

# Energy Division Central Files Document Coversheet

**Directions:** Submit all documents and submittal questions to Energy Division Central Files via email [EnergyDivisionCentralFiles@cpuc.ca.gov](mailto:EnergyDivisionCentralFiles@cpuc.ca.gov)

1. Fill out coversheet completely. Coversheet can be embedded as page 1 of the electronic compliance filing, or can be submitted as a separate document that is attached to the email that delivers the compliance filing.
2. If the coversheet is submitted as separate document, please name the coversheet file with the same document name used in your primary document (see Section A) + plus the word "cov" (for coversheet). For example, the name of the coversheet file will be something like: **PacifiCorp Monthly Gas Report 201602 COV.docx**
3. If the document is confidential, add CONF (for confidential). For example, the name of the coversheet file will be something like: **PacifiCorp Monthly Gas Report 201602 CONF.docx** and **PacifiCorp Monthly Gas Report 201602 COV CONF.docx**
4. All documents are required to be submitted in an electronically *searchable* format.
5. Documents need to reference the reason for the mandate that ordered the filing in Section B or C. If you are unable to reference a proceeding or explain the origin of your filing, please contact Energy Division Central Files.
6. To find a proceeding number (if you only have a decision number), go to <http://docs.cpuc.ca.gov/DecisionsSearchForm.aspx>; enter the decision number, and the results shown include the proceeding number.

## A. Document Name

Today's Date: 3/15/2022

1. Utility Name: PacifiCorp (U 901 E)
2. Document Submission Frequency (Annual, Semi-Annual, YTD, Quarterly, Monthly, Weekly, Ad-hoc, Once, Other Event): Annual
3. Report Name: Report on Energy Efficiency Programs
4. Reporting Interval (for this submission, e.g. 2015 Q1 – that data date): 2020 CY
5. Document File Name (format as 1+2 + 3 + 4): PacifiCorp Annual Report on Energy Efficiency Programs 2020 CY
6. Append the confidential and/or cover sheet notation, as appropriate. [Click here to enter text.](#)

*Sample Document Names:*

*Utility Name + Submittal Frequency + Report Name + Year + Reporting Interval + (COV or CONF or both or neither)*

<i>PacifiCorp (U 901 E) Annual Report on Energy Efficiency Programs 2021 CY</i>	

7. Identify whether this filing is  original or  revision to a previous filing.
  - a. If revision, identify date of the original filing: [Click here to enter text.](#)

## B. Documents Related to a Proceeding

All submittals should reference both a proceeding and a decision, if applicable. If not applicable, leave blank and fill out Section C.

1. Proceeding Number (starts with R, I, C, A, or P plus 7 numbers): A.07-07-011
2. Decision Number (starts with D plus 7 numbers): D.08-01-041
3. Ordering Paragraph (OP) Number from the decision: [Click here to enter text.](#)

# Energy Division Central Files Document Coversheet

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## C. Documents Submitted as Requested by Other Requirements

If the document submitted is in compliance with something other than a proceeding, (e.g. Resolution, Ruling, Staff Letter, Public Utilities Code, or sender's own motion), please explain:

As part of the program implementation plans PacifiCorp committed to provide an annual report covering participation, energy savings, expenditures, and highlights of program activities for its energy efficiency programs.

## D. Document Summary

Provide a Document Summary that explains why this report is being filed with the Energy Division. This information is often contained in the cover letter, introduction, or executive summary.

Annual report on the Company's energy efficiency programs.

## E. Sender Contact Information

1. Sender Name: Santiago Gutierrez
2. Sender Organization: PacifiCorp (U 901 E)
3. Sender Phone: 503-813-5165
4. Sender Email: Santiago.gutierrez@pacificorp.com

## F. Confidentiality

1. Is this document confidential?  No  Yes
  - a. If Yes, provide an explanation of why confidentiality is claimed and identify the expiration of the confidentiality designation (e.g. Confidential until December 31, 2020.) [Click here to enter text.](#)

## G. CPUC Routing

Energy Division's Director, Ed Randolph, requests that you not copy him on filings sent to Energy Division Central Files. Identify below any Commission staff that were copied on the submittal of this document.

1. Names of Commission staff that sender copied on the submittal of this Document: Amy Reardon, Peter Franzese, Jason Symonds, Mia Hart, and Alison LaBonte.

ver.5/19/2016

March 15, 2022

***VIA ELECTRONIC MAIL***

Mr. Simon Baker  
Interim Deputy Executive Director for Energy and Climate Policy  
Energy Division  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102-3298  
[EnergyDivisionCentralFiles@cpuc.ca.gov](mailto:EnergyDivisionCentralFiles@cpuc.ca.gov)

**RE: PacifiCorp's (U-901-E) 2021 Annual Report on Energy Efficiency Programs;  
A.07-07-011, D.08-01-041**

PacifiCorp, d/b/a Pacific Power (PacifiCorp), hereby submits its annual report on its energy efficiency programs. As part of the implementation plans PacifiCorp provided in Application 07-07-011, PacifiCorp committed to provide, starting in 2009, an annual report covering participation, energy savings and expenditures by sector and program, and highlights of program activity. The attached report covers these topics for calendar year 2021.

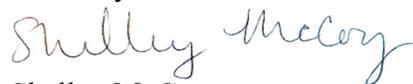
It is respectfully requested that all formal correspondence and Staff requests be addressed to the following:

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

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

Informal inquiries may be directed to Pooja Kishore, Regulatory Affairs Manager at 503-813-7314.

Sincerely,



Shelley McCoy  
Director, Regulation

Enclosure

cc: Amy Reardon, CPUC Energy Division  
Peter Franzese, CPUC Energy Division  
Jason Symonds, CPUC Energy Division  
Mia Hart, CPUC Energy Division  
Alison LaBonte, CPUC Energy Division

# **Attachment A**



# 2021 California Review of Energy Efficiency Programs

*Issued March 15, 2022*

Pacific Power  
825 NE Multnomah St.  
Portland, OR 97232

<https://www.pacificorp.com/environment/demand-side-management.html>

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## EXECUTIVE SUMMARY

Pacific Power is a multi-jurisdictional electric utility providing retail service to customers in California, Oregon, and Washington. Pacific Power, a division of PacifiCorp, serves approximately 47,800 customers in California. Pacific Power acquires energy efficiency and peak reduction resources as cost-effective alternatives to the acquisition of supply-side resources.

PacifiCorp develops a biennial integrated resource plan (IRP) as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals.<sup>1</sup> The IRP presents a framework of future actions to ensure that Pacific Power continues to provide reliable, reasonably priced service to customers. Energy Efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics, and costs.

Pacific Power uses outsourced program delivery implementers for its programs.<sup>2</sup> Evaluations for each of the programs are performed by independent external evaluators to validate energy savings derived from Pacific Power's energy efficiency programs.<sup>3</sup>

Pacific Power utilizes earned media, customer communications, education, and outreach, advertising as well as program specific marketing to communicate the value of energy efficiency, provide information regarding low-cost, no-cost energy efficiency measures and to educate customer on the availability of programs, services, and incentives.<sup>4</sup>

The Company offers two energy efficiency programs to customers in California. Home Energy Savings is offered to residential customers and Wattsmart Business is offered to commercial, industrial, and irrigation customers. Costs associated with the energy efficiency programs are recovered through schedule S-191. This report provides details on program results, activities, and expenditures of the DSM Cost Adjustment Tariff Rider ("Schedule S-191") as of the reporting period from January 1, 2021, through December 31, 2021. Pacific Power, on behalf of its customers, invested \$1.4 million in energy efficiency and peak reduction resource acquisitions during the reporting period. The investment yielded approximately 4.4 gigawatt-hours ("GWh") in first-year energy savings,<sup>5</sup> and approximately 796 gross kilowatts ("kW") of lifetime savings from 2021 energy efficiency acquisition.

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<sup>1</sup> Information on PacifiCorp's IRP can be found at <https://www.pacificorp.com/energy/integrated-resource-plan.html>.

<sup>2</sup> Program Administration can be found at <https://www.pacificorp.com/environment/demand-side-management.html> under the "Program Administration" section.

<sup>3</sup> Program Evaluation information for each program can be found at the following address: <https://www.pacificorp.com/environment/demand-side-management.html> under the "Reports and program evaluations by state" section.

<sup>4</sup> Communications, Outreach and Education can be found at <https://www.pacificorp.com/environment/demand-side-management.html> under the "[Communications and Outreach](#)" section.

<sup>5</sup> Reported ex-ante savings are gross at generation.

The Demand-side Management (“DSM”) portfolio was cost effective based on the Total Resource Cost (TRC) and Program Administrator Cost (PAC)<sup>6</sup> tests, which are the primary cost benefit tests in California.<sup>7</sup> Cost-effectiveness results are provided in Table 11 and Appendix A.

In 2021, Pacific Power’s portfolio included the following programs:

- **Energy Efficiency Programs:**
  - Home Energy Savings
  - Wattsmart Business

## REGULATORY ACTIVITIES

Energy efficiency programs are funded through a Commission-approved DSM Tariff Rider.

On November 29, 2018, the Commission adopted Decision (D.) 18-11-033 authorizing PacifiCorp’s request to continue operating energy efficiency programs through 2020.

On August 13, 2020, PacifiCorp filed a Petition to Modify D.18-11-033 (Petition for Modification) to extend funding and other provisions of D.18-11-033 beyond 2020 and through December 31, 2021, while PacifiCorp prepares an application seeking approval of the Company’s energy efficiency programs for the next funding cycle.

On September 1, 2020, PacifiCorp filed an Annual Budget Advice Letter for 2021 (Advice Letter 627-E) in accordance with D.18-11-033. This advice letter was withdrawn on September 30, 2020, because PacifiCorp did not yet have a decision on the Petition for Modification.

On November 19, 2020, the Commission adopted D.20-11-032 authorizing the Petition for Modification and granting the Company’s request to continue its energy efficiency programs through 2021 and to collect \$1.9 million via the Public Purpose Programs Surcharge to administer the programs. D.20-11-032 also states PacifiCorp’s energy efficiency portfolio expenditures during program year 2021 shall not exceed \$2.4 million, and no later than December 31, 2020, PacifiCorp shall file an application to continue its energy efficiency programs beyond 2021.

On December 17, 2020, PacifiCorp filed a revised Annual Budget Advice Letter for 2021 (Advice Letter 637-E), on January 8, 2021, responded to a data request, and on January 13, 2021, received a disposition letter noting the filing was accepted effective January 1, 2021.

On December 31, 2020, PacifiCorp filed Application A.20-12-018 to continue its energy efficiency programs beyond 2021.

On December 31, 2020, PacifiCorp provided Energy Division Staff details on program changes for Home Energy Savings and Wattsmart Business for 2021 that were summarized in the Annual Budget Advice Letter for 2021 (Advice Letter 637-E). The program changes were effective March 15, 2021.

On September 1, 2021, PacifiCorp filed an Annual Budget Advice Letter for 2022 (Advice Letter 657-E) in accordance with D.18-11-033 and D.20-11-032. On December 21, 2021, PacifiCorp filed a revised Annual

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<sup>6</sup> The Program Administrator Cost (PAC) test is also referred to as the Utility Cost Test (UCT).

<sup>7</sup> Cost effectiveness results include Net-to-Gross (“NTG”) ratios from DEER per Decision 18-11-033

Budget Advice Letter for 2022 (Advice Letter 657-E-A). On December 24, 2021, PacifiCorp received a disposition letter noting Advice Letter 657-E and 657-E-A were accepted effective January 1, 2022.

On September 14, 2021, PacifiCorp filed Advice Letter 659-E to increase the public purpose charge (Schedule S-191) that funds the programs. On December 20, 2021, PacifiCorp submitted supplemental Advice Letter 659-E-A to provide additional information as requested by Energy Division staff, and on December 27, 2021, PacifiCorp received a disposition letter noting Advice 659-E and 659-E-A were accepted effective February 1, 2022. On December 16, 2021, the Commission issued D.21-12-034 approving PacifiCorp's Application A.20-12-018 to continue its Energy Efficiency Programs and the Surcharge to Fund Public Purpose Programs as directed by D.20-11-032.

## PORTFOLIO OF PROGRAMS

### RESIDENTIAL ENERGY EFFICIENCY PROGRAM

#### HOME ENERGY SAVINGS

##### *Program Description*

The Home Energy Saving program uses the Company's Wattsmart brand for outreach. The program is designed to provide access and incentives for more efficient products and services installed or received in the following home types.

- New Construction Homes
- Single Family Existing Homes
- Multi-family Housing Units
- Manufactured Homes

The program applies to residential customers receiving electric service on Schedules D, DL-6, DS-8, DM-9 or NEM-35. Landlords who own property where the tenant is billed under Schedules D, DL-6, DS-8, DM-9 or NEM-35 also qualify. The Company does not have businesses or homes in the disadvantaged communities, as identified by Cal EPA pursuant to Health and Safety Code Section 397118.

Measures receiving incentives in 2021 included appliances, HVAC, and water heating.

The Home Energy Savings Program did not pass the TRC with a benefit cost ratio of 0.17 for 2021, nor the PAC with a benefit cost ratio of 0.17.

##### *Program Performance and Major Achievements in 2021*

- The Home Energy Saving Program achieved 22,276 kWh gross savings at site.
- Disbursed \$7,250 in incentives.
- The program was updated in 2021 for greater consistency with other California energy efficiency programs. Changes were intended to improve cost effectiveness, as well as align with Database of Energy Efficiency Resources (DEER) statewide workpapers and values.
- Implementor staff-built relationships with current Trade Allies, and met with potential Trade Allies, conducting inspections.
- Customers received regular communications about available Home Energy Savings program incentives through Pacific Power Connect newsletters sent in February, May, and October.

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<sup>8</sup> <https://www.cpuc.ca.gov/discom/>

- July and November customer bills featured an insert promoting available residential incentives.
- Customers had the opportunity to learn energy savings tips by completing the Home Energy Advisor Survey and online tool that asks customers about their home characteristics and provides recommended actions to make their home more energy efficient.

Additional information on the program administration can be found on the Company's website under the Program administration section:

<https://www.pacificorp.com/environment/demand-side-management.html>

Direct Link to Home Energy Savings program administration:

[https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/california/California\\_Program\\_Administration\\_Home\\_Energy\\_Savings.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/california/California_Program_Administration_Home_Energy_Savings.pdf)

## NON-RESIDENTIAL ENERGY EFFICIENCY PROGRAM

### WATTSMART BUSINESS

#### *Program Description*

The commercial, industrial, and irrigation energy efficiency program is consolidated into a Non-Residential Energy Efficiency program, Schedule A-140.<sup>9</sup> The Non-Residential Energy Efficiency program is promoted to the Company's customers as Wattsmart Business.

Wattsmart Business is intended to influence new and existing non-residential customers to increase the efficiency of electricity usage through the installation of energy efficiency measures and adoption of improved energy management protocols. Qualifying measures include those which, when implemented in an eligible facility, produce verifiable electric energy efficiency improvements.

Incentives and services offered through Wattsmart Business include:

- Typical upgrades included in Incentive Lists: Incentives for listed lighting, HVAC, irrigation, compressed air, and other equipment upgrades that increase electrical energy efficiency and exceed energy code requirements.

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<sup>9</sup> Program details such as incentive tables and program definitions are available on our website at [https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/california/CA\\_wattsmartBusiness\\_Definitions\\_Incentive\\_Tables\\_Information.pdf](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](https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/california/CA_wattsmartBusiness_Brochure.pdf)

- Custom analysis: Offers energy analysis studies, services, and incentives for more complex projects.
- Energy Management: Provides expert facility and process analysis and incentives to help lower energy costs by optimizing customer's energy use.
- Energy Project Manager Co-funding: Available to customers who commit to an annual goal of completing energy projects resulting in at least 1,000,000 kWh/year in energy savings
- Project Financing: PacifiCorp is teamed with National Energy Improvement Fund, an energy efficiency project financing firm, to provide customers with access to third party financing options for instances where funds for project implementation are not available from within the customer's organization.

In 2021 Wattsmart Business program passed the TRC with 1.42 as well as the PAC with 2.06.

### ***Program Performance and Major Achievements in 2021***

- In 2021, the program achieved 4,075,389 kWh gross savings.
- Disbursed incentives of \$625,619.
- The program was updated in 2021 to continue to improve consistency with other California energy efficiency programs. These changes are intended to
  - align with [DEER statewide workpapers](#)<sup>10</sup>, including removal or modification of measures, and voluntarily begin a transition to align with the statewide Custom Project Guidance Document as much as possible.
  - add a new measure for LED High and Low Bays based on a statewide workpaper and allow for a custom incentive for new construction/major renovation interior lighting measures
  - add a new measure for Electronically Commutated Motors in walk-in freezers or coolers
  - add a custom New Construction/Major Renovation (NCRM) lighting measure and aligned with the California custom projects process for all non-deemed measures.
  - align with updates to third-party specifications such as Consortium for Energy Efficiency
- Adaptively managed the COVID-19 pandemic. For example, outreach and onsite inspections continued to be performed virtually where necessary.
- Updated the Pacific Power branded lighting incentive and savings calculation tool and customer facing report for use in proposing lighting projects to customers.

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<sup>10</sup> The California Electronic Technical Reference Manual (eTRM) will be the source for all statewide deemed measures starting in 2022. <http://www.caltf.org/etrm-overview>

- Continued to add courses to the eLearning Platform for participating vendors. The platform has a variety of courses that cover available incentives, measure requirements, and resources for applying. In 2021, the program added four new courses for California vendors: Controlled Agriculture Environment, Smart Buildings – Foundation and Future, Lighting Tool Tutorial and Tips for a Challenging Market.
- Continued the successful Small Business Lighting postcard/vendor follow-up campaign focused on hard-to-reach small business customers. Small Business Vendors who signed a non-disclosure agreement were provided with customer lists to allow them to connect with customers who received a postcard from Pacific Power postcard containing an introduction to the program and an approved vendor. The intent is to improve efficiency of the approved vendors sales processes and boost small business participation. In 2021, 18 postcards were sent for NGI Lighting and 24 were sent for LED Concepts.
- Continued leveraging distributors, LED Concepts and New Generation Illumination (NGI) Lighting, as a main sales arm of the lighting portion of the program and having them proactively promote lighting retrofits to customers and enlist contractors for the installs.
- Continued working with large industrial and City entities to identify energy efficiency opportunities with processing and pumping savings.

Additional information on the program administration can be found on the Company's website under the Program administration section:

<https://www.pacificorp.com/environment/demand-side-management.html>

Direct Link to Wattsmart Business program administration:<sup>11</sup>

[https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/california/California\\_Program\\_Administration\\_NonResidential.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/california/California_Program_Administration_NonResidential.pdf)

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<sup>11</sup> The Wattsmart Business program is administered through a process that allows for program changes after any stakeholder comments are addressed. After consultation with Commission staff on the program changes, they are posted to the program website and become effective 45 days thereafter.

## EXPENDITURES

### TOTAL PORTFOLIO BUDGET AND EXPENDITURES

**Table 1: DSM Balancing Account<sup>12</sup>**

Month	Expenditure <sup>13</sup>	S-191 Revenue <sup>14</sup>	Cash Basis Accumulative Balance <sup>15</sup>	Net Cost Accrual <sup>16</sup>	Accrual Basis Accumulative Balance <sup>17</sup>
20-Dec			\$ (557,798)	\$ (190,006)	\$ (356,563)
21-Jan	\$ 101,687	\$ (84,718)	\$ (540,829)	\$ 28,769	\$ (310,825)
21-Feb	\$ 79,396	\$ (74,098)	\$ (535,531)	\$ 24,928	\$ 280,599)
21-Mar	\$ 197,401	\$ (80,733)	\$ (418,863)	\$ 14,112	\$ (149,818)
21-Apr	\$ 61,954	\$ (67,715)	\$ (424,624)	\$ (133,541)	\$ (289,120)
21-May	\$ 246,515	\$ (67,444)	\$ (245,553)	\$ (5,111)	\$ (115,160)
21-Jun	\$ 111,056	\$ (72,109)	\$ (206,606)	\$ 93,871	\$ 17,657
21-Jul	\$ 31,055	\$ (84,783)	\$ (260,334)	\$ (69,080)	\$ (105,151)
21-Aug	\$ 145,289	\$ (96,856)	\$ (211,901)	\$ 95,093	\$ 38,375
21-Sep	\$ 66,814	\$ (86,502)	\$ (231,590)	\$ (130,040)	\$ (111,354)
21-Oct	\$ 46,843	\$ (60,872)	\$ (245,619)	\$ 62,156	\$ (63,227)
21-Nov	\$ 79,981	\$ (46,502)	\$ (212,141)	\$ (9,535)	\$ (39,284)
21-Dec	\$ 289,943	\$ (80,389)	\$ (2,587)	\$ (25,325)	\$ 144,945
<b>2021 Total</b>	<b>\$ 1,457,934<sup>18</sup></b>	<b>\$ (902,723)</b>			

<sup>12</sup> The DSM balancing account is the mechanism used for managing the DSM Tariff Rider revenues and actual DSM-incurred expenditures.

<sup>13</sup> Monthly expenditures for approved energy efficiency programs.

<sup>14</sup> Revenue collected through the DSM Tariff Rider.

<sup>15</sup> Current balance of the account; a running total of account activities, excluding the accrued cost. A positive balance means cumulative expenditures exceeds cumulative revenue; a negative balance means cumulative revenue exceeds cumulative expenditures.

<sup>16</sup> Two accrual entries are made each month for expenditures of energy efficiency programs. One estimates the incurred cost not yet processed, and the other reverses the estimate from the previous month. The amount shown here is the net of the two entries. This accounting principle was applied to the balancing account but would not be included when calculating the carrying charges.

<sup>17</sup> Current balance of the account including accrued costs. A positive balance means cumulative expenditures exceeds cumulative revenue; a negative balance means cumulative revenue exceeds cumulative expenditures

<sup>18</sup> December 2021 accrual.

**Table 2: California Gross Results January 1, 2021 – December 31, 2021<sup>19</sup>**

Energy Efficiency Program	kWh Savings (at site)	kWh Savings (at gen)	Investment
<i>Home Energy Savings</i>	22,276	24,232	\$ 73,657
<b>Total Residential</b>	<b>22,276</b>	<b>24,232</b>	<b>\$ 73,657</b>
WSB Commercial	1,084,214	1,232,811	\$ 345,415
WSB Industrial	2,351,043	2,551,540	\$ 627,454
WSB Irrigation	640,132	641,241	\$ 160,681
<b>Total Wattsmart Business</b>	<b>4,075,389</b>	<b>4,425,592</b>	<b>\$ 1,133,551</b>
Portfolio - EM&V			\$ 216,783
Portfolio - DSM Central			\$ 6,669
Portfolio – TRL			\$ 559
<b>Total Energy Efficiency</b>	<b>4,097,665</b>	<b>4,449,824</b>	<b>\$ 1,431,219</b>

**Table 3: Portfolio Level Forecast Expenditures – Breakdown by Cost Category<sup>20</sup>**

Cost Category Description	2021 Expenditures	% of Total
Administrative Costs	\$ 87,534	6%
Direct Implementation – Incentives	\$ 632,869	44%
Direct Implementation - Non-Incentives	\$ 467,877	33%
IOU's administered marketing, education, and outreach	\$ 18,928	1%
EM&V	\$ 224,011	16%
<b>Total</b>	<b>\$ 1,431,219</b>	<b>100%</b>

**Table 4: 2021 Program Level Expenditures – Breakdown by Cost Category**

Cost Category Description	2021 Home Energy Savings Expenditures (a)	2021 Wattsmart Business Expenditures (b)	2021 Total Portfolio Expenditures (c)	2021 Total Expenditures (a+b+c)	% of Total
Utility Administrative Costs	\$ 13,117	\$ 74,417		\$ 87,534	6%
Direct Implementation – Incentives	\$ 7,250	\$ 625,619		\$ 632,869	44%
Direct Implementation - Non-Incentives	\$ 51,349	\$ 416,528	\$ 7,228	\$ 475,105	33%
IOU's administered marketing, education, and outreach	\$ 1,941	\$ 16,987		\$ 18,928	1%
EM&V			\$ 216,783	\$ 216,783	15%
<b>Total</b>	<b>\$ 73,657</b>	<b>\$ 1,133,551</b>	<b>\$ 224,011</b>	<b>\$ 1,431,219</b>	<b>100%</b>

<sup>19</sup> Gross Savings

<sup>20</sup> Decision 18-11-033 included an order to submit Annual Budget Advice Letters (“ABAL”) starting in September 2019 that include a breakdown of expenses, including at minimum the following categories: incentive payments, program evaluations, and administrative expenses

## OVERALL PORTFOLIO LEVEL METRICS REPORTING

D.18-11-033 included an order to conform to “Overall Portfolio Level” metrics requirements as prescribed in D.18-05-041.

1. Energy Savings – Tables 5-7 summarize first year annual and lifecycle ex-ante (pre-evaluation) electric and demand savings (gross and net) for 2021.

**Table 5: First Year Annual Savings Gross and Net<sup>21</sup>**

Program	First Year Gross kWh Savings at Site	First Year Net kWh Savings at Site	First Year Gross kWh Savings at Gen	First Year Net kWh Savings at Gen
Home Energy Savings	22,276	20,320	24,232	13,938
Wattsmart Business	4,075,389	3,725,112	4,425,592	3,249,804
<b>Total</b>	<b>4,097,665</b>	<b>3,745,432</b>	<b>4,449,824</b>	<b>3,263,742</b>

**Table 6: Lifecycle kWh Savings Gross and Net Savings<sup>22</sup>**

Program	First Year Gross kWh Savings at Site	First Year Net kWh Savings at Site	First Year Gross kWh Savings at Gen	First Year Net kWh Savings at Gen
Home Energy Savings	271,781	156,330	295,640	170,054
Wattsmart Business	39,031,194	28,661,412	42,385,192	31,124,322
<b>Total</b>	<b>39,302,974</b>	<b>28,817,742</b>	<b>42,580,832</b>	<b>31,294,376</b>

**Table 7: Lifecycle kW Savings Gross and Net Savings<sup>23</sup>**

Program	First Year Gross kW Savings at Site	First Year Net kW Savings at Site	First Year Gross kW Savings at Gen	First Year Net kW Savings at Gen
Home Energy Savings	4	2	4	2
Wattsmart Business	729	536	792	582
<b>Total</b>	<b>733</b>	<b>538</b>	<b>796</b>	<b>584</b>

2. Disadvantaged Communities – The Company does not have businesses or homes in disadvantaged communities, as identified by CalEPA pursuant to Health and Safety Code Section 39711.<sup>24</sup>
3. Hard-to-Reach Participation – Tables 8-10 represent the Company’s hard-to-reach customer participation by program.

<sup>21</sup> Decision 18-11-033 included an order to conform to ‘Overall Portfolio Level’ metrics requirements as prescribed in Decision 18-05-041.

<sup>22</sup>Lifecycle savings is without discount rate.

<sup>23</sup> kW savings are not additive over the measure life since it is time independent and therefore lifecycle impacts are reported consistent with first year kW savings. Totals may be off due to rounding.

<sup>24</sup> <https://www.cpuc.ca.gov/discom/>

**Table 8: 2021 Hard to Reach Markets First Annual Gross and Net kWh Savings**

Program	First Year Gross kWh Savings at Site	First Year Net kWh Savings at Site	First Year Gross kWh Savings at Gen	First Year Net kWh Savings at Gen
Home Energy Savings	2,725	2,317	2,965	2,520
Wattsmart Business	880,786	748,668	956,815	813,293
<b>Total</b>	<b>883,511</b>	<b>750,985</b>	<b>959,780</b>	<b>815,813</b>

**Table 9: 2021 Hard to Reach Markets Lifecycle Gross and Net kWh Savings**

Program	First Year Gross kWh Savings at Site	First Year Net kWh Savings at Site	First Year Gross kWh Savings at Gen	First Year Net kWh Savings at Gen
Home Energy Savings	33,252	28,264	36,171	30,745
Wattsmart Business	7,093,000	6,029,050	7,705,267	6,549,477
<b>Total</b>	<b>7,126,251</b>	<b>6,057,313</b>	<b>7,741,438</b>	<b>6,580,222</b>

**Table 10: 2021 Hard to Reach Markets Gross and Net kW Savings**

Program	First Year Gross kW Savings at Site	First Year Net kW Savings at Site	First Year Gross kW Savings at Gen	First Year Net kW Savings at Gen
Home Energy Savings	0.49	0.41	1	0.45
Wattsmart Business	158	134	171	146
<b>Total</b>	<b>158</b>	<b>134</b>	<b>172</b>	<b>146</b>

**Table 11: Home Energy Savings Eligible Program Measures**

Measure Category	Total kWh/Yr Savings @ Site	Total Incentive	Measure Quantity
Appliances	1,632	\$ 1,050	10
HVAC	9,987	\$ 2,600	5
Water Heating	10,657	\$ 3,600	8
<b>Grand Total</b>	<b>22,276</b>	<b>\$ 7,250</b>	<b>23</b>

**Table 12: Wattsmart Business Program Performance by Sector**

Sector	Total kWh/Yr Savings @ Site	Total Incentive	Total Projects
Commercial	1,084,214	\$ 181,576	45
Industrial	2,351,043	\$ 354,514	6
Irrigation	640,132	\$ 89,528	32
<b>Grand Total</b>	<b>4,075,389</b>	<b>\$ 625,619</b>	<b>83</b>

**Table 13: Wattsmart Business Installed Program Measures**

Sector	Total kWh/Yr Savings @ Site	Total Incentive	Total Projects
Food Service Equipment	11,725	\$ 5,250	1
Irrigation	640,132	\$ 89,528	32
Lighting	833,334	\$ 166,473	44
Motors	1,659,061	\$ 248,859	2
Additional Measures	670,841	\$ 100,626	1

Sector	Total kWh/Yr Savings @ Site	Total Incentive	Total Projects
HVAC	260,296	\$ 14,882	3
<b>Grand Total</b>	<b>4,075,389</b>	<b>\$ 625,619</b>	<b>83</b>

## TOTAL COST EFFECTIVENESS RESULTS BY PORTFOLIO AND PROGRAM

Program cost effectiveness is performed using a Company specific modeling tool, created by a third-party consultant. 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. The analysis assesses the costs and benefits of DSM resource programs from different stakeholder perspectives, including participants and non-participants, based on four tests described in the Standard Practice Manual (TRC, UCT, PCT and RIM) as well as an additional fifth test, PTRC.

Based on D.18-11-033, PacifiCorp's model was revised in 2018 to include a greenhouse gas adder for the incremental value of avoided greenhouse gas emissions.

The Company only used approved net-to-gross ratios from the DEER in the cost effectiveness assessment for the 2021 program year.

Each of the cost-effectiveness tests is outlined below. The primary cost/benefit tests are the Total Resource Cost (TRC) and UCT.

- PacifiCorp Total Resource Test (PTRC) is the total resource cost test with an additional 10% added to the net benefit side of the benefit/cost formula to account for non-quantified environmental and non-energy benefits of conservation resources over supply side alternatives.
- Total Resource Cost (TRC) Test considers the benefits and costs from the perspective of all utility customers, comparing the total costs and benefits from both the utility and utility customer perspectives.
- Utility Cost (UCT) Test also called the Program Administrator Cost Test (PAC), provides a benefit to cost perspective from the utility only. The test compares the total utility cost incurred to the benefit/value of the energy and capacity saved and contains no customer costs or benefits in calculation of the ratio.
- Participant Cost Test (PCT) compares the portion of the resource paid directly by participants to the savings realized by the participants.
- Ratepayer Impact Cost Test (RIM) examines the impact of energy efficiency expenditures on non-participating ratepayers overall. Unlike supply-side investments, energy efficiency programs reduce energy sales. Reduced sales typically lower revenue requirements while putting near-term upward pressure on the rates remaining fixed costs are spread over fewer kilowatt-hours.

Cost effectiveness is tested using the decrement values from the IRP for all measure categories. The Company's approach to determining an avoided cost for energy efficiency is to compare the system cost of the preferred portfolio with and without energy efficiency where the cost difference is the value of the "decrement" or system-wide energy efficiency savings. Risk

reduction and T&D adders are then added to this decrement value to determine the total avoided cost. Essentially, an avoided cost is equal to the Decrement Value + Risk Reduction adder + T&D adder.

**Table 14: Portfolio Cost Effectiveness**

Program	Benefit/Cost Test <sup>25</sup>				
	PTRC	TRC	UCT/PAC	PCT	RIM
Energy Efficiency Portfolio	1.33	1.21	1.64	3.33	0.39
C&I Programs (non-residential)	1.56	1.42	2.06	3.33	0.41
Residential Energy Efficiency Portfolio	0.19	0.17	0.17	2.58	0.12

Portfolio-level cost effectiveness includes portfolio and EM&V costs, such as the Potential Assessment and DSM system database.

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<sup>25</sup> Based on decision 18-11-033, PacifiCorp’s model was revised in 2018 to include greenhouse gas adder for the incremental value of avoided greenhouse gas emissions.

## EVALUATIONS

Evaluations are performed by independent external evaluators to validate energy and demand savings derived from the Company’s energy efficiency programs. Industry best practices are adopted by the Company with regards to principles of operation, methodologies, evaluation methods, and protocols including those outlined in the National Action Plan for Energy Efficiency Program Impact Evaluation and the California Evaluation Framework guides.

A component of the overall evaluation efforts is aimed at the reasonable verification of installations of energy efficient measures and associated documentation through review of documentation, surveys and/or ongoing onsite inspections.

Verification of the potential to achieve savings involves regular inspection and commissioning of equipment. The Company engages in programmatic verification activities, including inspections, quality assurance reviews, and tracking checks and balances as part of routine program implementation and may rely upon these practices in the verification of installation information for the purposes of savings verifications in advance of more formal impact evaluation results.

Evaluation, measurement, and verification tasks are segregated within the Company organization to ensure they are performed and managed by personnel who are not directly responsible for program management.

Information on evaluation activities completed or in progress during 2021 are summarized in the chart below. Completed evaluation reports are available at the following link, under the “Reports and program evaluations by state” section:

<https://www.pacificorp.com/environment/demand-side-management.html>

**Table 15: 2021 Evaluation Activities**

<b>Evaluation</b>	<b>Responsible Consultant</b>	<b>Status</b>	<b>Published</b>
Home Energy Savings	ADM	Completed	2021
Wattsmart Business Evaluation 2020-2021	Cadmus	In Process	N/A

# **Attachment B**

## APPENDIX

### Appendix A: Cost-effectiveness Results<sup>1</sup>

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<sup>1</sup> Cost-effectiveness results were generated by Applied Energy Group (AEG) using the approved Cost-effectiveness methodologies.



## MEMORANDUM

To: Alesha Pino, PacifiCorp  
From: Andrew Cottrell, Andy Hudson, Dylan Royalty, AEG  
Date: March 9, 2022  
Re: PacifiCorp California Portfolio and Sector Level Cost-Effectiveness Results – PY2021

AEG estimated the cost-effectiveness of PacifiCorp’s overall energy efficiency portfolio in the state of California based on Program Year (PY) 2021 costs and savings estimates provided by PacifiCorp. This memo provides cost-effectiveness results at the portfolio and sector levels. The portfolio has a positive benefit-cost ratio for the Total Resource Cost Test (TRC), the PacifiCorp Total Resource Cost Test (PTRC), the Utility Cost Test (UCT), and the Participant Cost Test (PCT).

This memo provides analysis inputs and results in the following tables:

Table 1: Cost-Effectiveness Analysis Inputs

Table 2: Portfolio Level Costs, Nominal - PY2021

Table 3: Benefit/Cost Ratios by Portfolio Type

Table 4: 2021 Total Portfolio Cost-Effectiveness Results

Table 5: 2021 C&I Energy Efficiency Portfolio Cost-Effectiveness Results

Table 6: 2021 Residential Energy Efficiency Portfolio Cost-Effectiveness Results

The following assumptions were utilized in the analysis:

**Avoided Costs:** Hourly values provided by PacifiCorp are based on the 2019 Integrated Resource Plan (IRP) Preferred Portfolio, utilizing the California Avoided Cost Calculator, then converted into annual values using California load shapes from the IRP.

**Modeling Inputs:** measure savings, costs, measure lives, incentive levels, and portfolio costs were based on estimates provided by PacifiCorp.

**Other Economic Assumptions:** Discount rate, line loss, retail rate, energy-to-capacity conversion factor, and inflation rate values were provided by PacifiCorp and are presented in Table 1 below.



Tables 1 and 2 below summarize cost-effectiveness assumptions for the PacifiCorp California energy efficiency portfolio. All costs and impacts are presented at the portfolio level.

Table 1: Cost-Effectiveness Analysis Inputs

Parameter	PY2021
Discount Rate	6.92%
Residential Line Loss	8.78%
Commercial Line Loss	8.63%
Industrial Line Loss	8.53%
Irrigation Line Loss	8.78%
Residential Energy Rate (\$/kWh)	\$0.1296
Commercial Energy Rate (\$/kWh)	\$0.1385
Industrial Energy Rate (\$/kWh)	\$0.1029
Irrigation Energy Rate (\$/kWh)	\$0.1335
Energy-to-Capacity Conversion Factor	0.000178976
Inflation Rate <sup>1</sup>	2.28%

Table 2: Portfolio Level Costs, Nominal - PY2021<sup>2</sup>

Portfolio Level Expense	Cost
EM&V	\$216,783
DSM Central	\$6,669
TRL	\$559
<b>Total Cost</b>	<b>\$224,011</b>

Tables 3 through 6 present the cost-effectiveness results at the portfolio and sector levels.

Table 3: Benefit/Cost Ratios by Portfolio Type

Cost-Effectiveness Test	PTRC	TRC	UCT	RIM	PCT
Total Portfolio	1.41	1.29	1.75	0.40	3.47
C&I Programs	1.66	1.51	2.19	0.42	3.48
Residential Programs	0.19	0.17	0.17	0.12	2.58

<sup>1</sup> Future rates determined using a 2.28% annual escalator.

<sup>2</sup> To align with annual budget expectations, cost-effectiveness inputs are presented in nominal dollars.



Table 4: 2021 Total Portfolio Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Levelized \$/kW	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0780	\$436.06	\$1,944,369	\$2,749,236	\$804,867	1.41
Total Resource Cost Test (TRC) No Adder	\$0.0780	\$436.06	\$1,944,369	\$2,499,306	\$554,937	1.29
Utility Cost Test (UCT)	\$0.0574	\$320.98	\$1,431,219	\$2,499,306	\$1,068,087	1.75
Participant Cost Test (PCT)			\$1,560,716	\$5,413,404	\$3,852,688	3.47
Rate Impact Test (RIM)			\$6,211,754	\$2,499,306	-\$3,712,449	0.40
Lifecycle Revenue Impacts (\$/kWh)						\$0.0008649
Discounted Participant Payback (years)						2.86

Table 5: 2021 C&I Energy Efficiency Sector Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Levelized \$/kW	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0664	\$370.97	\$1,646,209	\$2,735,509	\$1,089,300	1.66
Total Resource Cost Test (TRC) No Adder	\$0.0664	\$370.97	\$1,646,209	\$2,486,827	\$840,618	1.51
Utility Cost Test (UCT)	\$0.0457	\$255.44	\$1,133,551	\$2,486,827	\$1,353,276	2.19
Participant Cost Test (PCT)			\$1,547,080	\$5,378,276	\$3,831,196	3.48
Rate Impact Test (RIM)			\$5,886,208	\$2,486,827	-\$3,399,381	0.42
Lifecycle Revenue Impacts (\$/kWh)						\$0.0008196
Discounted Participant Payback (years)						2.85

Table 6: 2021 Residential Energy Efficiency Sector Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Levelized \$/kW	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.6198	\$3,463.28	\$74,149	\$13,727	-\$60,422	0.19
Total Resource Cost Test (TRC) No Adder	\$0.6198	\$3,463.28	\$74,149	\$12,479	-\$61,670	0.17
Utility Cost Test (UCT)	\$0.6157	\$3,440.32	\$73,657	\$12,479	-\$61,178	0.17
Participant Cost Test (PCT)			\$13,637	\$35,128	\$21,492	2.58
Rate Impact Test (RIM)			\$101,535	\$12,479	-\$89,056	0.12
Lifecycle Revenue Impacts (\$/kWh)						\$0.0000141
Discounted Participant Payback (years)						4.65