incremental measure costs from AEG are provided in Exhibit F, Portfolio Cost-Effectiveness to Achieve Targets (with AEG measure costs) and summarized below.

Table 10: Portfolio Cost Effectiveness to Achieve Targets (with AEG measure costs)

Program Year	PTRC	TRC	UCT	RIM	PCT
2022	0.80	0.73	0.94	0.43	2.14
2023	0.83	0.75	0.97	0.44	2.17
2024	0.90	0.82	1.05	0.46	2.29
2025	0.97	0.88	1.13	0.49	2.39
2026	1.05	0.95	1.21	0.51	2.48
2022-2026	**0.93**	**0.85**	**1.08**	**0.47**	**2.33**

[16] https://www.cpuc.ca.gov/general.aspx?id=5267

PacifiCorp's cost-effectiveness results for the portfolio achieving the targets from AEG with PacifiCorp's adjustments to incremental measure costs are provided in Exhibit G, Portfolio Cost-Effectiveness to Achieve Targets (with adjusted measure costs) and summarized below.

Table 11: Portfolio Cost Effectiveness to Achieve Targets (with adjusted measure costs)

Program Year	PTRC	TRC	UCT	RIM	PCT
2022	0.96	0.87	0.94	0.43	3.05
2023	0.99	0.90	0.97	0.44	3.10
2024	1.07	0.98	1.05	0.46	3.27
2025	1.16	1.05	1.13	0.49	3.42
2026	1.25	1.13	1.21	0.51	3.54
2022-2026	**1.11**	**1.01**	**1.08**	**0.47**	**3.32**

Net energy savings and all costs, including those for internal labor (overhead) and evaluations were included in the assessment. Results for both the Total Resource Cost (TRC) and Program Administrator Cost (PAC) or Utility Cost Test (UCT) test components of the Dual-Test were calculated.

The TRC test measures net costs as a resource option based on the total costs for participants and the utility. The TRC benefits are the net present value of the supply-side resources avoided or deferred. The TRC is the present value of the net costs to participants plus all the costs incurred by the program administrator.

Under the PAC test, program benefits are the same as those used in the TRC test. The costs are only those incurred by the program administrator and exclude those incurred by participating customers. Test results for both tests are usually shown as a benefit-cost ratio and a portfolio is said to have passed if the benefit-cost ratio is greater than one.

E. Review of Portfolio Targets and Cost-Effectiveness

The cost-effectiveness results with adjusted measure costs illustrate that the portfolio is cost-effective and Home Energy Savings program results are more robust than the Wattsmart Business program results.

As part of reviewing the targets from AEG and the portfolio cost-effectiveness, the company noted the following:

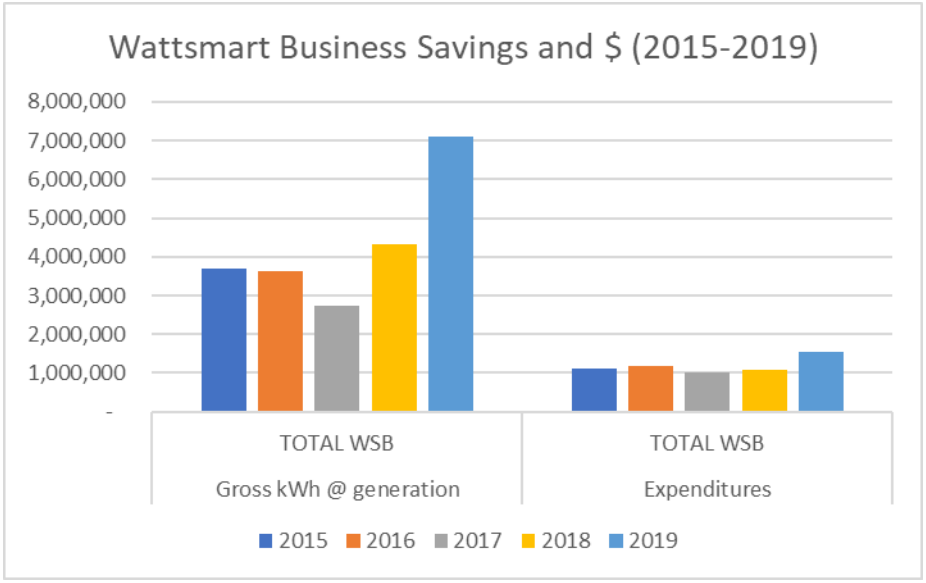
1) The targets for the earlier years are lower than projected savings for 2021 in the ABAL, and program results during the application period may exceed the targets especially for Wattsmart Business. This would mean earlier acquisition of the AEG-identified conservation potential for 2022-2026 and corresponds with earlier assistance for customers in saving energy and money.
2) The five-year TRC (and PAC) for the portfolio is just above 1.0. In general, a higher level of savings acquisition improves portfolio cost-effectiveness since costs of operating the programs can be amortized over more savings. Therefore, a primary program management tactic to improve cost-effectiveness is to work toward exceeding the savings targets cost-effectively.
3) However, the overall five-year portfolio budget in this Application is expected to be capped to a Commission-authorized funding level. The company cannot exceed the cap, so efforts to exceed the targets and improve cost-effectiveness would need to occur within spending limits of the budget.

Given these factors, PacifiCorp developed a potential budget scenario to test whether exceeding the savings targets from the AEG analysis by modeling additional incentives and program costs to identify and deliver those savings could result in a cost-effective portfolio.

F. PacifiCorp Scenario to Potentially Exceed Targets

To develop a scenario for exceeding the targets, the company used the AEG analysis and past program data for Wattsmart Business from the five-year period from 2015-2019. The time period of five years was chosen since it replicates the Application timeframe and five years is enough time to see year-to-year variability in program participation. Since the Home Energy Savings program is a much smaller percentage of portfolio savings with less year-to-year variation and potential for increased savings, the company focused on non-residential savings opportunities for this analysis. As shown in the figure below, Wattsmart Business program results vary significantly from year to year. For example, in 2017, the company did not have any projects with more than 200,000 kWh in savings and in other years such as 2019, PacifiCorp had several projects delivering over 200,000 kWh each. Expenditures vary as well, but not in the same pattern, as there is a baseload level of effort to operate the program and perform outreach activities whether program participants elect to complete their projects and achieve savings in a given year or not.

Figure 1



The table below contains the data for graphs above. The data came from the company's 2015-2019 annual reports.[17]

Table 12: Wattsmart Business Savings and Expenditures (from 2015-2019 Annual Reports)

	2015	2016	2017	2018	2019
Gross kWh @ generation	3,691,316	3,640,682	2,739,511	4,310,979	7,102,091
Expenditures	$ 1,100,244	$ 1,165,115	$ 1,020,012	$ 1,092,929	$ 1,531,637

The company identified the low year (2017) as a reference point for a low savings year and determined the average of the five years. The percentage increase in savings from the low year (2017) to the average year is 57%. This adjustment factor was used to determine the potential additional Wattsmart Business savings above the target from AEG because the savings identified in the study are designed to be a conservative estimate, equivalent to a low year savings estimate.

Generally, when Wattsmart Business savings results are high, the expenditures per kWh come down as the program can amortize baseload costs across more savings. The percentage decrease in expenditures/kWh (excluding incentives) from the low savings year (2017) to the average savings year is -42 percent. This adjustment factor was used to determine the potential additional Wattsmart Business expenditures for the additional savings above the target. Note: the adjustment factor for expenditures per kWh was applied to non-incentive expenditures since there is not an economy of scale associated with incentives.

Both adjustment factors are displayed in the table below and highlighted in yellow.

[17] Annual reports are available on the company's website at http://www.pacificorp.com/es/dsm/california.html

Table 13: Adjustment Factors for Wattsmart Business Savings and Expenditure/kWh

	Low kWh Year (2017)	Average kWh Year (2015-2019)	% change low to average
Gross kWh @ generation	2,739,511	4,296,916	57%
Non-Incentive Expenditures	$ 758,776	$ 695,014	-8%
Non-Incentive Expenditures $/kWh	0.28	0.16	-42%

Using these adjustment factors and the AEG analysis, below are 1) the original savings targets from AEG and the expenditures to achieve the targets, 2) the additional Wattsmart Business savings above the targets and expenditures to achieve the additional savings and 3) the total savings and expenditures to achieve the targets plus the additional savings above the target. Also included is an estimated breakdown for the portfolio expenses into the Commission cost categories.

Table 14: 2022-2026 Savings Targets plus additional Wattsmart Business MWh (Gross MWh at Generator)

	2022	2023	2024	2025	2026	Total
Home Energy Savings	84	156	259	399	573	1,471
Wattsmart Business	1,221	1,446	1,646	1,859	2,112	8,284
Wattsmart Business above target	696	823	938	1,059	1,203	4,719
Total MWH	2,001	2,425	2,843	3,316	3,888	14,474

Table 15: 2022-2026 Expenditures to Achieve Targets plus additional Wattsmart Business Savings

	2022	2023	2024	2025	2026	Total
Home Energy Savings	$ 38,781	$ 71,640	$ 106,643	$ 163,849	$ 236,198	$ 617,110
Wattsmart Business	$ 549,163	$ 667,080	$ 760,591	$ 862,302	$ 986,287	$ 3,825,423
Wattsmart Business above target	$ 236,576	$ 287,373	$ 327,657	$ 371,473	$ 424,886	$ 1,647,965
Total Expenditures	**$ 824,520**	**$ 1,026,094**	**$ 1,194,891**	**$ 1,397,624**	**$ 1,647,370**	**$ 6,090,498**

Table 16: 2022-2026 Portfolio Level Estimated Breakdown of Expenditures by Cost Category to Achieve Targets plus additional Wattsmart Business MWh

	2022	2023	2024	2025	2026	Total	%
Administrative Costs	$ 58,873	$ 73,388	$ 85,583	$ 100,308	$ 118,458	$ 436,610	7%
Incentive Payments	$ 372,936	$ 463,169	$ 538,430	$ 628,211	$ 738,738	$ 2,741,484	45%
Direct Implementation - non-incentives	$ 270,849	$ 337,628	$ 393,729	$ 461,475	$ 544,975	$ 2,008,656	33%
IOUs administered marketing, education and outreach	$ 18,404	$ 22,941	$ 26,753	$ 31,356	$ 37,030	$ 136,483	2%
Program Evaluation	$ 103,459	$ 128,967	$ 150,396	$ 176,274	$ 208,169	$ 767,265	13%
Total	$ 824,520	$ 1,026,094	$ 1,194,891	$ 1,397,624	$ 1,647,370	$ 6,090,498	100%

PacifiCorp's cost-effectiveness results for the portfolio with PacifiCorp's adjustments to incremental measure costs and with the targets from AEG plus additional Wattsmart Business savings are provided in Exhibit H, Portfolio Cost Effectiveness to Exceed Targets (with adjusted measure costs, additional Wattsmart Business megawatt-hour (MWh)), and summarized below.

Table 17: Portfolio Cost Effectiveness to Exceed Targets (with adjusted measure costs, additional Wattsmart Business MWHh

Program Year	PTRC	TRC	UCT	RIM	PCT
2022	1.03	0.94	1.03	0.45	3.02
2023	1.06	0.96	1.05	0.46	3.05
2024	1.14	1.04	1.12	0.48	3.19
2025	1.22	1.11	1.20	0.50	3.31
2026	1.31	1.19	1.28	0.53	3.41
2022-2026	**1.18**	**1.07**	**1.16**	**0.49**	**3.23**

III. PROPOSED FRAMEWORK

The following framework elements for 2022-2026 are intended to continue PacifiCorp's alignment with the large investor owned utilities while recognizing some unique aspects of PacifiCorp's service area in California.

A. Application Timeframe of Five Years from 2022-2026

As indicated in the background provided above, PacifiCorp is essentially on a four-year application cycle given the three-year applications with a one-year extension. Historically, the company has expected about one year or more for approval of each Application. PacifiCorp is proposing a five-year application cycle to allow amortization of the application work for both company, Staff and the Commission over one additional year.

B. Use of Company Model for Cost-Effectiveness Analysis

PacifiCorp proposes to continue to use its company-specific cost-effectiveness model and, as part of its ABALs, will document appropriate adjustments to its model in a separate report, to ensure continued alignment with related Commission decisions.

The statewide California Energy Data and Reporting System (CEDARs) Cost-Effectiveness Tool (CET) does not include PacifiCorp's avoided costs, and the already built and maintained company model is a cost-efficient path forward and appropriately applied for this Application, given the relatively small size of the PacifiCorp portfolio.

For a description of the company-specific cost-effectiveness model, refer to Exhibit E, Description of PacifiCorp Cost-Effectiveness Modeling Tool.

For a description of the review of the model included with the 2021 ABAL filing, refer to Exhibit D, Review of PacifiCorp California Energy Efficiency Cost-Effectiveness Model. The company would anticipate completing this type of review prior to filing each ABAL filed for 2022-2026, similar to its currently-approved process.

C. Alignment with Rolling Portfolio Framework

PacifiCorp is proposing the following in this Application, to continue alignment with the Rolling Portfolio Framework:

1. Portfolio TRC (and PAC) must meet or exceed 1.0.
2. PacifiCorp must track and report the overall portfolio-level common metrics adopted in D.18-05-041.
3. PacifiCorp must:
    a. submit ABALs that include a forecast TRC (and PAC) that meets or exceeds 1.0; verification of prior year savings; and a breakdown of year-to-date expenses, including at minimum the following categories: incentive payments, program evaluation, and administrative expenses.
    b. conform to portfolio level metrics requirements as prescribed in D.18-05-041 and other subsequent Commission guidance and decisions related to metrics submissions and filings.

The company recognizes in D.18-11-033, the Commission stated administrative costs should be consistent across all IOUs and set a cost cap on administration expenses of 10 percent of total energy efficiency expenditures but declined to enforce the cap for PacifiCorp. While the

company has come in below 10 percent in the 2019 results and the 2020 and 2021 ABALs, this has been with a larger portfolio. As shown in Table 2 above, given the budget for 2022, a 10 percent cap would result in administration expenses capped at less than $59,000 and it would take additional administration expenses to manage to a cap. Given the small overall size of the 2022-2026 portfolio and administration expenses, and given the many complexities that increase administration expenses are not portfolio-size dependent, PacifiCorp requests that a cap continue to be delayed. PacifiCorp will continue to break down expenditures into the Commission's cost categories (administrative costs, direct implementation – incentive payments, direct implementation – non-incentives, IOU's administered marketing/education/outreach and EM&V) in annual reports and ABALs so there is clarity on the level of administration expenses.

The company also recognizes in D.18-11-033 that the Commission noted the large IOUs are required to submit ABALs for program year 2022 and thereafter with a forecast TRC (and PAC) that meets or exceeds 1.25 and that the Commission may apply this same standard to PacifiCorp in future applications. In aligning with the statewide workpaper measures and removing measures such as lighting and Energy Kits in Home Energy Savings (HES) and exterior commercial lighting in Wattsmart Business, the portfolio size decreased significantly, putting more downward pressure on cost-effectiveness. Given the small portfolio relative to the other IOUs, and the small, rural nature of the company's service area with long drive times, as well as few large customers and many hard-to-reach customers, the company requests to continue to have a TRC and PAC standard of 1.0.

D. Opportunity for Check-ins and Staff Engagement

PacifiCorp appreciates the opportunity for engagement with Energy Division Staff, given the magnitude of activity taking place in the California regulatory environment and the company's relatively small energy efficiency portfolio.

For 2022-2026, PacifiCorp will issue an annual review of prior year energy efficiency programs[18] by the last business day in March and file an ABAL on the first business day of September with funding levels for the upcoming year. Both will include overall portfolio metrics adopted in D.18-05-041. Both the annual review and the ABAL will also serve as check-ins and provide updated information on program results and plans and opportunity for interaction with and direction from Staff.

E. Program Change Process

PacifiCorp proposes to continue to use the ABAL and previously-approved program change process to keep the programs updated and aligned with potential changes to statewide workpapers, market data, etc.

Upcoming program changes will be defined as part of the ABAL preparation each year. Each ABAL will align with statewide workpapers available on the DEER website[19] as of September 1 of a filing year. PacifiCorp will follow the program change process described below to incorporate necessary changes to program details managed on the company website.[20] Once

[18] Annual reports are available at http://www.pacificorp.com/es/dsm/california.html.
[19] Currently available online at http://www.deeresources.net/ by clicking "Workpaper Archive." Workpapers in the archive with a File Name beginning with "SW", where current revision = true (not false) are current statewide workpapers.
[20] Link to Wattsmart Business program details - https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/california/CA_wattsmartBusiness_Definitions_Incentive_Tables_Information.pdf

the program changes for a coming year are effective, these values will be used for that year,[21] and the statewide workpapers and other DEER resources will be reviewed again for the next ABAL.

The program change processes for the Home Energy Savings and Wattsmart Business programs are similar and were referenced in PacifiCorp's Application for 2018-2020 (A.13-07-015):

- Home Energy Savings – Appendix J from Application 07-07-011 filed July 16, 2007 described the program change process for Home Energy Savings. The relevant text from page 2 of Appendix J is provided below:

  "The comprehensive nature of the Program and changing equipment standards indicate that a flexible and market-driven program delivery is required. PacifiCorp is proposing that Schedule D-118 outline the basic program elements, including: customer eligibility, use of a program administrator for delivery, the seasonal nature of selected incentive offers, and that current incentive levels may change. Specific details on all aspects of the program including incentive levels, eligible equipment specifications and dates for incentive availability would be managed by the program administrator using a dedicated program web site with easy links from the Pacific Power web site. Changes in equipment specifications or incentive levels would be clearly posted on the Web site with at least 45 days advance notice."
- Wattsmart Business – Exhibit I – Program Change Process from Advice Letter 518-E filed February 24, 2015.

[21] For example, measures with a measure effective date on or after the 2022 program changes are implemented will use the 9/1/2021 statewide workpaper values.

F. Potential Addition of Fuel Switching Measures

Similar to customers in communities in the San Joaquin Valley where Disadvantaged Communities Pilot projects are underway,[22] PacifiCorp's customers in California do not have much, if any, access to natural gas service and may use wood, propane or other non-utility (unregulated) fuels. PacifiCorp plans to review available information on the San Joaquin Valley pilots and other available information and may propose fuel switching measures for Home Energy Savings and/or Wattsmart Business during the application timeframe using the ABAL and program change process.

G. Potential Addition of Home Energy Reports

During the application timeframe, PacifiCorp plans to review the feasibility of adding Home Energy Reports to improve its residential offering.

H. Funding Authorization

PacifiCorp requests funding authorization of $6.1 million for the 2022-2026 program years. This includes $4.44 million in expenditures to achieve the AEG-identified energy savings targets plus $1.61 million in expenditures for achieving additional savings above the targets. Due to the small size of PacifiCorp's service area in California, there is a lack of forecast diversity for energy efficiency programs and there can be variations in participation from year to year, particularly in the Wattsmart Business program. The COVID-19 pandemic and its economic impacts may further exacerbate these issues. Also, as cost-effectiveness generally improves with higher levels of participation, PacifiCorp requests funding authorization that is higher than the amount identified to achieve the targets, so the company has a greater opportunity to improve portfolio cost-effectiveness. As such, PacifiCorp requests funding authorization of a cap of $6.1 million for the

[22] http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M250/K023/250023516.PDF

2022-2026 program years. This is expected to provide sufficient funding for potential program participation in excess of the targets and for modest investments in potential additions of Fuel Switching Measures and/or Home Energy Reports.

The ABALs for 2022-2026 will provide annual forecasts and inform any needed adjustments in the Surcharge collection rate. The ABALs will not set a cap on annual spending in the event the program participation is higher than forecast. The company will track expenditures to date relative to the overall 2022-2026 funding cap in annual reports.

IV. BUDGET RECOVERY

Budget recovery is proposed using the Demand Side Management Balancing Account. Revenue collected to fund PacifiCorp's energy efficiency programs is managed through the collection of the Public Purpose Charge (Schedule S-191) and tracked in the company's Demand Side Management Balancing Account. The annual review (annual report) provided each March contains monthly detail on revenue and expenditures and the account balance for the prior year. In addition to annual reporting, the company will review the account balance and projected expenditures as part of preparing each ABAL and will file a Tier 2 advice letter to adjust the Public Purpose Charge as needed.

As stated in its ABAL for 2021 (Advice 636-E) filed December 2020, the company completed a preliminary review of the current Demand Side Management Balancing Account as of October 31, 2020 including forecast expenditures and revenue through December 31, 2021. Based on this review, an adjustment to the Public Purpose Charge (Schedule S-191) is not needed at this time. Annual Public Purpose Charge revenue should remain less than annual expenditures to bring the account into balance. The company anticipates an increase to the Public Purpose

Charge will likely be needed effective January 1, 2022 and will file for this adjustment via a Tier 2 Advice Letter in 2021 as needed.

V. FUTURE CHANGES TO THE SURCHARGE

To ensure expeditious delivery of changes to the Programs and maintain adequate funding levels, as previously authorized in D.18-11-033, PacifiCorp requests approval to continue making future changes to the Surcharge using a Tier 2 advice letter process as outlined in General Order (GO) 96-B in lieu of the formal application process. GO 96-B allows for the use of an advice letter process to modify tariffs or seek a rate increase to conform to statutory requirements or a Commission order.[23]

Due to the small size of PacifiCorp's service territory, there is a lack of forecast diversity for energy efficiency programs. Changes in Program participation can cause greater fluctuations in the balancing account over a shorter period than would be the case of a larger portfolio. Use of an advice letter allows more timely adjustment of the Surcharge to maintain the proper balance in the balancing account and reduce the rate impact to customers. Approval to continue using an advice letter for future changes to the Surcharge is consistent with previous Commission orders, due to its administrative efficiency.

VII. STATUTORY AND REGULATORY REQUIREMENTS

A. Applicant and Correspondence (Rules 2.1 (a) and (b))

PacifiCorp is a public utility organized and existing under the laws of the State of Oregon. PacifiCorp engages in the business of generating, transmitting and distributing electric energy in portions of Northern California and in the states of Oregon, Washington, Utah,

[23] See GO 96-B, Section 5.1, Matters Appropriate to Advice Letters.

Wyoming, and Idaho. PacifiCorp's principal place of business is 825 NE Multnomah Street, Suite 2000, Portland, Oregon 97232.

Communications regarding this Application should be addressed to:

Pooja Kishore
Regulatory Manager
PacifiCorp
825 NE Multnomah Street, Suite 2000
Portland, Oregon, 97232
Telephone: (503) 813-7314
Email: californiadockets@pacificorp.com

and

Carla Scarsella
Senior Attorney
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, Oregon, 97232
Telephone: (503) 813-6338
Email: carla.scarsella@pacificorp.com

Additionally, PacifiCorp respectfully requests that all data requests regarding this matter be addressed to:

By E-mail (preferred):	datarequest@pacificorp.com
By regular mail:	Data Request Response Center PacifiCorp 825 NE Multnomah, Suite 2000 Portland, Oregon, 97232

B. Statutory and Procedural Authority (Rule 2.1)

PacifiCorp's authority for this request includes, but is not limited to, Sections 381, 451, 491, 701 and 702 of the California Public Utilities Code, and prior decisions, and orders and resolutions of the Commission. PacifiCorp's request is consistent with Rules 1.5 through 1.11 and 1.13 of the Commission's Rules of Practice and Procedure, which specify the procedures for the filing of documents. Additionally, this request is consistent with Rules 2.1, 2.2 and 3.2.

C. Proposed Categorization, Need for Hearing, Issues to be Considered, Relevant Safety Considerations, and Proposed Schedule (Rule 2.1(c))

1. Proposed Categorization, Need for Hearing, and Issues to be Considered

PacifiCorp proposed that the Commission classify this proceeding as ratesetting. No hearings are necessary for the Commission to act upon PacifiCorp's request. PacifiCorp's Application and supporting exhibits constitute a sufficient record for the Commission to base its decision without the need for hearings. However, PacifiCorp is prepared to provide other such information as the Commission may require during its review of this Application. The issues in the proceeding relate to PacifiCorp's proposed revisions to its energy efficiency programs and continuation of the Surcharge to support the programs as described in this Application.

2. Safety Considerations

In D.16-01-017, the Commission amended Rule 2.1(c) to require that applications clearly state the "relevant safety considerations." PacifiCorp is committed to promoting the health, safety, comfort and convenience of customers and the public at large. Safety for PacifiCorp employees, customers, and stakeholders is one of PacifiCorp's six core principles. PacifiCorp has developed and implemented various programs to help customers, employees, and stakeholders understand their own personal safety. In 2012 PacifiCorp received Prestigious Member Recognition from the National Safety Council for holding safety as a core value and making safety a priority in business. In 2013, 2015, and 2016 PacifiCorp received the Occupational Excellence Achievement Award from the National Safety Council for working to reduce on the job injuries. PacifiCorp was recognized for its safety achievement by the Edison Electric Institute by being in the top 1 percent of the safest electrical utilities in America for 2015. PacifiCorp also holds its contractors to a high standard of safety by requiring its contractors to register with a third-party evaluator of the contractor's safety performance.

PacifiCorp complies with all applicable safety codes, including, but not limited to, the National Electric Safety Code, the Occupational Health and Safety Act, and any applicable state health and safety act requirements, at all of its generation facilities. Certain safety codes may also be applicable to the operation of PacifiCorp's transmission and distribution facilities. PacifiCorp has developed standards that meet or exceed the National Electrical Safety Code. Employees are trained in work practice regulations along with Company construction standards to the highest standards and consistency.

PacifiCorp also works to develop teamwork to mitigate safety risks and has developed and implemented programs to continue improvement in safety. PacifiCorp continuously communicates safety goals in order to stay consistently on message across the organization. These programs include training and communicating from the top down, consistently delivering the same safety message and programs to all locations and auditing the communications and programs. PacifiCorp sends daily emails to all of its employees noting accident reports and containing general reminders about safety. Other examples of PacifiCorp's commitment to safety include periodic emails with general safety tips for workplace and personal safety, safety committees for each floor of its corporate offices and field offices, annual safety training requirements which are linked to each employee's performance review, daily hazard assessment meetings for field offices, and annual evacuation drills. PacifiCorp prioritizes safety for all resources and to the benefit of all employees, customers, and stakeholders.

The Commission has previously explained that the "safe and reliable provisions of utilities at predictable rates promotes public safety" (D.14-12-053 at pp. 12-13). As demonstrated in this Application PacifiCorp's requested relief supports the safe and reliable

provision of electric service and energy efficiency programs at predictable rates and promotes public safety.

3. Proposed Schedule

PacifiCorp respectfully requests and proposes the following schedule:

Event	Estimated Timeline
Application Filed	December 31, 2020
Protests/Responses Due	Due 30 days after it appears on the Commission's daily calendar
Response to Protests Due	Due within 10 days of the protest deadline
Prehearing Conference	February 2021
Scoping Memo	March 2021
Proposed Decision	May 2021
Final Commission Decision	June 2021

D. Organization and Qualification to Transaction Business (Rule 2.2)

A certified copy of PacifiCorp's Articles of Incorporation, as amended, and presently in effect was filed with the Commission in A.97-05-011, which resulted in issuance of D.97-12-093 and is incorporated by reference pursuant to Rule 2.2 of the Commission's Rules of Practice and Procedure.

E. List of Exhibits

The following exhibits are attached and incorporated by reference to this Application:

Exhibit A - Overall Portfolio Metrics – Hard-to-Reach Reporting Descriptions

Exhibit B - California 2022-2026 Energy Efficiency Target Development.

Exhibit C - PacifiCorp Cost Category Reporting Descriptions

Exhibit D - Review of PacifiCorp California Energy Efficiency Cost-Effectiveness Model

Exhibit E - Description of PacifiCorp Cost-Effectiveness Modeling Tool

Exhibit F - Portfolio Cost Effectiveness to Achieve Targets (with AEG measure costs)

Exhibit G - Portfolio Cost Effectiveness to Achieve Targets (with adjusted measure costs)

Exhibit H - Portfolio Cost Effectiveness to Exceed Targets (with adjusted measure costs, additional Wattsmart Business MWH)

Exhibit I - Wattsmart Business – Program Change Process from Advice Letter 518-E filed 2/24/2015

VIII. CONCLUSION

WHEREFORE, PacifiCorp respectfully requests that the Commission issue an order, effective June 30, 2021, authorizing PacifiCorp to revise existing energy efficiency programs and authorizing PacifiCorp to continue using the Tier 2 advice letter process to request changes to the Surcharge.

Respectfully submitted this December 31, 2020, at Portland, Oregon.

By Carla Scarsella

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Senior Attorney for PacifiCorp

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

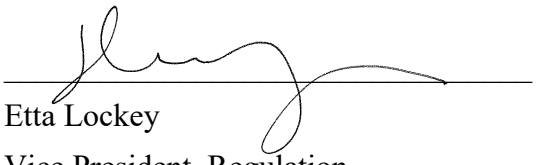
Application of PACIFICORP (U 901 E), an Oregon Company, to Continue its Energy Efficiency Programs and the Surcharge to Fund Public Purpose Programs	Application No. 20-12-___ (Filed December 31, 2020)

VERIFICATION

I am an officer of the applicant in the above-captioned proceeding and am authorized to make this verification on its behalf. The statements in the foregoing document are true on my own knowledge, except as to matters which are stated therein on information or belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 31, 2020, at Portland, Oregon.



Etta Lockey
Vice President, Regulation

Exhibit A

Exhibit A – Overall Portfolio Metrics – Hard-to-Reach Reporting Descriptions

The descriptions below for each program explain how PacifiCorp is currently collecting the data used to identify participants who meet the Hard-to-Reach criteria defined in Decision 18-05-041, pages 159-160 (copied at the end of this exhibit).

All participants in both programs meet the geographic criteria.

Home Energy Savings

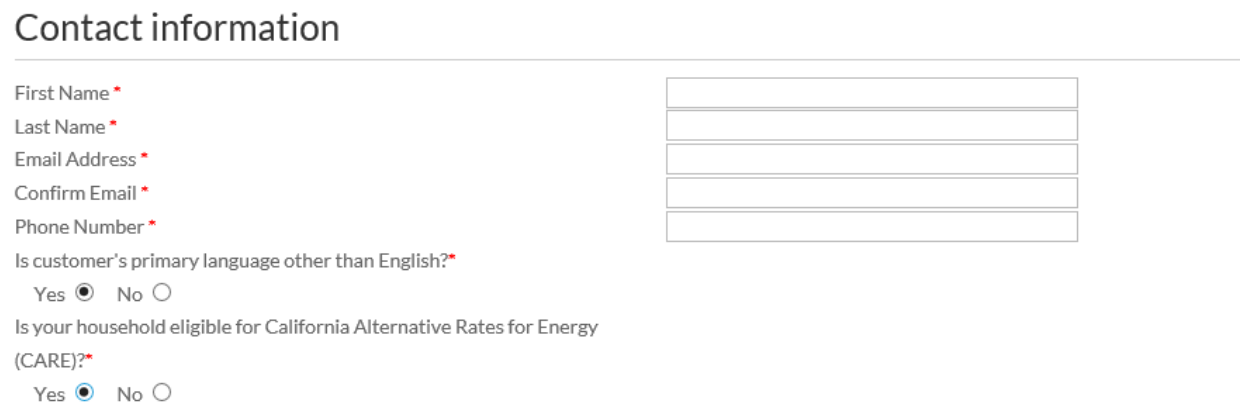
Data on hard-to-reach criteria is requested from all participants.

Language – Primary language spoken is other than English

Data used to identify participants who meet this criteria is based on self-reported information from the participant contact on their incentive application[1]. They answer the question "Is customer's primary language a language other than English?"

Income – Those customers who qualify for the California Alternative Rates for Energy (CARE)

Data used to identify participants who meet this criteria is based on self-reported information for the household from the participant contact on their incentive application. They answer the question "Is your household eligible for California Alternative Rates for Energy (CARE)?"

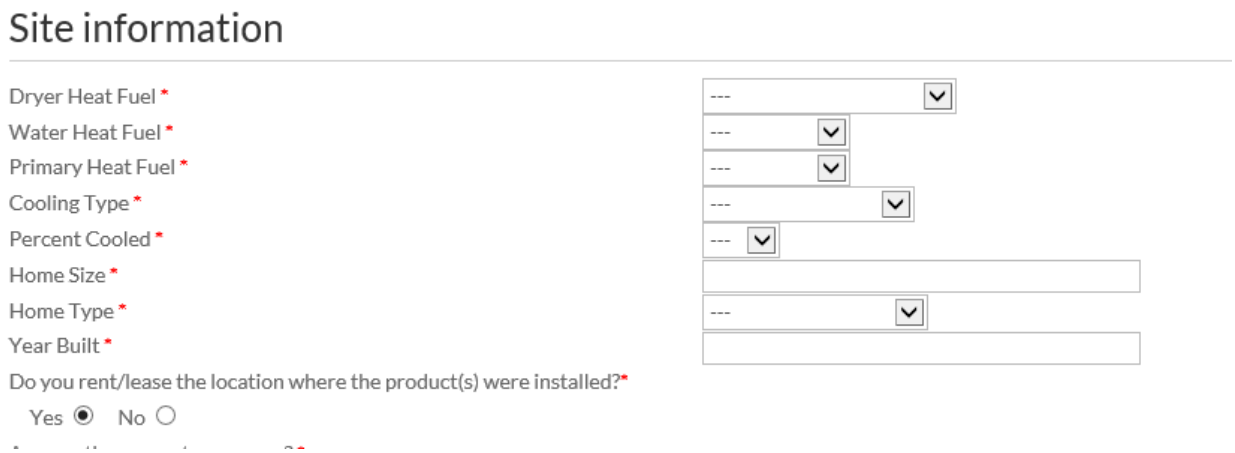

Contact information

First Name *
Last Name *
Email Address *
Confirm Email *
Phone Number *
Is customer's primary language other than English?*
Yes ◉ No ○
Is your household eligible for California Alternative Rates for Energy (CARE)?*
Yes ◉ No ○

[1] An example incentive application is available at https://wattsmartsavings.net/california-residential/savings-application/

Housing Type – Multi-family and Mobile Home Tenants (rent and lease)

Data used to identify participants who meet this criteria is based on self-reported information from the participant contact on their incentive application. Participants provide their home type (single-family, multi-family or manufactured home) and answer this question – "Do you rent/lease the location where the product(s) were installed?"



Wattsmart Business

Data on hard-to-reach criteria is requested for all participants except Instant Incentive (mid-market) lighting[2] and green motor rewind participants who receive their incentive as a credit at the point of purchase.

Language – Primary language spoken is other than English

Data used to identify participants who meet this criteria is based on self-reported information from the participant contact on their incentive application[3]. They answer the question "Contact primary language spoken is language other than English?" for themselves as the participant contact (not for the business overall).

[2] Note this offer was removed from the program effective 9/24/2020. Since the version of the program that applies for a customer project/application is based on the lamp purchase date, there may be some participation in 2021 for this offer but none is expected in 2022-2026.

[3] An example Wattsmart Business incentive application is available at https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/california/CA_wattsmartBusiness_General_Application_with_address.pdf

PARTICIPANT INFORMATION				
(Check will be issued to the participant business name and address listed below unless the payment release section below has been filled out) Participant is (check all that apply) ☐ Customer ☐ Facility owner ☐ Tenant/Electricity user				
Participant business name (as shown on IRS Form W-9):				
Mailing address:		City:	State:	Zip:
Contact name:		Contact title:		
Contact telephone number: ( )	Cell number: ( )	Contact email address:		
Contact primary language spoken is other than English? ☐ Yes ☐ No				

Business size – Less than ten employees and/or classified as Very Small – Customers whose annual electric demand is less than 20 kilowatt (kW)

Data used to identify participants who meet this criteria is based on the rate schedule code for the electric account associated with the project. PacifiCorp may collect information on number of employees in the future.

Examples of rate codes for accounts less than 20KW:

- 06GNSV0025 – CALIFORNIA GENERAL SERVICE (LESS THAN 20 KW)
- 06GNSV025F – CALIFORNIA GENERAL SERVICE, FLAT RATE (LESS THAN 20 KW)
- 06NMT25135 – CA NET METERING GENERAL SERVICE LESS THAN 20 KW
- 06RGNSV025 – RESIDENTIAL USE, SMALL GENERAL SERVICE RATE (LESS THAN 20 KW)
- 06APSV0020 – CALIFORNIA AGRICULTURAL PUMPING
- 06APSV0115 – CA AGRICULTURAL PUMPING TIME-OF-USE PILOT, GHG CREDIT
- 06NMT20135 – CA AGRICULTURAL PUMPING – NET METER
- 06USBR0020 – CALIFORNIA USBR IRR CONTRACTS, ON PROJECT LAND
- 06USBR0115 – CA AGRICULTURAL PUMP TOU PILOT, USBR CUSTS, GHG CR

Leased or Rented Facilities – Investments in improvements to a facility rented or leased by a participating business customer

Data used to identify participants who meet this criteria is based on self-reported information from the participant on their incentive application. Participants answer this question for the project site – "Does Participant rent/lease the project site location?"

PROJECT SITE INFORMATION			
Facility/Project name:			
Facility address:	City:	State:	Zip:
Commercial/industrial electric account #: ___ ___ ___ ___ ___ ___ ___ ___ - ___ ___ ___ ___		Rate Schedule:	
Electric meter number – seven or eight digits: (If multiple meters at site only enter one) ___ ___ ___ ___ ___ ___ ___ ___	Customer name: (As shown on bill)		
Does Participant rent/lease the project site location? ☐ Yes ☐ No			

Reference Information copied from Decision 18-05-041, pages 159-160 -
http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M215/K706/215706139.PDF

For purposes of administering energy efficiency programs, hard-to-reach customers are defined pursuant to the criteria identified in Resolution G-3497, with one modification. Specifically:

> Specific criteria were developed by Staff to be used in classifying a customer as hard-to-reach. Two criteria are considered sufficient if one of the criteria met is the geographic criteria defined below. There are common as well as separate criteria when defining hard-to-reach for residential versus small business customers. The barriers common to both include:
> o Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a combination of language, business size, geographic, and lease (split incentive) barriers. These barriers to consider include:
> □ Language – Primary language spoken is other than English, and/or
>
> □ Geographic –
>
> □Businesses or homes in areas other than the United States Office of Management and Budget Combined Statistical Areas of the San Francisco Bay Area, the Greater Los Angeles Area and the Greater Sacramento Area or the Office of Management and Budget metropolitan statistical areas of San Diego County.
>
> □Businesses or homes in disadvantaged communities, as identified by CalEPA pursuant to Health and Safety Code Section 39711.
>
> o For small business added criteria to the above to consider:
>
> □ Business Size – Less than ten employees and/or classified as Very Small (Customers whose annual electric demand is less than 20 kilowatts, or whose annual gas consumption is less than 10,000 therm, or both), and/or
>
> □ Leased or Rented Facilities – Investments in improvements to a facility rented or leased by a participating business customer
>
> o For residential added criteria to the above to consider:
>
> □ Income – Those customers who qualify for the California Alternative Rates for Energy (CARE) or the Family Electric Rate Assistance Program (FERA), and/or
>
> □ Housing Type – Multi-family and Mobile Home Tenants (rent and lease)

Exhibit B

Exhibit B – California 2022-2026 Energy Efficiency Target Development

MEMORANDUM

To: Elaine Prause, Nancy Goddard, Don Jones, Jr., PacifiCorp

From: Eli Morris and Zach Froio, Applied Energy Group

Date: December 18, 2020

Re: California 2022-2026 Energy Efficiency Target Development

In support of PacifiCorp's application to extend its California energy efficiency programs beyond 2021, Applied Energy Group (AEG) performed an analysis of the amount of savings that might be cost-effective for PacifiCorp to acquire from 2022-2026. As described in this memo, the resulting targets incorporate a current assessment of technical achievable energy efficiency potential in PacifiCorp's California service territory, recent guidance from the California Public Utilities Commission (CPUC) regarding measures that are eligible to include in PacifiCorp programs, and economic screening that serves as a proxy for upcoming results from PacifiCorp's next Integrated Resource Plan (IRP).

Background

PacifiCorp's previous program applications have been based on energy efficiency selections from its most recent IRP preferred portfolios. While this remains the preferred approach, PacifiCorp and AEG identified several reasons why the latest filed IRP is not reflective of current program opportunities in PacifiCorp's California service territory, namely:

- PacifiCorp's most recent IRP (the 2019 IRP) was filed October 18, 2019. Because of the time required for a robust public input process and modeling across PacifiCorp's six-state system, energy efficiency inputs for this IRP were developed based on the best data available in early 2018. As such, these inputs do not reflect recent guidance from the CPUC regarding the transformation of the LED lighting market or the alignment with current statewide workpapers.
- The 2019 IRP load forecast did not contemplate the potential impacts of a global pandemic on utility loads or energy efficiency programs. PacifiCorp recently updated its load forecast in support of the 2021 IRP to attempt to capture the impact of COVID-19 on future loads.
- The 2019 IRP Preferred Portfolio included carbon compliance costs, but not the social cost of carbon, so the value of energy efficiency in the IRP was not fully aligned with current CPUC guidance on the development of avoided costs for energy efficiency. PacifiCorp has addressed the

value of avoided greenhouse gas emissions outside of the IRP in developing California-specific avoided costs for energy efficiency.

AEG is currently performing an updated potential study in support of PacifiCorp's 2021 IRP. Although this study is not yet final, the draft results represent the best view into the energy efficiency potential available in PacifiCorp's California service territory, incorporating an updated load forecast accounting for expected impacts of COVID-19 on loads, recent data on PacifiCorp customers, loads, and equipment saturations, and CPUC guidance on energy efficiency program opportunities.

Analysis Methodology

PacifiCorp's potential study includes a wide variety of energy efficiency measures, including emerging technologies and measures whose savings might be realized outside of utility programs (e.g., through future updates to codes and standards). Because of this, the potential identified is not necessarily reflective of what PacifiCorp might be able to achieve through its programs for California customers. Therefore, to identify actionable targets for PacifiCorp, AEG performed the following steps:

1. **Estimate Economic Potential:** Because PacifiCorp's IRP allows energy efficiency resources to compete with supply-side alternatives directly, economic screening is not performed as part of the potential study. Rather, the IRP identifies the level of energy efficiency that will be economic to acquire. However, because PacifiCorp's 2021 IRP is currently under development, the value of energy efficiency from the 2021 IRP is not yet known. To address this, AEG screened draft 2021 potential study results using results of a 2019 IRP scenario that incorporated the societal cost of carbon, as this scenario was deemed to be the most reflective of the value that the 2021 IRP might see for energy efficiency in PacifiCorp's California service territory.
2. **Identify Economic Measures Available in DEER:** The list of measures that passed the economic screen in step 1 included both measures that align with CPUC guidance on what PacifiCorp can include in prescriptive programs and those that do not (i.e., measures that are more efficient than baseline technologies, but that do not have a statewide workpaper). To align the economic potential with what PacifiCorp could acquire through programs, AEG removed measures that are not currently "available in DEER," as described in PacifiCorp's 2021 Annual Budget Advice Letter.
3. **Estimate Site-specific Commercial and Industrial/Agricultural Potential:** Because Step 2 narrowed the potential to prescriptive measures, it proved to be overly restrictive, understating the opportunity to acquire savings through site-specific commercial and industrial/agricultural projects. To account for this, AEG included all economic commercial and industrial/agricultural potential in the target with the exception of LED exterior lighting, as this market is considered transformed statewide.
4. **Create Portfolio Target:** The final step of the analysis was to sum the total incremental annual potential from all measures remaining after steps 1-3 to create a total target for each 2022 through 2026. The resulting annual incremental savings are provided in the Analysis Results section below.

Analysis Results

The analysis described above resulted in portfolio-level targets ramping up from 1,305 MWh to 2,685 MWh between 2022 and 2026, or an average of approximately 1,950 MWh per year.[4] This annual

[4] All MWh values presented in this memo represent savings at the generator, including line losses.

increase is due to the application of ramp rates in the potential study. These ramp rates are akin to the adoption rates used in the California Potential and Goals Study, accounting for technology diffusion and customer acceptance. For consistency across PacifiCorp's states, AEG used ramp rates from the Northwest Power and Conservation Council's draft 2021 Power Plan.[5] For additional information on the shape of these ramp rates and how they are applied within the potential study, see presentation materials form PacifiCorp's August 28., 2020, CPA Workshop as part of the 2021 IRP Public Input Process.[6]

Table 1 presents the results of AEG's analysis by sector, end use, and year. AEG notes that while the underlying ramp rates represent reasonable assumptions for long-term system-wide planning, they may not be reflective of technology deployment or customer adoption in any specific jurisdiction. As such, AEG recommends that PacifiCorp use the results of this analysis as a basis for setting annual portfolio savings targets, but adjust the deployment schedule as appropriate to reflect local conditions and to ensure program cost-effectiveness.

Table 1. 2022-2026 Incremental Savings by Sector, End Use (MWh at Generator)

Sector	End Use	2022	2023	2024	2025	2026
Residential	Cooling	1.7	3.3	5.9	9.7	15.3
Residential	Space Heating	0.2	0.5	0.0	0.0	0.0
Residential	Water Heating	63.1	123.9	214.7	340.6	499.2
Residential	Appliances	19.1	28.7	38.5	48.5	58.2
Residential	Miscellaneous	0.0	0.0	0.0	0.1	0.1
Commercial	Cooling	242.7	280.3	307.5	337.8	365.7
Commercial	Space Heating	35.6	44.8	51.5	58.9	68.7
Commercial	Ventilation	162.3	187.0	205.2	217.4	242.1
Commercial	Water Heating	74.2	76.8	78.3	79.8	75.7
Commercial	Interior Lighting	144.6	166.5	178.6	188.8	203.7
Commercial	Refrigeration	228.3	297.4	366.1	443.6	536.5
Commercial	Food Preparation	1.6	3.7	7.7	14.0	21.6
Commercial	Office Equipment	25.0	27.6	29.1	30.4	32.5
Commercial	Miscellaneous	56.4	64.3	73.0	83.1	94.6
Industrial	Cooling	2.8	2.8	3.3	3.6	4.0
Industrial	Space Heating	0.4	0.4	0.4	0.4	0.4
Industrial	Ventilation	0.0	0.0	0.0	0.0	0.1
Industrial	Interior Lighting	17.5	15.7	15.3	14.3	12.8
Industrial	Miscellaneous	1.2	2.4	4.1	6.4	9.0
Industrial	Process	15.9	24.3	35.6	49.7	65.8
Industrial	Motors	193.2	232.2	271.0	311.0	359.7

[5] https://www.nwcouncil.org/2021-northwest-power-plan
[6] Slides 19-22, https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/08-28-2020_PacifiCorp_2021_IRP_PIM.pdf

Irrigation	Motors	19.4	19.4	19.4	19.4	19.4
Total Incremental Savings		**1,305**	**1,602**	**1,905**	**2,258**	**2,685**

Exhibit C

Exhibit C – PacifiCorp Cost Category Reporting Descriptions

1) Administrative costs
    a) Fully loaded labor costs for Company staff associated with California demand-side management programs
        i) Includes costs for internal Company staff labor (e.g. program managers and staff supporting EM&V, reporting, direct implementation)
        ii) Includes employee expenses associated with programs
        iii) Includes in-house contractor labor and expenses
        iv) Includes membership dues associated with programs (ESource, IES, etc.)
2) Incentive Payments (Direct implementation-incentives and rebates)
    a) Customer incentives
    b) Partner incentives
    c) Home Energy Savings - kits
3) Direct implementation non-incentives
    a) Outsourced program delivery costs
    b) Energy engineering services provided for business customer projects
    c) Costs for program development work performed by third parties (including cost-effectiveness analysis, measure development)
    d) Costs for systems and systems maintenance paid to third parties
4) IOUs administered marketing, education, and outreach
    a) Outsourced ad agency costs (development of marketing materials, ad agency costs for media placements)
    b) Costs for utility administered printing, direct mail, e-blasts
    c) Internal Company staff labor responsible for marketing
    d) Customer surveys – DSM Survey
    e) Tools for customer access to understand their billing data
5) Program Evaluation (EM&V)
    a) Outsourced program evaluation costs (consultant costs only)
    b) Outsourced costs for cost-effectiveness analysis for evaluations, annual report (consultant costs only)

Exhibit D

Exhibit D –Review of PacifiCorp California Energy Efficiency Cost-Effectiveness Model

MEMORANDUM

To: Elaine Prause, Nancy Goddard, Don Jones, Jr., PacifiCorp

From: Eli Morris, AEG

Date: August 19, 2020

Re: Review of PacifiCorp California Energy Efficiency Cost-Effectiveness Model

In granting PacifiCorp's application to continue operating its California energy efficiency programs through 2020, the California Public Utilities Commission (CPUC) found that:

> PacifiCorp may continue to use its company-specific avoided cost calculator through 2020 provided that, in calculating its cost-effectiveness metrics (e.g., the TRC and PAC), PacifiCorp comply with applicable directives specified in this decision, including the 10 percent cap on administrative expenses and utilization of correct DEER values, and in other relevant Commission proceedings, primarily the total resource value framework (R.14-10-003), that will have a major impact on cost-benefit assessments.[7]

In its Revised Annual Budget Advice Letter (ABAL) for 2020 Energy Efficiency Programs,[8] PacifiCorp described its current Cost-Effectiveness Modeling Tool, including updates and review performed by Guidehouse (formerly Navigant) Consulting to align with previous CPUC guidance. In preparation for its 2021 ABAL filing, PacifiCorp engaged Applied Energy Group (AEG) to review recent relevant CPUC guidance regarding energy efficiency cost-effectiveness methodology and tools and to recommend updates to ensure continued alignment with CPUC cost-effectiveness practices. AEG's findings and recommendations from this review are provided below.

Findings

1. **PacifiCorp's current cost-effectiveness reporting framework includes the tests currently required to be reported by the CPUC.**

   In May 2019, the CPUC ordered that "[b]eginning on July 1, 2019, the Total Resource Cost test shall be considered the primary test for all Commission activities, including filings and submissions, requiring cost-effectiveness analysis of distributed energy resources, except where expressly prohibited by statute or Commission decision."[9] In that decision, the CPUC also ordered that all filings and

[7] Decision 18-11-033 Granting Application of PacifiCorp to Continue Energy Efficiency Programs Through 2020 and Requiring Further Alignment with Energy Efficiency Rolling Portfolio Framework, page 15:
[8] PacifiCorp Advice Letter No. 588-E-A, July 6, 2020.
[9] Rulemaking 14-10-003, Decision 19-05-019, page 66, May 16, 2019.

submissions requiring cost-effectiveness analysis should consider the Program Administrator Cost and Rate Impact Measure tests and that all tests should be modified to include greenhouse gas (GHG) adders adopted in Decision 18-02-018.

PacifiCorp's current cost-effectiveness model reports results from the following perspectives:

- Total Resource Cost (TRC)
- Program Administrator Cost (PAC)[10]
- Ratepayer Impact (RIM)
- Participant Cost Test (PCT)
- PacifiCorp Total Resource Cost (PTRC)

In 2018, PacifiCorp modified its cost-effectiveness analysis to include the value of avoided GHG emissions. As such, PacifiCorp's current reporting includes all perspectives required by the CPUC, although updates to certain inputs are required, as discussed below.

2. PacifiCorp's avoided costs should be updated to align with current CPUC guidance.

To ensure alignment with CPUC avoided cost guidance for 2021, there are several updates that should be made to PacifiCorp's avoided costs:

a) Avoided costs should be updated based on information from PacifiCorp's 2019 Integrated Resource Plan (IRP), which was published October 18, 2019. Previous analysis has been based on PacifiCorp's 2017 IRP.

b) In updating its avoided costs, PacifiCorp should ensure alignment with the following recent Commission guidance:

i. Exclude the resource balance year for generation deferral (i.e., include the value of generation deferral in all years of the analysis);[11]

ii. Calculate the value of generation deferral based on the cost of a four-hour battery;[12]

iii. Incorporate current values of GHG emissions (cap and trade value plus GHG adder);[13]

iv. Add additional values for ancillary services and high global warming potential gases, where applicable;[14] and

v. Account for the GHG rebalancing effect.[15]

The CPUC's cost-effectiveness website[16] is a valuable resource for understanding avoided cost methodology and inputs, including the 2020 Avoided Cost Calculator Excel file and associated documentation and webinars.

3. It is currently not possible for PacifiCorp to use the CEDARS Cost-Effectiveness Tool (CET).

The CET is populated with utility-specific avoided costs to enable cost-effectiveness analysis of energy efficiency programs for California's large investor-owned utilities and other program administrators.

[10] PacifiCorp's reporting refers to the Program Administrator Cost test as the Utility Cost Test.
[11] Rulemaking 14-10-003, Decision 20-04-010, page 86, April 16, 2020.
[12] *Id.* at 89.
[13] *Ibid.*
[14] *Ibid.*
[15] *2020 Distributed Energy Resources Avoided Cost Calculator Documentation*, page 27, June 24. 2020.
[16] https://www.cpuc.ca.gov/General.aspx?id=5267

However, because PacifiCorp's avoided costs are not included in the CET, it is not currently possible to assess the cost-effectiveness of PacifiCorp's programs using the CET. To use the current CET, PacifiCorp would need to use another utility's avoided costs, which may not accurately capture the value of energy efficiency to PacifiCorp's customers.

4. Although it is not possible for PacifiCorp to use the CET, PacifiCorp's cost-effectiveness modeling methodology is consistent with the CET and the Standard Practice Manual.

   As described in Attachment 5 to PacifiCorp's Revised 2020 ABAL, PacifiCorp's cost-effectiveness model, developed and maintained by Guidehouse, incorporates measure and program costs, impacts, line losses, avoided costs, effective useful lives, hourly load shapes, realization rates, net-to-gross ratios, and other relevant inputs to calculate each of the required cost-effectiveness tests discussed above. Once PacifiCorp's avoided costs are updated to align with current CPUC guidance, using Guidehouse's model should produce comparable results to what the CET would produce if it were populated with PacifiCorp-specific avoided costs.

Recommendations

Based on the review of PacifiCorp's current practices and relevant CPUC guidance, AEG offers the following recommendations to ensure that PacifiCorp's cost-effectiveness analyses continue to align with CPUC expectations. AEG recommends that PacifiCorp:

1. Use the 2020 Avoided Cost Calculator to develop updated avoided costs for 2021.

   Using the 2020 Avoided Cost Calculator Excel file available on the CPUC website and adjusting inputs as appropriate to align with PacifiCorp's system and IRP will allow PacifiCorp to accurately reflect the value of energy efficiency to its system while ensuring alignment with CPUC avoided cost guidance. This process will also enable PacifiCorp to easily document which inputs have been modified relative to the version of the electric Avoided Cost Calculator available on the CPUC website.

2. Use the hourly outputs from the 2020 Avoided Cost Calculator as an input to Guidehouse's cost-effectiveness model.

   PacifiCorp's current cost-effectiveness model is already set up to accept hourly avoided cost values, allowing the output of the Avoided Cost Calculator to become a direct input into the cost-effectiveness analysis. Applying these hourly avoided costs to end use loadshapes will replicate the analysis performed for other investor-owned utilities in the CET.

3. Ensure that line losses are not double counted.

   In PacifiCorp's current framework, line losses are applied to measure savings within Guidehouse's model, not included in avoided costs. Because the Avoided Cost Calculator includes line losses in hourly outputs, line losses should no longer be applied within Guidehouse's model to avoid double counting benefits.

4. **Continue to monitor relevant CPUC decisions and updates to the Avoided Cost Calculator to ensure continues alignment with CPUC cost-effectiveness guidance**

Exhibit E

Exhibit E – Description of PacifiCorp Cost-Effectiveness Modeling Tool

Overview:
PacifiCorp utilizes third parties to develop and maintain cost effectiveness modeling tools to assess the economic benefits of energy efficiency programs. The model used in California is developed and maintained by Guidehouse (formerly Navigant) Consulting.

The model is Excel based and compares benefits and costs for all tests except the PCT on an hourly basis over the measure life. Calculations can be performed on a measure or program basis. Program results can be aggregated from individual measures. Multiple programs can be aggregated into a portfolio.

The modeling tool calculates cost effectiveness from the following perspectives which align with the Standard Practice Manual:

- Total Resource Cost (TRC)
- Program Administrator Cost (PAC),
- Ratepayer Impact (RIM)
- Participant Cost Test (PCT).

In addition, the tool calculates a variant of the TRC, referred to in PacifiCorp reporting as the PacifiCorp TRC (P-TRC). This test is the TRC with an additional 10% added benefit for the non-quantified environmental and non-energy benefits that may be generated by energy efficiency.

Avoided Costs:
The avoided costs specific to energy efficiency imported into this model are generated by the 2020 Avoided Cost Calculator (ACC) Excel file available on the CPUC website with inputs adjusted to appropriately align with PacifiCorp's system. Inputs that have been modified to reflect PacifiCorp's system are as follows; inflation, discount rate, electricity prices, distribution capacity cost, and transmission capacity cost. Line losses were not applied in the 2020 ACC but are incorporated in the Guidehouse model as described below. Values from the 2020 ACC which were not adjusted specific to PacifiCorp's system but where default values were used included all energy storage and emissions assumptions.

Load shapes:
The model utilizes load shapes specific to end uses and the sector in which the measures are installed to calculate the avoided costs for each hour of the year. The sum of the avoided costs in each hour of the year is multiplied by the annual savings value. The library of load shapes available for modeling is a combination of publicly available information (Northwest Power and Conservation Council) and selected building simulation modeling. The load shape library contains approximately 150 separate load shapes available for California modeling. The full library resides outside the model and Guidehouse pulls shapes in as necessary for modeling.

Discount rate:
Benefits and costs are discounted by the model back to the present year (or year of interest if different than current year) using a single established nominal discount rate for all perspectives (societal, utility, participant). This discount rate is also used for levelizing calculations. The

discount rate in this model is nominal and is the same as the discount rate used in the most recent IRP (2019). When a new IRP is filed, the model will be updated to include the most recent discount rate.

Line losses:
The model adds line losses as a percentage to the customer site specific measure energy savings based on sectors (residential, commercial, industrial, and irrigation). The line losses include the impacts of both transmission and distribution level service. The sector value is based on a weighted average calculation performed by PacifiCorp's regulation department. The weighted average calculation utilizes values from the 2018 PacifiCorp Electric Operations Loss Study.

Retail rates:
The model utilizes average retail energy rates by customer sector within a state to calculate the PCT and RIM results. Average retail rates are calculated by PacifiCorp's regulation department on regular basis and when updated, the new values are provided to Guidehouse.

Inflation rate:
The model uses a single real inflation rate to escalate forecasts or values beyond the period for which they are available if it is necessary for modeling. The inflation rate is the same rate as used by the most recent IRP (2019).

Sales forecasts (MWh):
Sales forecasts for a 20 year period are an input to this model and used to calculate life cycle revenue impacts for the RIM test. The sales forecasts by state are periodically updated by PacifiCorp and provided to Guidehouse for their use in this model.

Net-to-gross ratio (NTGR):
NTGRs are provided by PacifiCorp as an input to this model, and consistent with CPUC direction are sourced from the latest DEER data base. Consistent with the Standard Practice Manual, NTGRs are applied to the customer costs in the TRC test and to the energy savings benefits in both the TRC and PAC tests.

Realization rates:
Realization rates are provided by PacifiCorp as an input to this model and are used to adjust the energy savings (kWh) used for all the calculations. This adjustment is in addition to the application of NTGRs. The source of realization rates is typically program impact evaluations performed for PacifiCorp by a third party. Realization rates may be available by measure group or specific measures.

Measure/effective useful life:
Measure lives are provided by PacifiCorp as an input to this model and are used to identify to stream of energy savings benefits delivered over time. Measure lives are utilized in calculating benefits over time and lifecycle impacts (kWh and $). For the residential program which utilizes DEER, the measure life source is consistent with the source for unit energy savings. For the business program with substantively fewer deemed measures, the source for measure life is the

third party measure life review completed in 2017 for PacifiCorp. The source for measure life is DEER where DEER values were available.

In limited cases, the program adopts a dual baseline methodology that includes two measure baselines: one defined by pre-conditions for the remaining useful life of the existing system and the second defined by industry standard practice. For these cases the program will calculate energy savings for both baseline periods. However, the first baseline period energy savings is be reported and used in cost-effectiveness analysis, and the measure life is adjusted such that the lifetime savings is correct.

Energy to capacity conversion factor:
The model utilizes an energy to capacity conversion factor to estimate the estimated kW impact of the energy efficiency programs during PacifiCorp's system peak period. The system peak is not state specific. The energy-to-capacity conversion factor is developed from energy efficiency selections in the IRP (2019) the energy efficiency resources acquired through the Company's programs have the same average load profile as those energy efficiency resources selected in the 2019 IRP. The calculation, provided by PacifiCorp, is the same for all saved energy and is provided to Guidehouse for use in the model.

Costs:
Energy efficiency measure, program and portfolio costs are an input to the model and provided by PacifiCorp. Measure costs align with the baseline assumptions used to quantify savings; i.e., retrofit, new construction, etc. Measure level cost effectiveness does not include the impacts of program costs. Program costs are provided at a program level and are included as an additional cost that reduces energy savings benefits generated by the sum of all measures. Portfolio costs for systems and shared services are added to summation of program benefits. The model utilizes California specific cost categories[17] for non-incentive costs.

Outputs/results:
The model generates results by measure, by program (multiple measures) and by portfolio (multiple programs). Results are available in an electronic format in the model. The model also has templates that generate results from multiple perspectives into a tabular format.

Model results (and units) include:

- Costs ($)
- Benefits ($)
- Net benefits ($)
- Benefit/cost ratio ($/$)
- Levelized cost ($/kWh)
- Levelized cost ($/kW)
- Life cycle revenue impacts ($/kWh)
- Discounted participant payback (years)
- First year gross and net savings (kWh) at site and at generation

[17] Decision 18-11-033 included an order to provide a breakdown of year-to-date expenses, including at minimum the following categories: incentive payments, program evaluation, and administrative expenses.

- Lifecycle gross and net savings (kWh) at site and at generation
- Lifecycle gross and net savings (kWh) at site and at generation

Exhibit F

Exhibit F - Portfolio Cost Effectiveness to Achieve Targets (with AEG measure costs)

Guidehouse

Memorandum

To: Nancy Goddard, PacifiCorp

From: David Basak, Guidehouse

Date: December 21, 2020

Re: Cost-Effectiveness Results for the California Portfolio Level Results - PY2022-2026 - Full Measure Cost Scenario

Guidehouse estimated the cost-effectiveness for the overall energy efficiency portfolio and component sectors, based on 2022-2026 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall energy efficiency portfolio and the two sector components. The portfolio passes the cost-effectiveness for all cost tests except the RIM test in the combined PY2022-2026 overview. The memo consists of the following tables.

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guidehouse.com

Table 1 – Portfolio Level Cost-Effectiveness Inputs

Parameter	2022	2023	2024	2025	2026
Discount Rate	6.92%	6.92%	6.92%	6.92%	6.92%
Residential Line Loss	8.78%	8.78%	8.78%	8.78%	8.78%
Commercial Line Loss	8.63%	8.63%	8.63%	8.63%	8.63%
Industrial Line Loss	8.53%	8.53%	8.53%	8.53%	8.53%
Irrigation Line Loss	8.78%	8.78%	8.78%	8.78%	8.78%
Residential Energy Rate ($/kWh)[1]	$0.1481	$0.1514	$0.1549	$0.1584	$0.1620
Commercial Energy Rate ($/kWh)[1]	$0.1411	$0.1443	$0.1476	$0.1509	$0.1544
Industrial Energy Rate ($/kWh)[1]	$0.1061	$0.1086	$0.1110	$0.1136	$0.1161
Irrigation Energy Rate ($/kWh)[1]	$0.1596	$0.1633	$0.1670	$0.1708	$0.1747
Inflation Rate	2.28%	2.28%	2.28%	2.28%	2.28%

[1] Future rates determined using a 2.28% annual escalator.

Table 2 – Portfolio Level Annual Costs by Program Year

Expense	2022	2023	2024	2025	2026
Portfolio - Administrative Costs	$0	$0	$0	$0	$0
Portfolio - Direct Implementation – non-incentives	$0	$0	$0	$0	$0
Portfolio - IOUs administered marketing, education and outreach	$0	$0	$0	$0	$0
Portfolio - Program Evaluation	$0	$0	$0	$0	$0
Total Costs	**$0**	**$0**	**$0**	**$0**	**$0**

Table 3 – Benefit/Cost Ratios – Portfolio Level PY2022-2026

Sector	PTRC	TRC	UCT	RIM	PCT
Total Portfolio	0.93	0.85	1.08	0.47	2.33
C&I Programs	0.87	0.79	1.03	0.47	2.13
Residential Programs	1.34	1.22	1.40	0.50	3.56

The following tables provide the cost-effectiveness results for the combination of program years 2022 through 2026 at the sector level.

Table 4 – Portfolio Level Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1524	$851.72	$5,682,298	$5,285,802	-$396,496	0.93
Total Resource Cost Test (TRC) No Adder	$0.1524	$851.72	$5,682,298	$4,805,275	-$877,024	0.85
Utility Cost Test (UCT)	$0.1192	$665.89	$4,442,533	$4,805,275	$362,742	1.08
Rate Impact Test (RIM)			$10,120,834	$4,805,275	-$5,315,559	0.47
Participant Cost Test (PCT)			$4,848,628	$11,276,440	$6,427,812	2.33
Lifecycle Revenue Impacts ($/kWh)						$0.0000046547

Table 5 – C&I Portfolio Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1618	$903.81	$4,976,450	$4,336,952	-$639,498	0.87
Total Resource Cost Test (TRC) No Adder	$0.1618	$903.81	$4,976,450	$3,942,684	-$1,033,767	0.79
Utility Cost Test (UCT)	$0.1243	$694.76	$3,825,423	$3,942,684	$117,261	1.03
Rate Impact Test (RIM)			$8,397,389	$3,942,684	-$4,454,705	0.47
Participant Cost Test (PCT)			$4,175,107	$8,879,712	$4,704,605	2.13
Lifecycle Revenue Impacts ($/kWh)						$0.0000050518

Table 6 – Residential Portfolio Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1084	$605.65	$705,848	$948,850	$243,002	1.34
Total Resource Cost Test (TRC) No Adder	$0.1084	$605.65	$705,848	$862,591	$156,743	1.22
Utility Cost Test (UCT)	$0.0948	$529.51	$617,110	$862,591	$245,481	1.40
Rate Impact Test (RIM)			$1,723,445	$862,591	-$860,854	0.50
Participant Cost Test (PCT)			$673,520	$2,396,728	$1,723,207	3.56
Lifecycle Revenue Impacts ($/kWh)						$0.0000033089

The following tables provide the cost-effectiveness results for program year 2022.

Table 7 – Portfolio Level Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1560	$871.67	$760,232	$608,638	-$151,594	0.80
Total Resource Cost Test (TRC) No Adder	$0.1560	$871.67	$760,232	$553,307	-$206,925	0.73
Utility Cost Test (UCT)	$0.1207	$674.13	$587,944	$553,307	-$34,637	0.94
Rate Impact Test (RIM)			$1,284,486	$553,307	-$731,179	0.43
Participant Cost Test (PCT)			$641,688	$1,370,322	$728,633	2.14
Lifecycle Revenue Impacts ($/kWh)						$0.0000036123

Table 8 – C&I Portfolio Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1588	$887.55	$717,038	$564,538	-$152,501	0.79
Total Resource Cost Test (TRC) No Adder	$0.1588	$887.55	$717,038	$513,216	-$203,823	0.72
Utility Cost Test (UCT)	$0.1217	$679.75	$549,163	$513,216	-$35,948	0.93
Rate Impact Test (RIM)			$1,188,507	$513,216	-$675,291	0.43
Participant Cost Test (PCT)			$599,363	$1,238,056	$638,693	2.07
Lifecycle Revenue Impacts ($/kWh)						$0.0000044369

Table 9 – Residential Portfolio Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1203	$672.11	$43,193	$44,100	$907	1.02
Total Resource Cost Test (TRC) No Adder	$0.1203	$672.11	$43,193	$40,091	-$3,102	0.93
Utility Cost Test (UCT)	$0.1080	$603.45	$38,781	$40,091	$1,311	1.03
Rate Impact Test (RIM)			$95,978	$40,091	-$55,887	0.42
Participant Cost Test (PCT)			$42,325	$132,266	$89,940	3.12
Lifecycle Revenue Impacts ($/kWh)						$0.0000011129

The following tables provide the cost-effectiveness results for program year 2023.

Table 10 – Portfolio Level Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1581	$883.47	$950,561	$785,159	-$165,402	0.83
Total Resource Cost Test (TRC) No Adder	$0.1581	$883.47	$950,561	$713,781	-$236,780	0.75
Utility Cost Test (UCT)	$0.1229	$686.58	$738,720	$713,781	-$24,939	0.97
Rate Impact Test (RIM)			$1,621,453	$713,781	-$907,672	0.44
Participant Cost Test (PCT)			$806,247	$1,750,608	$944,361	2.17
Lifecycle Revenue Impacts ($/kWh)						$0.0000041746

Table 11 – C&I Portfolio Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1630	$910.99	$869,550	$697,137	-$172,414	0.80
Total Resource Cost Test (TRC) No Adder	$0.1630	$910.99	$869,550	$633,760	-$235,790	0.73
Utility Cost Test (UCT)	$0.1251	$698.87	$667,080	$633,760	-$33,319	0.95
Rate Impact Test (RIM)			$1,439,271	$633,760	-$805,511	0.44
Participant Cost Test (PCT)			$728,058	$1,501,229	$773,171	2.06
Lifecycle Revenue Impacts ($/kWh)						$0.0000049281

Table 12 – Residential Portfolio Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1194	$667.11	$81,011	$88,023	$7,012	1.09
Total Resource Cost Test (TRC) No Adder	$0.1194	$667.11	$81,011	$80,021	-$990	0.99
Utility Cost Test (UCT)	$0.1056	$589.95	$71,640	$80,021	$8,380	1.12
Rate Impact Test (RIM)			$182,182	$80,021	-$102,161	0.44
Participant Cost Test (PCT)			$78,189	$249,379	$171,190	3.19
Lifecycle Revenue Impacts ($/kWh)						$0.0000018928

The following tables provide the cost-effectiveness results for program year 2024.

Table 13 – Portfolio Level Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1533	$856.73	$1,110,803	$998,607	-$112,196	0.90
Total Resource Cost Test (TRC) No Adder	$0.1533	$856.73	$1,110,803	$907,825	-$202,978	0.82
Utility Cost Test (UCT)	$0.1197	$668.87	$867,234	$907,825	$40,591	1.05
Rate Impact Test (RIM)			$1,958,997	$907,825	-$1,051,172	0.46
Participant Cost Test (PCT)			$946,508	$2,167,068	$1,220,560	2.29
Lifecycle Revenue Impacts ($/kWh)						$0.0000046888

Table 14 – C&I Portfolio Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1621	$905.55	$989,858	$842,431	-$147,426	0.85
Total Resource Cost Test (TRC) No Adder	$0.1621	$905.55	$989,858	$765,847	-$224,011	0.77
Utility Cost Test (UCT)	$0.1245	$695.81	$760,591	$765,847	$5,256	1.01
Rate Impact Test (RIM)			$1,662,936	$765,847	-$897,089	0.46
Participant Cost Test (PCT)			$830,117	$1,752,845	$922,728	2.11
Lifecycle Revenue Impacts ($/kWh)						$0.0000050912

Table 15 – Residential Portfolio Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1064	$594.46	$120,945	$156,176	$35,231	1.29
Total Resource Cost Test (TRC) No Adder	$0.1064	$594.46	$120,945	$141,978	$21,033	1.17
Utility Cost Test (UCT)	$0.0938	$524.17	$106,643	$141,978	$35,335	1.33
Rate Impact Test (RIM)			$296,061	$141,978	-$154,082	0.48
Participant Cost Test (PCT)			$116,391	$414,223	$297,831	3.56
Lifecycle Revenue Impacts ($/kWh)						$0.0000032112

The following tables provide the cost-effectiveness results for program year 2025.

Table 16 – Portfolio Level Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1504	$840.44	$1,308,247	$1,270,988	-$37,259	0.97
Total Resource Cost Test (TRC) No Adder	$0.1504	$840.44	$1,308,247	$1,155,444	-$152,803	0.88
Utility Cost Test (UCT)	$0.1180	$659.22	$1,026,150	$1,155,444	$129,294	1.13
Rate Impact Test (RIM)			$2,372,518	$1,155,444	-$1,217,074	0.49
Participant Cost Test (PCT)			$1,119,951	$2,678,614	$1,558,662	2.39
Lifecycle Revenue Impacts ($/kWh)						$0.0000050720

Table 17 – C&I Portfolio Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1617	$903.74	$1,120,470	$1,011,823	-$108,646	0.90
Total Resource Cost Test (TRC) No Adder	$0.1617	$903.74	$1,120,470	$919,839	-$200,630	0.82
Utility Cost Test (UCT)	$0.1245	$695.51	$862,302	$919,839	$57,538	1.07
Rate Impact Test (RIM)			$1,907,000	$919,839	-$987,161	0.48
Participant Cost Test (PCT)			$941,125	$2,029,340	$1,088,215	2.16
Lifecycle Revenue Impacts ($/kWh)						$0.0000052448

Table 18 – Residential Portfolio Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1061	$592.73	$187,777	$259,165	$71,387	1.38
Total Resource Cost Test (TRC) No Adder	$0.1061	$592.73	$187,777	$235,604	$47,827	1.25
Utility Cost Test (UCT)	$0.0926	$517.20	$163,849	$235,604	$71,756	1.44
Rate Impact Test (RIM)			$465,518	$235,604	-$229,914	0.51
Participant Cost Test (PCT)			$178,826	$649,273	$470,447	3.63
Lifecycle Revenue Impacts ($/kWh)						$0.0000044435

The following tables provide the cost-effectiveness results for program year 2026.

Table 19 – Portfolio Level Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1486	$830.07	$1,552,455	$1,622,409	$69,954	1.05
Total Resource Cost Test (TRC) No Adder	$0.1486	$830.07	$1,552,455	$1,474,918	-$77,538	0.95
Utility Cost Test (UCT)	$0.1170	$653.64	$1,222,485	$1,474,918	$252,433	1.21
Rate Impact Test (RIM)			$2,883,380	$1,474,918	-$1,408,462	0.51
Participant Cost Test (PCT)			$1,334,233	$3,309,828	$1,975,596	2.48
Lifecycle Revenue Impacts ($/kWh)						$0.0000054596

Table 20 – C&I Portfolio Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1623	$906.96	$1,279,534	$1,221,023	-$58,511	0.95
Total Resource Cost Test (TRC) No Adder	$0.1623	$906.96	$1,279,534	$1,110,021	-$169,513	0.87
Utility Cost Test (UCT)	$0.1251	$699.10	$986,287	$1,110,021	$123,734	1.13
Rate Impact Test (RIM)			$2,199,674	$1,110,021	-$1,089,653	0.50
Participant Cost Test (PCT)			$1,076,444	$2,358,242	$1,281,797	2.19
Lifecycle Revenue Impacts ($/kWh)						$0.0000054015

Table 21 – Residential Portfolio Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1063	$593.98	$272,921	$401,386	$128,465	1.47
Total Resource Cost Test (TRC) No Adder	$0.1063	$593.98	$272,921	$364,897	$91,976	1.34
Utility Cost Test (UCT)	$0.0920	$514.05	$236,198	$364,897	$128,699	1.54
Rate Impact Test (RIM)			$683,706	$364,897	-$318,809	0.53
Participant Cost Test (PCT)			$257,789	$951,587	$693,798	3.69
Lifecycle Revenue Impacts ($/kWh)						$0.0000056679

Exhibit G

Exhibit G - Portfolio Cost Effectiveness to Achieve Targets (with adjusted measure costs)

Guidehouse

Memorandum

To: Nancy Goddard, PacifiCorp

From: David Basak, Guidehouse

Date: December 21, 2020

Re: Cost-Effectiveness Results for the California Portfolio Level Results - PY2022-2026 - 30% Measure Cost Scenario

Guidehouse estimated the cost-effectiveness for the overall energy efficiency portfolio and component sectors, based on 2022-2026 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall energy efficiency portfolio and the two sector components. The portfolio passes the cost-effectiveness for all cost tests except the RIM test in the combined PY2022-2026 overview. The memo consists of the following tables.

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Table 1 – Portfolio Level Cost-Effectiveness Inputs

Parameter	2022	2023	2024	2025	2026
Discount Rate	6.92%	6.92%	6.92%	6.92%	6.92%
Residential Line Loss	8.78%	8.78%	8.78%	8.78%	8.78%
Commercial Line Loss	8.63%	8.63%	8.63%	8.63%	8.63%
Industrial Line Loss	8.53%	8.53%	8.53%	8.53%	8.53%
Irrigation Line Loss	8.78%	8.78%	8.78%	8.78%	8.78%
Residential Energy Rate ($/kWh)[1]	$0.1481	$0.1514	$0.1549	$0.1584	$0.1620
Commercial Energy Rate ($/kWh)[1]	$0.1411	$0.1443	$0.1476	$0.1509	$0.1544
Industrial Energy Rate ($/kWh)[1]	$0.1061	$0.1086	$0.1110	$0.1136	$0.1161
Irrigation Energy Rate ($/kWh)[1]	$0.1596	$0.1633	$0.1670	$0.1708	$0.1747
Inflation Rate	2.28%	2.28%	2.28%	2.28%	2.28%

[1] Future rates determined using a 2.28% annual escalator.

Table 2 – Portfolio Level Annual Costs by Program Year

Expense	2022	2023	2024	2025	2026
Portfolio - Administrative Costs	$0	$0	$0	$0	$0
Portfolio - Direct Implementation – non-incentives	$0	$0	$0	$0	$0
Portfolio - IOUs administered marketing, education and outreach	$0	$0	$0	$0	$0
Portfolio - Program Evaluation	$0	$0	$0	$0	$0
Total Costs	**$0**	**$0**	**$0**	**$0**	**$0**

Table 3 – Benefit/Cost Ratios – Portfolio Level PY2022-2026

Sector	PTRC	TRC	UCT	RIM	PCT
Total Portfolio	1.11	1.01	1.08	0.47	3.32
C&I Programs	1.04	0.95	1.03	0.47	3.04
Residential Programs	1.57	1.43	1.40	0.50	5.08

The following tables provide the cost-effectiveness results for the combination of program years 2022 through 2026 at the sector level.

Table 4 – Portfolio Level Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1277	$713.27	$4,758,591	$5,285,802	$527,211	1.11
Total Resource Cost Test (TRC) No Adder	$0.1277	$713.27	$4,758,591	$4,805,275	$46,684	1.01
Utility Cost Test (UCT)	$0.1192	$665.89	$4,442,533	$4,805,275	$362,742	1.08
Rate Impact Test (RIM)			$10,120,834	$4,805,275	-$5,315,559	0.47
Participant Cost Test (PCT)			$3,394,039	$11,276,440	$7,882,400	3.32
Lifecycle Revenue Impacts ($/kWh)						$0.0000046547

Table 5 – C&I Portfolio Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1351	$754.80	$4,156,012	$4,336,952	$180,940	1.04
Total Resource Cost Test (TRC) No Adder	$0.1351	$754.80	$4,156,012	$3,942,684	-$213,328	0.95
Utility Cost Test (UCT)	$0.1243	$694.76	$3,825,423	$3,942,684	$117,261	1.03
Rate Impact Test (RIM)			$8,397,389	$3,942,684	-$4,454,705	0.47
Participant Cost Test (PCT)			$2,922,575	$8,879,712	$5,957,137	3.04
Lifecycle Revenue Impacts ($/kWh)						$0.0000050518

Table 6 – Residential Portfolio Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0925	$517.04	$602,579	$948,850	$346,271	1.57
Total Resource Cost Test (TRC) No Adder	$0.0925	$517.04	$602,579	$862,591	$260,012	1.43
Utility Cost Test (UCT)	$0.0948	$529.51	$617,110	$862,591	$245,481	1.40
Rate Impact Test (RIM)			$1,723,445	$862,591	-$860,854	0.50
Participant Cost Test (PCT)			$471,464	$2,396,728	$1,925,263	5.08
Lifecycle Revenue Impacts ($/kWh)						$0.0000033089

The following tables provide the cost-effectiveness results for program year 2022.

Table 7 – Portfolio Level Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1304	$728.68	$635,521	$608,638	-$26,883	0.96
Total Resource Cost Test (TRC) No Adder	$0.1304	$728.68	$635,521	$553,307	-$82,214	0.87
Utility Cost Test (UCT)	$0.1207	$674.13	$587,944	$553,307	-$34,637	0.94
Rate Impact Test (RIM)			$1,284,486	$553,307	-$731,179	0.43
Participant Cost Test (PCT)			$449,182	$1,370,322	$921,140	3.05
Lifecycle Revenue Impacts ($/kWh)						$0.0000036123

Table 8 – C&I Portfolio Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1326	$740.78	$598,468	$564,538	-$33,930	0.94
Total Resource Cost Test (TRC) No Adder	$0.1326	$740.78	$598,468	$513,216	-$85,252	0.86
Utility Cost Test (UCT)	$0.1217	$679.75	$549,163	$513,216	-$35,948	0.93
Rate Impact Test (RIM)			$1,188,507	$513,216	-$675,291	0.43
Participant Cost Test (PCT)			$419,554	$1,238,056	$818,502	2.95
Lifecycle Revenue Impacts ($/kWh)						$0.0000044369

Table 9 – Residential Portfolio Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1032	$576.56	$37,053	$44,100	$7,048	1.19
Total Resource Cost Test (TRC) No Adder	$0.1032	$576.56	$37,053	$40,091	$3,038	1.08
Utility Cost Test (UCT)	$0.1080	$603.45	$38,781	$40,091	$1,311	1.03
Rate Impact Test (RIM)			$95,978	$40,091	-$55,887	0.42
Participant Cost Test (PCT)			$29,628	$132,266	$102,638	4.46
Lifecycle Revenue Impacts ($/kWh)						$0.0000011129

The following tables provide the cost-effectiveness results for program year 2023.

Table 10 – Portfolio Level Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1323	$739.12	$795,257	$785,159	-$10,098	0.99
Total Resource Cost Test (TRC) No Adder	$0.1323	$739.12	$795,257	$713,781	-$81,476	0.90
Utility Cost Test (UCT)	$0.1229	$686.58	$738,720	$713,781	-$24,939	0.97
Rate Impact Test (RIM)			$1,621,453	$713,781	-$907,672	0.44
Participant Cost Test (PCT)			$564,373	$1,750,608	$1,186,235	3.10
Lifecycle Revenue Impacts ($/kWh)						$0.0000041746

Table 11 – C&I Portfolio Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1361	$760.55	$725,955	$697,137	-$28,819	0.96
Total Resource Cost Test (TRC) No Adder	$0.1361	$760.55	$725,955	$633,760	-$92,195	0.87
Utility Cost Test (UCT)	$0.1251	$698.87	$667,080	$633,760	-$33,319	0.95
Rate Impact Test (RIM)			$1,439,271	$633,760	-$805,511	0.44
Participant Cost Test (PCT)			$509,641	$1,501,229	$991,588	2.95
Lifecycle Revenue Impacts ($/kWh)						$0.0000049281

Table 12 – Residential Portfolio Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1021	$570.69	$69,302	$88,023	$18,721	1.27
Total Resource Cost Test (TRC) No Adder	$0.1021	$570.69	$69,302	$80,021	$10,719	1.15
Utility Cost Test (UCT)	$0.1056	$589.95	$71,640	$80,021	$8,380	1.12
Rate Impact Test (RIM)			$182,182	$80,021	-$102,161	0.44
Participant Cost Test (PCT)			$54,732	$249,379	$194,647	4.56
Lifecycle Revenue Impacts ($/kWh)						$0.0000018928

The following tables provide the cost-effectiveness results for program year 2024.

Table 13 – Portfolio Level Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1284	$717.30	$930,019	$998,607	$68,589	1.07
Total Resource Cost Test (TRC) No Adder	$0.1284	$717.30	$930,019	$907,825	-$22,194	0.98
Utility Cost Test (UCT)	$0.1197	$668.87	$867,234	$907,825	$40,591	1.05
Rate Impact Test (RIM)			$1,958,997	$907,825	-$1,051,172	0.46
Participant Cost Test (PCT)			$662,556	$2,167,068	$1,504,512	3.27
Lifecycle Revenue Impacts ($/kWh)						$0.0000046888

Table 14 – C&I Portfolio Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1353	$756.20	$826,610	$842,431	$15,822	1.02
Total Resource Cost Test (TRC) No Adder	$0.1353	$756.20	$826,610	$765,847	-$60,763	0.93
Utility Cost Test (UCT)	$0.1245	$695.81	$760,591	$765,847	$5,256	1.01
Rate Impact Test (RIM)			$1,662,936	$765,847	-$897,089	0.46
Participant Cost Test (PCT)			$581,082	$1,752,845	$1,171,763	3.02
Lifecycle Revenue Impacts ($/kWh)						$0.0000050912

Table 15 – Residential Portfolio Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0910	$508.27	$103,409	$156,176	$52,767	1.51
Total Resource Cost Test (TRC) No Adder	$0.0910	$508.27	$103,409	$141,978	$38,569	1.37
Utility Cost Test (UCT)	$0.0938	$524.17	$106,643	$141,978	$35,335	1.33
Rate Impact Test (RIM)			$296,061	$141,978	-$154,082	0.48
Participant Cost Test (PCT)			$81,474	$414,223	$332,749	5.08
Lifecycle Revenue Impacts ($/kWh)						$0.0000032112

The following tables provide the cost-effectiveness results for program year 2025.

Table 16 – Portfolio Level Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1260	$704.20	$1,096,167	$1,270,988	$174,821	1.16
Total Resource Cost Test (TRC) No Adder	$0.1260	$704.20	$1,096,167	$1,155,444	$59,277	1.05
Utility Cost Test (UCT)	$0.1180	$659.22	$1,026,150	$1,155,444	$129,294	1.13
Rate Impact Test (RIM)			$2,372,518	$1,155,444	-$1,217,074	0.49
Participant Cost Test (PCT)			$783,966	$2,678,614	$1,894,648	3.42
Lifecycle Revenue Impacts ($/kWh)						$0.0000050720

Table 17 – C&I Portfolio Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1351	$754.89	$935,919	$1,011,823	$75,905	1.08
Total Resource Cost Test (TRC) No Adder	$0.1351	$754.89	$935,919	$919,839	-$16,079	0.98
Utility Cost Test (UCT)	$0.1245	$695.51	$862,302	$919,839	$57,538	1.07
Rate Impact Test (RIM)			$1,907,000	$919,839	-$987,161	0.48
Participant Cost Test (PCT)			$658,788	$2,029,340	$1,370,553	3.08
Lifecycle Revenue Impacts ($/kWh)						$0.0000052448

Table 18 – Residential Portfolio Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0905	$505.83	$160,248	$259,165	$98,917	1.62
Total Resource Cost Test (TRC) No Adder	$0.0905	$505.83	$160,248	$235,604	$75,356	1.47
Utility Cost Test (UCT)	$0.0926	$517.20	$163,849	$235,604	$71,756	1.44
Rate Impact Test (RIM)			$465,518	$235,604	-$229,914	0.51
Participant Cost Test (PCT)			$125,178	$649,273	$524,095	5.19
Lifecycle Revenue Impacts ($/kWh)						$0.0000044435

The following tables provide the cost-effectiveness results for program year 2026.

Table 19 – Portfolio Level Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1246	$695.96	$1,301,627	$1,622,409	$320,782	1.25
Total Resource Cost Test (TRC) No Adder	$0.1246	$695.96	$1,301,627	$1,474,918	$173,290	1.13
Utility Cost Test (UCT)	$0.1170	$653.64	$1,222,485	$1,474,918	$252,433	1.21
Rate Impact Test (RIM)			$2,883,380	$1,474,918	-$1,408,462	0.51
Participant Cost Test (PCT)			$933,963	$3,309,828	$2,375,865	3.54
Lifecycle Revenue Impacts ($/kWh)						$0.0000054596

Table 20 – C&I Portfolio Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1356	$757.77	$1,069,060	$1,221,023	$151,963	1.14
Total Resource Cost Test (TRC) No Adder	$0.1356	$757.77	$1,069,060	$1,110,021	$40,961	1.04
Utility Cost Test (UCT)	$0.1251	$699.10	$986,287	$1,110,021	$123,734	1.13
Rate Impact Test (RIM)			$2,199,674	$1,110,021	-$1,089,653	0.50
Participant Cost Test (PCT)			$753,511	$2,358,242	$1,604,731	3.13
Lifecycle Revenue Impacts ($/kWh)						$0.0000054015

Table 21 – Residential Portfolio Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0906	$506.15	$232,567	$401,386	$168,819	1.73
Total Resource Cost Test (TRC) No Adder	$0.0906	$506.15	$232,567	$364,897	$132,329	1.57
Utility Cost Test (UCT)	$0.0920	$514.05	$236,198	$364,897	$128,699	1.54
Rate Impact Test (RIM)			$683,706	$364,897	-$318,809	0.53
Participant Cost Test (PCT)			$180,452	$951,587	$771,135	5.27
Lifecycle Revenue Impacts ($/kWh)						$0.0000056679

Exhibit H

Exhibit H - Portfolio Cost Effectiveness to Exceed Targets (with adjusted measure costs, additional Wattsmart Business MWH)

Guidehouse

Memorandum

To: Nancy Goddard, PacifiCorp

From: David Basak, Guidehouse

Date: December 21, 2020

Re: Cost-Effectiveness Results for the California Portfolio Level Results - PY2022-2026 - Adjusted Savings Scenario

Guidehouse estimated the cost-effectiveness for the overall energy efficiency portfolio and component sectors, based on 2022-2026 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall energy efficiency portfolio and the two sector components. The portfolio passes the cost-effectiveness for all cost tests except the RIM test in the combined PY2022-2026 overview. The memo consists of the following tables.

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303.728.2500 main
guidehouse.com

Table 1 – Portfolio Level Cost-Effectiveness Inputs

Parameter	2022	2023	2024	2025	2026
Discount Rate	6.92%	6.92%	6.92%	6.92%	6.92%
Residential Line Loss	8.78%	8.78%	8.78%	8.78%	8.78%
Commercial Line Loss	8.63%	8.63%	8.63%	8.63%	8.63%
Industrial Line Loss	8.53%	8.53%	8.53%	8.53%	8.53%
Irrigation Line Loss	8.78%	8.78%	8.78%	8.78%	8.78%
Residential Energy Rate ($/kWh)[1]	$0.1481	$0.1514	$0.1549	$0.1584	$0.1620
Commercial Energy Rate ($/kWh)[1]	$0.1411	$0.1443	$0.1476	$0.1509	$0.1544
Industrial Energy Rate ($/kWh)[1]	$0.1061	$0.1086	$0.1110	$0.1136	$0.1161
Irrigation Energy Rate ($/kWh)[1]	$0.1596	$0.1633	$0.1670	$0.1708	$0.1747
Inflation Rate	2.28%	2.28%	2.28%	2.28%	2.28%

[1] Future rates determined using a 2.28% annual escalator.

Table 2 – Portfolio Level Annual Costs by Program Year

Expense	2022	2023	2024	2025	2026
Portfolio - Administrative Costs	$0	$0	$0	$0	$0
Portfolio - Direct Implementation – non-incentives	$0	$0	$0	$0	$0
Portfolio - IOUs administered marketing, education and outreach	$0	$0	$0	$0	$0
Portfolio - Program Evaluation	$0	$0	$0	$0	$0
Total Costs	**$0**	**$0**	**$0**	**$0**	**$0**

Table 3 – Benefit/Cost Ratios – Portfolio Level PY2022-2026

Sector	PTRC	TRC	UCT	RIM	PCT
Total Portfolio	1.18	1.07	1.16	0.49	3.23
C&I Programs	1.14	1.03	1.13	0.49	3.04
Residential Programs	1.57	1.43	1.40	0.50	5.08

The following tables provide the cost-effectiveness results for the combination of program years 2022 through 2026 at the sector level.

Table 4 – Portfolio Level Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1203	$672.38	$6,594,882	$7,756,431	$1,161,549	1.18
Total Resource Cost Test (TRC) No Adder	$0.1203	$672.38	$6,594,882	$7,051,301	$456,419	1.07
Utility Cost Test (UCT)	$0.1111	$620.96	$6,090,498	$7,051,301	$960,803	1.16
Rate Impact Test (RIM)			$14,373,308	$7,051,301	-$7,322,007	0.49
Participant Cost Test (PCT)			$5,058,941	$16,334,940	$11,275,999	3.23
Lifecycle Revenue Impacts ($/kWh)						$0.0000064117

Table 5 – C&I Portfolio Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1241	$693.33	$5,992,303	$6,807,581	$815,278	1.14
Total Resource Cost Test (TRC) No Adder	$0.1241	$693.33	$5,992,303	$6,188,710	$196,407	1.03
Utility Cost Test (UCT)	$0.1133	$633.29	$5,473,388	$6,188,710	$715,322	1.13
Rate Impact Test (RIM)			$12,649,863	$6,188,710	-$6,461,153	0.49
Participant Cost Test (PCT)			$4,587,477	$13,938,212	$9,350,736	3.04
Lifecycle Revenue Impacts ($/kWh)						$0.0000073272

Table 6 – Residential Portfolio Cost-Effectiveness Results – PY2022-2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0925	$517.04	$602,579	$948,850	$346,271	1.57
Total Resource Cost Test (TRC) No Adder	$0.0925	$517.04	$602,579	$862,591	$260,012	1.43
Utility Cost Test (UCT)	$0.0948	$529.51	$617,110	$862,591	$245,481	1.40
Rate Impact Test (RIM)			$1,723,445	$862,591	-$860,854	0.50
Participant Cost Test (PCT)			$471,464	$2,396,728	$1,925,263	5.08
Lifecycle Revenue Impacts ($/kWh)						$0.0000033089

The following tables provide the cost-effectiveness results for program year 2022.

Table 7 – Portfolio Level Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1209	$675.62	$900,184	$930,238	$30,054	1.03
Total Resource Cost Test (TRC) No Adder	$0.1209	$675.62	$900,184	$845,670	-$54,513	0.94
Utility Cost Test (UCT)	$0.1108	$618.83	$824,520	$845,670	$21,151	1.03
Rate Impact Test (RIM)			$1,885,276	$845,670	-$1,039,606	0.45
Participant Cost Test (PCT)			$688,189	$2,075,604	$1,387,415	3.02
Lifecycle Revenue Impacts ($/kWh)						$0.0000051360

Table 8 – C&I Portfolio Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1218	$680.64	$863,131	$886,137	$23,006	1.03
Total Resource Cost Test (TRC) No Adder	$0.1218	$680.64	$863,131	$805,579	-$57,552	0.93
Utility Cost Test (UCT)	$0.1109	$619.61	$785,739	$805,579	$19,840	1.03
Rate Impact Test (RIM)			$1,789,298	$805,579	-$983,718	0.45
Participant Cost Test (PCT)			$658,561	$1,943,339	$1,284,777	2.95
Lifecycle Revenue Impacts ($/kWh)						$0.0000064634

Table 9 – Residential Portfolio Cost-Effectiveness Results – PY2022

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1032	$576.56	$37,053	$44,100	$7,048	1.19
Total Resource Cost Test (TRC) No Adder	$0.1032	$576.56	$37,053	$40,091	$3,038	1.08
Utility Cost Test (UCT)	$0.1080	$603.45	$38,781	$40,091	$1,311	1.03
Rate Impact Test (RIM)			$95,978	$40,091	-$55,887	0.42
Participant Cost Test (PCT)			$29,628	$132,266	$102,638	4.46
Lifecycle Revenue Impacts ($/kWh)						$0.0000011129

The following tables provide the cost-effectiveness results for program year 2023.

Table 10 – Portfolio Level Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1233	$689.12	$1,116,170	$1,182,297	$66,127	1.06
Total Resource Cost Test (TRC) No Adder	$0.1233	$689.12	$1,116,170	$1,074,815	-$41,355	0.96
Utility Cost Test (UCT)	$0.1134	$633.51	$1,026,094	$1,074,815	$48,722	1.05
Rate Impact Test (RIM)			$2,348,721	$1,074,815	-$1,273,905	0.46
Participant Cost Test (PCT)			$854,700	$2,605,812	$1,751,112	3.05
Lifecycle Revenue Impacts ($/kWh)						$0.0000058590

Table 11 – C&I Portfolio Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1251	$698.72	$1,046,868	$1,094,274	$47,406	1.05
Total Resource Cost Test (TRC) No Adder	$0.1251	$698.72	$1,046,868	$994,794	-$52,074	0.95
Utility Cost Test (UCT)	$0.1140	$637.04	$954,453	$994,794	$40,341	1.04
Rate Impact Test (RIM)			$2,166,538	$994,794	-$1,171,744	0.46
Participant Cost Test (PCT)			$799,967	$2,356,433	$1,556,465	2.95
Lifecycle Revenue Impacts ($/kWh)						$0.0000071687

Table 12 – Residential Portfolio Cost-Effectiveness Results – PY2023

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1021	$570.69	$69,302	$88,023	$18,721	1.27
Total Resource Cost Test (TRC) No Adder	$0.1021	$570.69	$69,302	$80,021	$10,719	1.15
Utility Cost Test (UCT)	$0.1056	$589.95	$71,640	$80,021	$8,380	1.12
Rate Impact Test (RIM)			$182,182	$80,021	-$102,161	0.44
Participant Cost Test (PCT)			$54,732	$249,379	$194,647	4.56
Lifecycle Revenue Impacts ($/kWh)						$0.0000018928

The following tables provide the cost-effectiveness results for program year 2024.

Table 13 – Portfolio Level Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1208	$674.89	$1,295,285	$1,478,515	$183,230	1.14
Total Resource Cost Test (TRC) No Adder	$0.1208	$674.89	$1,295,285	$1,344,104	$48,819	1.04
Utility Cost Test (UCT)	$0.1114	$622.58	$1,194,891	$1,344,104	$149,214	1.12
Rate Impact Test (RIM)			$2,800,692	$1,344,104	-$1,456,588	0.48
Participant Cost Test (PCT)			$993,580	$3,165,610	$2,172,030	3.19
Lifecycle Revenue Impacts ($/kWh)						$0.0000064972

Table 14 – C&I Portfolio Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1243	$694.64	$1,191,876	$1,322,339	$130,463	1.11
Total Resource Cost Test (TRC) No Adder	$0.1243	$694.64	$1,191,876	$1,202,126	$10,250	1.01
Utility Cost Test (UCT)	$0.1135	$634.25	$1,088,248	$1,202,126	$113,878	1.10
Rate Impact Test (RIM)			$2,504,632	$1,202,126	-$1,302,505	0.48
Participant Cost Test (PCT)			$912,106	$2,751,387	$1,839,281	3.02
Lifecycle Revenue Impacts ($/kWh)						$0.0000073920

Table 15 – Residential Portfolio Cost-Effectiveness Results – PY2024

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0910	$508.27	$103,409	$156,176	$52,767	1.51
Total Resource Cost Test (TRC) No Adder	$0.0910	$508.27	$103,409	$141,978	$38,569	1.37
Utility Cost Test (UCT)	$0.0938	$524.17	$106,643	$141,978	$35,335	1.33
Rate Impact Test (RIM)			$296,061	$141,978	-$154,082	0.48
Participant Cost Test (PCT)			$81,474	$414,223	$332,749	5.08
Lifecycle Revenue Impacts ($/kWh)						$0.0000032112

The following tables provide the cost-effectiveness results for program year 2025.

Table 16 – Portfolio Level Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1194	$667.10	$1,509,578	$1,847,393	$337,816	1.22
Total Resource Cost Test (TRC) No Adder	$0.1194	$667.10	$1,509,578	$1,679,448	$169,871	1.11
Utility Cost Test (UCT)	$0.1105	$617.63	$1,397,624	$1,679,448	$281,824	1.20
Rate Impact Test (RIM)			$3,339,124	$1,679,448	-$1,659,676	0.50
Participant Cost Test (PCT)			$1,159,257	$3,834,667	$2,675,410	3.31
Lifecycle Revenue Impacts ($/kWh)						$0.0000069165

Table 17 – C&I Portfolio Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1241	$693.35	$1,349,329	$1,588,228	$238,899	1.18
Total Resource Cost Test (TRC) No Adder	$0.1241	$693.35	$1,349,329	$1,443,844	$94,514	1.07
Utility Cost Test (UCT)	$0.1135	$633.97	$1,233,775	$1,443,844	$210,069	1.17
Rate Impact Test (RIM)			$2,873,606	$1,443,844	-$1,429,762	0.50
Participant Cost Test (PCT)			$1,034,079	$3,185,394	$2,151,315	3.08
Lifecycle Revenue Impacts ($/kWh)						$0.0000075963

Table 18 – Residential Portfolio Cost-Effectiveness Results – PY2025

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0905	$505.83	$160,248	$259,165	$98,917	1.62
Total Resource Cost Test (TRC) No Adder	$0.0905	$505.83	$160,248	$235,604	$75,356	1.47
Utility Cost Test (UCT)	$0.0926	$517.20	$163,849	$235,604	$71,756	1.44
Rate Impact Test (RIM)			$465,518	$235,604	-$229,914	0.51
Participant Cost Test (PCT)			$125,178	$649,273	$524,095	5.19
Lifecycle Revenue Impacts ($/kWh)						$0.0000044435

The following tables provide the cost-effectiveness results for program year 2026.

Table 19 – Portfolio Level Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1187	$663.31	$1,773,666	$2,317,989	$544,323	1.31
Total Resource Cost Test (TRC) No Adder	$0.1187	$663.31	$1,773,666	$2,107,263	$333,597	1.19
Utility Cost Test (UCT)	$0.1103	$616.08	$1,647,370	$2,107,263	$459,892	1.28
Rate Impact Test (RIM)			$3,999,495	$2,107,263	-$1,892,232	0.53
Participant Cost Test (PCT)			$1,363,215	$4,653,247	$3,290,031	3.41
Lifecycle Revenue Impacts ($/kWh)						$0.0000073348

Table 20 – C&I Portfolio Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1246	$695.92	$1,541,098	$1,916,603	$375,504	1.24
Total Resource Cost Test (TRC) No Adder	$0.1246	$695.92	$1,541,098	$1,742,366	$201,268	1.13
Utility Cost Test (UCT)	$0.1141	$637.25	$1,411,173	$1,742,366	$331,193	1.23
Rate Impact Test (RIM)			$3,315,789	$1,742,366	-$1,573,423	0.53
Participant Cost Test (PCT)			$1,182,763	$3,701,660	$2,518,897	3.13
Lifecycle Revenue Impacts ($/kWh)						$0.0000077995

Table 21 – Residential Portfolio Cost-Effectiveness Results – PY2026

Cost-Effectiveness Test	Levelized $/kWh	Levelized $/kW	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0906	$506.15	$232,567	$401,386	$168,819	1.73
Total Resource Cost Test (TRC) No Adder	$0.0906	$506.15	$232,567	$364,897	$132,329	1.57
Utility Cost Test (UCT)	$0.0920	$514.05	$236,198	$364,897	$128,699	1.54
Rate Impact Test (RIM)			$683,706	$364,897	-$318,809	0.53
Participant Cost Test (PCT)			$180,452	$951,587	$771,135	5.27
Lifecycle Revenue Impacts ($/kWh)						$0.0000056679

Exhibit I

Exhibit I – PacifiCorp Program Change Process – Wattsmart Business

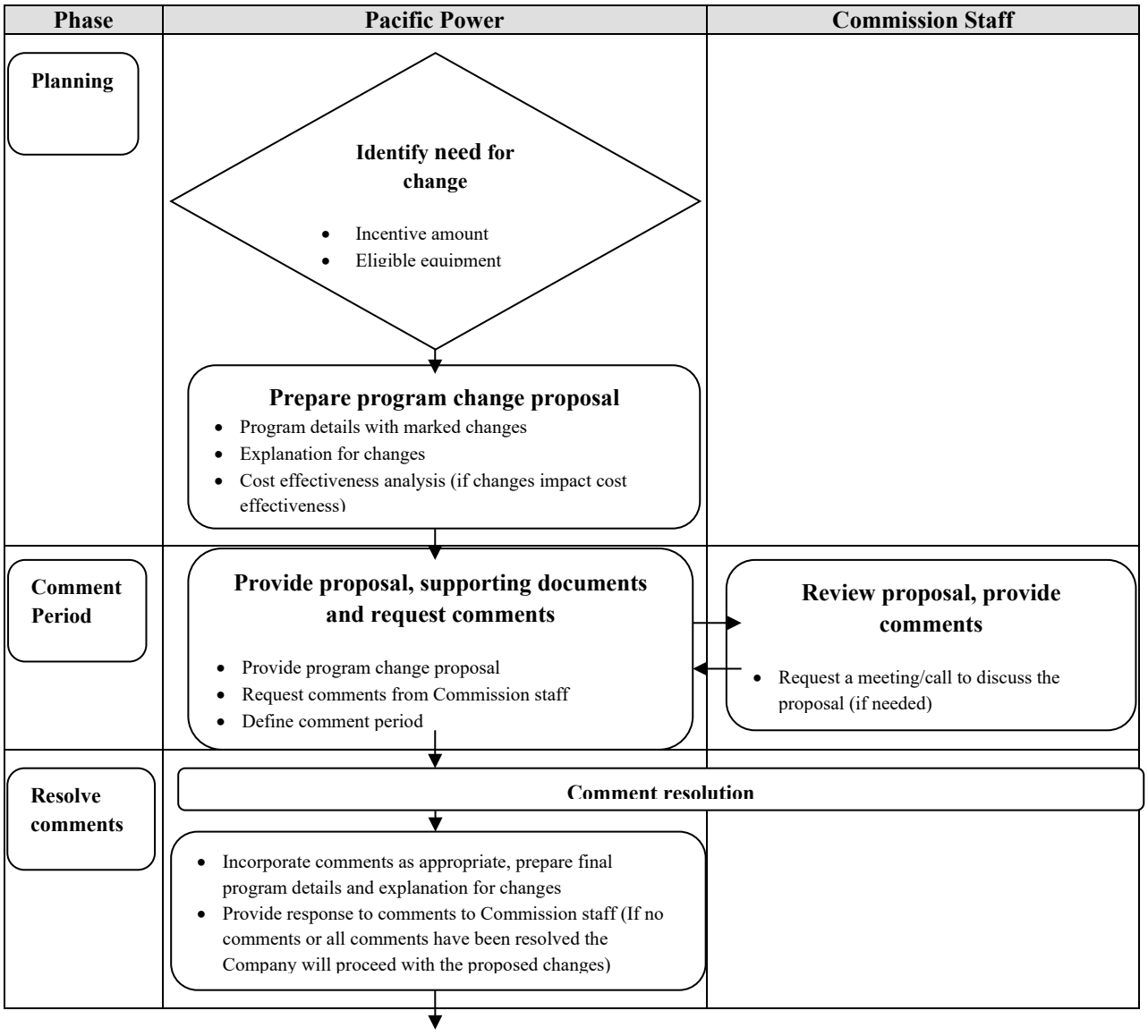
Program Change Process from Advice Letter 518-E filed February 24, 2015

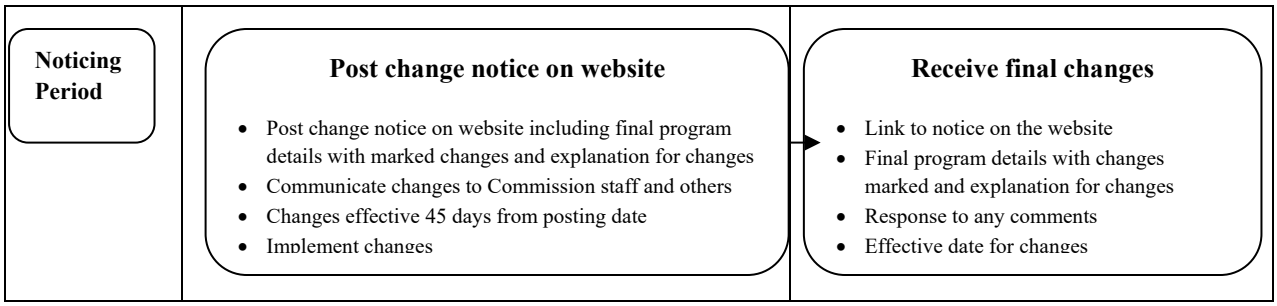
Exhibit E

Pacific Power Flexible Tariff Format – Change Process - California

This process applies to specific program details managed outside of the program tariff such as:

- Incentive tables
- Program definitions
- General incentive information




Noticing Period
Post change notice on website
Post change notice on website including final program details with marked changes and explanation for changes
Communicate changes to Commission staff and others
Changes effective 45 days from posting date
Implement changes
Receive final changes
Link to notice on the website
Final program details with changes marked and explanation for changes
Response to any comments
Effective date for changes