



## 2022 Washington Annual Report on Conservation Acquisition

*Final 6/1/2023*

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## EXECUTIVE SUMMARY

PacifiCorp is a multi-jurisdictional electric utility providing retail service to customers in Washington, California, Idaho, Oregon, Utah, and Wyoming. PacifiCorp dba Pacific Power & Light Company (“Pacific Power or Company”) serves approximately 135,706 customers in Washington. The Company works with its customers to reduce the need for investment in supply side resources and infrastructure by reducing energy consumption and peak demand through a cost-effective energy efficiency program portfolio.

PacifiCorp is required to comply with the requirements of the Energy Independence Act (I-937) codified in RCW19.285 and WAC 480-109. This report outlines the activities and expenditures related to pursuing all conservation in accordance with the I-937 framework, including Washington Utilities and Transportation Commission (“Commission”) orders and administrative rules.

In 2022, the Company offered four energy efficiency programs in Washington and received energy savings and market transformation benefits through its affiliation with the Northwest Energy Efficiency Alliance (NEEA). In addition to the energy efficiency programs, the Company, on behalf of customers, invested in outreach and education for the purpose of promoting the efficient use of electricity and improving program performance. The Company recovers expenditures associated with these programs through the System Benefits Charge Adjustment, Schedule 191.

Pacific Power uses outsourced program delivery implementers for its programs.<sup>1</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>2</sup>

Pacific Power utilizes earned media, customer communications, education, outreach, and advertising as well as program specific marketing to communicate the value of energy efficiency, provide information regarding low-cost and no-cost energy efficiency measures and to educate customers on the availability of programs, services, and incentives.<sup>3</sup>

In 2022, to achieve Clean Energy Transformation Act (CETA) equity objectives, Pacific Power began implementing Demand-side Utility Actions outlined in the 2022-2023 Biennial Conservation Plan (in the DSM Business Plan appendix) and the Clean Energy Implementation Plan (both filed in 2021). See the CETA Utility Actions section for updates. Pacific Power’s

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<sup>1</sup> Program Administration can be found at <https://www.pacificcorp.com/environment/demand-side-management.html> under the “Program Administration” section.

<sup>2</sup> Program Evaluation information for each program can be found at the following address: <https://www.pacificcorp.com/environment/demand-side-management.html> under the “Reports and program evaluations by state” section.

<sup>3</sup> Communications, Outreach and Education can be found at <https://www.pacificcorp.com/environment/demand-side-management.html> under the “Communications and Outreach” section.

customer benefit indicator metric results for energy efficiency programs will be reported in the Clean Energy Implementation Plan progress report due July 1, 2023.

This report provides details on program results, activities, expenditures, and System Benefits Charge (“Schedule 191”) revenue as of the reporting period January 1, 2022, through December 31, 2022. Pacific Power, on behalf of its customers, invested \$14.7 million in energy efficiency and peak reduction resource acquisitions during the reporting period. The investment yielded approximately 40 kilowatt-hours hours (“kWh”) in first-year energy savings,<sup>4</sup> and approximately 6.73 gross megawatts (“MW”) of savings from 2022 energy efficiency acquisition. Despite efforts to achieve targets, energy savings from Pacific Power programs (excluding NEEA) were 70% of 2022 savings projected in the 2022-2023 DSM Business Plan filed November 1, 2021. Total portfolio expenses (including NEEA and portfolio costs) in 2022 were 64% of the 2022 projection in the 2022-2023 DSM Business Plan.

For 2022, the company notes the lingering effects of the COVID-19 pandemic

- 1) Significantly impacted program performance and prevented the Company from being on track to meet its 2022-2023 conservation target,
- 2) Were beyond the reasonable control of the Company and could not have been reasonably anticipated, and
- 3) Meet the criteria of “natural disasters resulting in the issuance of extended emergency declarations” given Governor Jay Inslee declared a State of Emergency on February 29, 2020, and the State of Emergency was still in place until November 1, 2022. As of the end of 2022, the federal Public Health Emergency declaration remains in effect.

Several prevalent challenges persisted in 2022 due to the COVID-19 pandemic. Outlined below are some of the issues that contributed to lower-than-expected energy savings results:

- **Higher interest rates** – Interest rates increased in 2022, which changed the calculus for investment decisions and prompted some customers to delay the implementation of projects.
- **Labor Shortages** – Customers across all business sectors are experiencing a shortage of available workers and increased wages/benefits for those employed. Some businesses are reducing hours and limiting production as a stop gap measure. Many Trade Allies did not have enough staff to take on additional projects. Demand for skilled trade jobs outpaced the supply of qualified workers.
- **Delayed Shipments** – There was also a worker shortage and shipping capacity challenges in transportation, limiting the number of trucks on the road and trains hauling HVAC replacement parts.

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<sup>4</sup> Reported ex-ante savings are gross at generation.

- **Product Availability** – Shortage of microprocessor chips caused additional equipment shortages.
- **General Uncertainty** – Customer uncertainty around staffing issues and labor and material costs, caused delays in project implementation.

In 2021, Northwest Energy Efficiency Alliance documented supply chain challenges resulting from the COVID-19 pandemic. They updated this memo for 2022 to document the continued challenges. Their memos are attached as an Appendix B to this report.

The Demand-side Management (“DSM”) portfolio was cost effective based on the PacifiCorp Total Resource Cost Test (PTRC) and the Utility/Program Administrator Cost Test (UCT), which are the primary Cost Effectiveness tests used in Washington.<sup>5</sup> Cost-effectiveness results are provided in table 13, and Appendix A.

In 2022, Pacific Power’s portfolio included the following programs:

- **Energy Efficiency Programs:**
  - Home Energy Savings (Schedule 118)
  - Home Energy Reports
  - Low Income Weatherization (Schedule 114)
  - Wattsmart Business (Schedule 140)

## REGULATORY AND COMPLIANCE

An external conservation advisory group of stakeholders is required to be maintained and used by the Company to advise it about conservation issues including program designs, incentive levels, third party evaluations, program marketing, and pilots. WAC 480-109-110 provides the scope of issues for the advisory group. The Company refers to its conservation advisory group as the Washington DSM Advisory Group. Due to the COVID-19 pandemic, 2022 advisory group meetings continued to be virtual only and are listed below with meeting dates and summary of topics discussed.

In 2022, in addition to conservation/energy efficiency, the Company discussed plans for new Demand Response programs with the DSM Advisory Group. Demand Response is a resource in the Clean Energy Implementation Plan filed in 2021 in compliance with the Washington Clean Energy Transformation Act. While the scope for this 2022 annual report is energy efficiency, demand response regulatory activity is included in this section.

In compliance with I-937, the Company continuously reviews and updates, as appropriate, the conservation programs and portfolio to adapt to changing market conditions. Steps taken to

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<sup>5</sup> Cost-effectiveness results include realization rates and Net-to-Gross (NTG) ratios.

adaptively manage the conservation programs during 2022 are included within program specific sections of this report.

Pilot projects are implemented when appropriate and are expected to be cost effective within the current or immediately subsequent biennium if the overall portfolio remains cost effective. The Company, after consultation with its DSM Advisory Group, offers initiatives or offers within two programs: *Home Energy Savings* and *Wattsmart Business*. This focus is administratively efficient and uses existing program awareness—both important considerations in the Company’s rural territory. To further leverage other efforts, the Company has linked its pilot efforts with regional work supported by NEEA whenever possible. Pilot projects and 2022 results are outlined in the section, Pilot Projects.

Summary of DSM Advisory Group Meetings in 2022:

| Date / Meeting # | Key Topics  | Updates   |
|------------------|---|---|
| #1, 2/28/2022    | <ul style="list-style-type: none"> <li>• All Source Request for Proposals</li> <li>• Review of the 2022 communications and outreach plan</li> <li>• Business Energy Reports</li> <li>• Future Non-Energy Impacts research</li> </ul>  | <ul style="list-style-type: none"> <li>• Conservation Potential Assessment</li> <li>• Low-income Ductless Heat Pump (DHP) Conversion Measures</li> <li>• Washington Equity Advisory Group schedule/updates</li> <li>• Clean Energy Implementation Plan process/next steps</li> <li>• Clean Energy Implementation Plan utility actions</li> <li>• 2022-2023 DSM forecast indicating shortfall</li> </ul>   |
| #2, 4/28/2022    | <ul style="list-style-type: none"> <li>• 2020-2021 Biennial Conservation Report preview</li> <li>• 2022-2023 DSM forecast indicating shortfall</li> <li>• System Benefits Charge (Schedule 191) review, condition 12d – including options for proposed increase</li> <li>• Conservation Potential Assessment, Non-Energy Impacts (condition 11a)</li> <li>• Demand Response programs – preview of upcoming filings</li> <li>• Procurement update – Home Energy Reports / Business Energy Reports</li> </ul> | <ul style="list-style-type: none"> <li>• Follow-up from 2/28/2022 meeting</li> <li>• CETA: Equity Advisory Group, Clean Energy Implementation Plan</li> <li>• Clean Energy Implementation Plan utility actions</li> <li>• On-Bill Financing, Craft3 requested amendments to enable financing for critical repairs and unsecured loans (e.g., for homeowners residing on Tribal lands or manufactured home parks)</li> <li>• Upcoming drafts due to the DSM Advisory Group</li> <li>• DSM Advisory Group meetings for balance of 2022</li> </ul> |

| Date / Meeting # | Key Topics  | Updates   |
|------------------|---|---|
| #3, 6/28/2022    | <ul style="list-style-type: none"> <li>• NEI and CPA updates</li> <li>• Demand Response</li> <li>• Adoption of air conditioning with low global warming potential refrigerants (condition 10b), including presentation by NEEA</li> <li>• Whether and how to research and evaluate opportunities for cool roof and tree planting conservation (condition 10c)</li> <li>• 2022-2023 DSM Forecast indicating shortfall</li> <li>• Energy Burden Assessment presentation by Empower Dataworks</li> </ul> | <ul style="list-style-type: none"> <li>• Follow-up from 2/28/2022 meeting on The Energy Project proposal</li> <li>• CETA: Equity Advisory Group</li> <li>• Clean Energy Implementation Plan utility actions – CBI metrics for 2022 YTD</li> <li>• Recent filings (EIA reports, SBC filing) – status and next steps</li> <li>• On-Bill Financing (Craft3)</li> <li>• Pilot: Clean Buildings Accelerator</li> <li>• Upcoming drafts for DSM Advisory Group review</li> <li>• DSM Advisory Group meetings for balance of 2022</li> </ul> |
| #4, 9/8/2022     | <ul style="list-style-type: none"> <li>• 2023 Annual Conservation Plan, preview of planned program changes (condition 5b)</li> <li>• Conservation Potential Assessment updates</li> <li>• 2022-2023 DSM Forecast indicating shortfall</li> <li>• Other Conditions: adoption of low global warming potential refrigerants (condition 10b), tree planting conservation (condition 10c)</li> </ul>   | <ul style="list-style-type: none"> <li>• Demand Response Update</li> <li>• CETA: Equity Advisory Group</li> <li>• Clean Energy Implementation Plan utility actions</li> <li>• Pilots - Non-residential Lighting Controls</li> <li>• Recent filings, upcoming drafts due to the DSM Advisory Group</li> <li>• 2022 DSM Advisory Group meetings</li> </ul>  |
| #5, 12/14/2022   | <ul style="list-style-type: none"> <li>• 2023 communications and outreach plan</li> <li>• Conservation Potential Assessment results</li> <li>• Home Energy Reports – measure life assumption change, procurement update</li> <li>• 2022-2023 DSM Forecast indicating shortfall, adaptive management</li> </ul>  | <ul style="list-style-type: none"> <li>• Whether and how to research and evaluate opportunities for cool roof and tree planting conservation (condition 10c)</li> <li>• Demand Response, CETA, pilots</li> <li>• Recent filings, upcoming drafts due to the DSM Advisory Group</li> <li>• Proposed 2023 DSM Advisory Group meeting topics, schedule for drafts coming for review</li> </ul>   |

Summary of DSM filings in 2022:

December 21, 2021 – Advice 21-13 (Docket UE-210973) to make changes to the energy efficiency program tariffs, Schedules 114, 118 and 140 including changes needed to implement utility actions in the Clean Energy Implementation Plan. This filing was approved effective February 4, 2022.

May 31, 2022 – Washington Annual Report on Conservation Acquisition for 2021 (Docket UE-190908). The report provides details on program results and activities. Revised report provided June 23, 2022.

June 1, 2022 – 2020-2021 Biennial Conservation Report (Docket UE-190908). Revised report provided June 20, 2022.

June 1, 2022 – 2020-2021 Conservation Report to Department of Commerce (Docket UE-190908). The report detailed the Company's results toward meeting the targets established in RCW 19.285.070 and WAC 194-37-060 (EIA requirements). Revised report provided June 23, 2022.

June 1, 2022 – System Benefits Charge filing, Advice 22-02, to increase the System Benefits Charge collection rate to better align the company's recovery of costs associated with its cost-effective portfolio of conservation programs. (Docket UE-220411). This filing was approved effective August 1, 2022. The customer notice was filed June 29, 2022, and a revised customer notice was filed July 12, 2022.

July 22, 2022 – Demand Response Programs filing, Advice 22-02 in Docket UE-220550. Included Schedule 106, a broadly enabling tariff for demand response programs, and introduction of an irrigation load control program with costs recovered through a deferral account. Replacement pages filed August 16, 2022.

November 15, 2022 – Pacific Power's 2023 Annual Conservation Plan in Docket UE-210830.

November 16, 2022 – Pacific Power filed a commercial/industrial demand response program and requested recovery of costs through a deferral account (Docket UE-220848).

December 16, 2022 – Pacific Power filed a petition for an accounting order to defer the costs associated with demand response programs (Docket UE-220848). A corrected petition was filed December 29, 2022.

In addition to the above DSM regulatory activity, there were Equity Advisory Group meetings and Clean Energy Transformation Act (CETA) regulatory activities in 2022.

The Company worked with its Equity Advisory Group, formed in 2021 and made up of key local community members, to help inform and advise the Company and met with them nine times in 2022. Input from the Equity Advisory Group informed the utility energy efficiency actions in the Company's 2022-2023 DSM Business Plan (the same actions are also in the Clean Energy Implementation Plan) and equity-related program changes for 2023.



## PORTFOLIO OF PROGRAMS

The portfolio of Company programs (excluding Low Income Weatherization and without NEEA or NEIs) passed the PTRC with a benefit cost ratio of 1.86 and the UCT with a benefit cost ratio of 2.02. Information by program is available below followed by pilot results, utility action results, a full set of tables and cost-effectiveness.

## RESIDENTIAL ENERGY EFFICIENCY PROGRAM

### HOME ENERGY SAVINGS

#### *Program Description*

The Home Energy Saving program is designed to provide access and incentives for more efficient products and services installed or received in the following residential dwelling types.

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

Measures eligible for incentives in 2022 included appliances, HVAC, water heating, weatherization, and retail lighting.

The Home Energy Savings program did not pass the PacifiCorp Total Resource Test (PTRC) with a benefit cost ratio of 0.58 without NEIs or 0.72 with NEIs or Utility Cost Test (UCT) with a benefit cost ratio of 0.77.

The Home Energy Savings program is administered by a third-party implementer working with subcontractors, retailers and trade allies who assist in delivering energy efficient products and services to customers. As the program delivery administrator, Resource Innovations, has responsibility of functional areas and associated goals including:

- Savings acquisition – achieving savings goals within budget and achieving metrics for Hard-to-Reach customers and Highly Impacted Communities.
- Outreach – engagement through all delivery channels including trade ally, retail, direct-install, and direct-to-customer. This includes recruitment, development, and support of contractors and retailers to increase the sale and installation of energy efficient appliances, electrical, plumbing and weatherization measures. Trade allies are provided with program materials, training, and regular updates that allow them to promote energy efficiency solutions.

- Marketing and communications – develop and manage content and messaging for program collateral, website, mailings, social media, retail point-of-purchase displays, and presentations.
- Project inspection and measure verification – maintain reporting accuracy through an ongoing post inspection process for measure installation verification.
- Incentive processing – performed by the program administrator to manage application submittal through payment processing focusing on complete and accurate information to provide customer payments expeditiously.
- Program design and updates – provide program design and regulatory support including measure research, technical design and analysis, review of statewide workpapers and regulatory requirements (energy code/standard changes, Regional Technical Forum (RTF), California electronic Technical Reference Manual), cost effectiveness inputs, administration of program and software tools, measure library updates, and tariff compliance.
- Customer satisfaction – maintaining high customer satisfaction experience delivered across outreach, marketing, operations, and customer support teams.
- Continuous improvement – provide analysis and make recommendations to program based on new and emerging technologies, market and pricing trends, participation trends, and availability of high efficiency equipment options.

### *Program Performance and Major Achievements in 2022*

- The Home Energy Saving Program achieved 2,625,379 kWh gross savings at site.
- Disbursed \$1.7M in incentives.
- Program changes:
  - Planned changes went into effect January 1, 2022, and the following changes were made:
    - Align with the latest unit energy savings (UES) from the RTF.
    - Remove measures with deemed savings recently deactivated by the RTF.
    - Increased customer and trade ally incentives for HVAC, building shell and water heating measures.
    - Added new measures:
      - Direct install duct sealing measure for single family homes
      - Load or occupancy sensing advanced power strips (retail)
      - Multifamily attic insulation: R-0 to R-49
      - Multifamily floor insulation: R-19 to R-30
      - Multifamily windows (pre-condition baseline): U-22 or lower

### *Adaptive Management*

In coordination with Pacific Power, program administrator Resource Innovations implemented the following key initiatives in 2022 to adaptively manage the Home Energy Savings program:

1. **Continued implementing and adaptively managing COVID-19 protocols** for in-person assessments, inspections, and direct install work to keep customers and program team members safe and compliant with State and County COVID-19 guidelines. This provided the program staff access to customers hesitant to participate in the program to safely provide them with support and services.
2. **Temporary Incentive Increase in Response to COVID-19 Pandemic** – Given the COVID-19 pandemic, incentives were increased by approximately 25% effective August 1, 2020. With ongoing supply chain issues and residential customer challenges implementing energy efficiency projects, this incentive increase was carried over and continued in 2022.
3. **Continued focus on supporting contractors.** Recruited and maintained a network of over 90 Home Energy Savings Wattsmart Vendors who promoted Pacific Power offerings to residential customers. Worked with trade allies to clarify program information and application procedures. Contractors were contacted in a variety of ways to adaptively manage the needs of the program, including engagement through in person meetings, phone, webinar and email. With the lifting of COVID restrictions, field reps were able to make multiple in-person visits to Wattsmart Vendors throughout the year. The continued effort to focus on and support contractors resulted in most of the HVAC savings results of nearly 2.4 million kWh in savings.
4. **Expanded and increased promotions for the instant validation coupon offer.** The instant validation coupon offer allows eligible residential customers to receive an instant point-of-purchase discount on eligible equipment in select in-store and online retail locations. The customer fills out an online application and receives a coupon code and scannable barcode that can be redeemed when they check out at participating retailers and online retailers. In 2022, the coupon offering expanded beyond Home Depot and Lowe's to include Ace Hardware retail locations offering an Amazon smart thermostat to customers for only \$15 after the \$100 Pacific Power incentive was applied. The online coupon option provided customers an alternative way to participate in the offer other than the traditional brick-and-mortar stores. The coupon offer was promoted directly to customers via the following efforts and achieved 37,880 kWh:
  - a. Utility bills insert for residential customers focusing on smart thermostats and the instant coupon associated with it.
  - b. Pacific Power staff hosted tables at numerous community events in 2022, promoting the instant coupons available both online and at participating Home Depot, Lowe's, and Ace Hardware locations.
  - c. Point of purchase collateral at all retail locations offering instant coupons.
  - d. Trade Ally newsletter to increase awareness of the coupon program. Informed customer through Pacific Power's Connect newsletter.
5. **Smart Thermostat Limited Time Promotions.** The program ran a limited time offer promotion for smart thermostats in November to align with Black Friday manufacturer discounts. This was an update to a previously run promotion with adaptive management improvements that included customer eligibility verification integration into the online

process. The price points for the thermostats began at \$0.99 with free shipping and resulted in 438 eligible customer purchases from 27 different towns and cities in Pacific Power's service area. The November smart thermostat limited time promotion resulted in 190,092 kWh in annual energy savings and high satisfaction levels from participating customers.

**6. Expanded direct install programs and measures.**

**a. Grew direct install lighting for multi-family renters and manufactured homes.**

Expanding on a 2021 launch, direct install lighting campaigns continued to focus on tenant spaces in multifamily buildings and manufactured homes. The direct install lighting offer resulted in over 950 LED bulbs installed in manufactured homes and multifamily buildings, with savings of approximately 65,000 kWh. 510 LED bulbs were installed across four multi-family properties, including screw in LEDs in rental units as well as T8 LEDs in common areas. This direct install approach yielded more savings per bulb as compared to a retail upstream buy-down approach because program staff confirmed existing bulb types and only installed bulbs in eligible spaces as determined by the RTF (i.e., kitchen, living and dining rooms). Participants were also provided with targeted multi-family and manufactured home marketing collateral that cross-promoted other Pacific Power offerings. The direct install lighting approach helped offset a portion of lost kWh savings from measures removed due to higher RTF baselines.

**b. Expanded direct install duct sealing to single family homes.** Initially the duct sealing direct-install offer was designed for manufactured homes, and in 2022 the program expanded to include single family homes. Manufactured homes accounted for 278,899 kWh savings and traditional single-family homes resulted in approximately 40,000 kWh savings from direct install duct sealing.

**7. Increased frequency of in-person retailer visits upon COVID restrictions lifting.**

Outreach staff performed 305 in-person field visits to participating retail locations in Washington. Store visits included a review and replacement of point-of-purchase collateral and informing store staff and customers about Pacific Power offers on smart thermostats, heat pump water heaters, clothes washers, and lighting. Discounted lighting was available only at approved value retailers located in Highly Impacted Communities.

**8. Completed retail store shelf surveys to keep a pulse on the shifting nature of the lighting market.**

In 2022, one round of lighting shelf surveys was conducted at major retailers in April. More than 1,700 individual products were surveyed across the three reporting periods, which produced nearly 20,000 data points to be analyzed. The report summarized findings related to LED market adoption levels, average retail pricing, and ENERGY STAR appliance purchasing data, as well as themes by retail chain and product type. The details of these surveys were used to recommend Pacific Power program adjustments and changes to adaptively managed the program throughout the 2022 calendar year, so that current program policy could keep in close step with quickly evolving market trends.

9. **Engaged with residential new construction but faced challenges.** Consistent contact has remained with five of the program's most engaged Energy Raters in the region, as well as four of the mid to large builders who participate. Developed a co-branded flyer for raters to promote the new multifamily incentive. Challenges impacting participation included a stricter Washington state energy code being in effect and continual supply chain issues, including high cost of construction materials. There were two single-family new home construction projects and five new manufactured home projects in 2022. Potential multifamily new construction projects were found to not meet the minimum 5% above code efficiency incentive eligibility requirement.

### *Program Performance Compared to the 2022-2023 DSM Business Plan*

Overall, 2022 Home Energy Savings energy savings results were 27% of plan. Measure groups with the highest energy savings in the 2022-2023 DSM Business Plan were HVAC, Building Shell, Whole Home, Water Heating and Lighting. HVAC savings in 2022 were 35% of plan, Building Shell savings were 1% of plan, Whole Home savings were 6% of plan, Water Heating savings were 10% of plan and Lighting savings results in 2022 were 105% of plan. HVAC savings accounted for 92% of the overall savings for the year. Total incentives per kWh in 2022 were \$0.64/kWh compared to \$0.65/kWh in the plan. In addition to the general factors described in the executive summary, contributing factors are outlined below.

- **Non-Lighting:** non-lighting measures accounted for 95% of 2022 savings. Once the COVID-19 restrictions eased, outreach staff were able to re-enter retail stores to train staff in selling efficient products, interact with customers and host pop-up events to increase program participation in non-lighting measures. Outreach staff also worked with contractors who engaged with customers to sell/install projects. While non-lighting measures were the highest performing group, several post-pandemic economic challenges persisted including labor shortages, delayed shipments, product availability, higher interest rates and general economic uncertainty led to lower than planned savings for the year.
- **Lighting:** The lighting goals were greatly reduced in 2022. Retail lighting was offered only in discount stores located in Highly Impacted Communities. General service lamps were offered to customers in stores such as Dollar Tree, Goodwill Stores, Habitat for Humanity Stores, and select other retailers. The purchase price was bought down and included the program incentive.
- **Direct Install:** In 2022, direct install measures accounted for about 384,000 kWh in savings. Direct install measures included duct sealing and lighting and were installed by various partners including a partnership with the Sustainable Living Center based in Walla Walla.

- **New Single-Family Homes and Manufactured Homes:** Building material shortages and increased construction costs caused new home prices to soar, and new home construction experienced a decline in activity. An additional challenge in 2022 was interest rate volatility and the highest mortgage rates since 2001. According to the National Association of Home Builders (NAHB), “Rising mortgage rates combined with 35% to 45% growth in home prices since 2020 have priced many prospective buyers out of the market. According to new NAHB estimates 18 million households were priced out of the market as rates increased from 3% to 7% throughout 2022.”

Building materials such as lumber, concrete and gypsum continued to see cost volatility in 2022 with the overall pricing being much higher than in years prior to the pandemic. According to an article, “Pandemic Demand Causes Unprecedented Building Supply Shortage”:

*A [survey](#) conducted in May 2021 by the NAHB found that more than 90% of builders reported shortages of appliances, 87% reported a shortage of windows and doors, and more than 50% of builders reported shortages of steel beams, insulation, roofing materials, vinyl siding, copper wiring, and plumber fixtures, among other materials. Since May 2020, the cost of steel mill products has risen over 75%, including a 59.4% increase in 2021 alone, and the cost of prepared asphalt and tar roofing and siding products has risen nearly 15%.*

- Construction costs including labor, equipment, and fuel (gasoline) and building materials continued to place pressure on new construction activity in 2022. The producer price index for inputs to residential construction building materials rose 8.3% in 2022.
  - Manufactured home dealers reported that stock was extremely low.
- **Multifamily New Construction:** Several potential projects were reviewed at the beginning of 2022; however, none qualified as eligible based on not exceeding the energy code requirements.

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/washington/Washington\\_Program\\_Administration\\_Home\\_Energy\\_Savings\\_22.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/washington/Washington_Program_Administration_Home_Energy_Savings_22.pdf)

## HOME ENERGY REPORTS

### *Program Description*

The Home Energy Reports program is a behavioral program designed to decrease participant energy usage by providing comparative energy usage data for similar homes located in the same geographical area. Additionally, the report provides the participant with tips to decrease their energy usage.

The Home Energy Reports program passed the PTRC with a benefit cost ratio of 4.81 and the UCT with a benefit cost ratio of 4.37 for 2022.

### ***Program Performance and Major Achievements in 2022***

- Total savings for 2022 was 4,289,670 kWh savings at customer site
- Program introduced a new email cohort achieving 2790 MWh
- 565,000 emails sent in 2022 with positive open and click-through rates of more than 46% and more than 3% respectively
- Of the recipients that responded to the Like/Dislike question, more than 83% submitted a Like response and 95% of email feedback was positive

### ***Program Performance Compared to the 2022-2023 DSM Business Plan***

Estimated savings was 4,289,670 which was 105% of plan. Final savings are pending the results of a program evaluation. Expenditures for the program were \$137,990 which was 37% of estimated expenditures.

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 Reporting (HER) program administration:

[https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/washington/Washington\\_Program\\_Administration\\_Home\\_Energy\\_Reports\\_22.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/washington/Washington_Program_Administration_Home_Energy_Reports_22.pdf)

## **LOW INCOME WEATHERIZATION**

### ***Program Description***

The Low-Income Weatherization program provides energy efficiency services through a partnership between the Company and local non-profit agencies to residential customers who meet the income-eligible guidelines. Services are provided at no cost to the program participants.

These agencies include Blue Mountain Action Council located in Walla Walla, Northwest Community Action Center in Toppenish, and Opportunities Industrialization Center of Washington in Yakima. The Company entered into an agreement for these services with the Yakama Nation Housing Authority in July 2018.

The Low-Income Program did not pass the PTRC with a benefit cost ratio of 0.98 for 2022 (with NEIs) and 0.42 benefit cost ratio (without NEIs).

### ***Program Performance and Major Achievements in 2022***

- In 2022 the program achieved savings of 261,515 kWh at customer site
- Number of homes served was 142
- Six multi-family homes, a total of 69 units, received weatherization services
- The following program changes were approved by Washington Utilities and Transportation Commission and effective February 1, 2022
  - These changes included but were not limited to expanding tariff applicability for installation of ductless heat pumps and major measures (ceiling, wall and floor insulation) to include, in addition to permanently installed operable electric space heating, space heaters or any fuel source except natural gas with adequate combustion air as determined by agency.
  - Increase funds available for repairs from 15 percent to 30 percent of the annual reimbursement on energy efficient measures to help reduce number of dwellings that are deferred due to extent of critical repairs needed before energy efficiency work can be made and updated income guideline to be consistent with RCW 19.405.020(25).

### ***Program Performance Compared to the 2022-2023 DSM Business Plan***

The annual energy savings in 2022 was 261,515 kWh versus 169,130 in the plan. The annual energy savings per home was 1,842 kWh in 2022 versus 1,301 in the plan. The number of homes served was 142 in 2022 versus 130 in the plan. The 2022 actuals exceeded the projections in the plan primarily due to the lifting of COVID-19 pandemic restrictions, agencies eased agency-imposed restrictions and ramped up services, and the completion of six multi-family weatherization projects.

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 Low Income Weatherization program administration:

<https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/washington/Washington Program Administration Low Income 22.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>6</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.
- 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.
- Enhanced incentives for small businesses: Provide enhanced incentives for lighting upgrades installed by an approved Wattsmart Small Business Vendor at an eligible existing small business customer facility.
- Midstream/Lighting Instant Incentive: Provides instant, point-of-purchase incentive for qualifying LED lamps sold through participating distributors. Customers purchasing lamps from non-participating suppliers can apply for incentives after purchase.

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<sup>6</sup> Program details such as incentive tables and program definitions are available on our website at [WA\\_wattsmartBusiness\\_Incentive\\_tables\\_information.pdf \(pacificpower.net\)](https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/washington/WA_wattsmartBusiness_Incentive_tables_information.pdf)

Program details for the Lighting Instant Incentive (midstream) offer are available on our website at [WA\\_Lighting\\_Instant\\_Incentive\\_Offer\\_9-4-2022.pdf \(pacificpower.net\)](https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/washington/WA_Lighting_Instant_Incentive_Offer_9-4-2022.pdf)

The program brochure is available at

[https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/washington/WA\\_wattsmartBusiness\\_Brochure.pdf](https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/washington/WA_wattsmartBusiness_Brochure.pdf)

- 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.

The Wattsmart Business program passed the PTRC with a benefit cost ratio of 3.02 and the UCT with a benefit cost ratio of 2.70 (with NEIs) and PTRC of 2.69 and UCT of 2.70 (without NEIs).

### *Program Performance and Major Achievements in 2022*

- In 2022, the program achieved 26,850,318 kWh gross savings at customer site.
- Disbursed incentives of \$5.283M.
- Program changes effective January 1, 2022, were intended to:
  - Further adaptively manage the program in response to the pandemic with additional temporary incentive increases. With these incentive increases bringing the paybacks for more projects to between one and two years, the project cost incentive cap that was temporarily increased in 2021 was reset to the prior level (70 percent) for all but the small business lighting offer.
  - Expand the Small Business Lighting program to increase participation from very small businesses and small businesses located in Named Communities in alignment with CETA. Higher incentives will be offered for the smallest businesses using less than 30,000 kilowatt-hours per year and Named Community small businesses, and the incentive cap for this new offer will increase to 100 percent of project costs to reduce the customer out-of-pocket cost barrier. These changes were specifically called out as Utility Actions in the 2022-2023 DSM Business Plan and the Clean Energy Implementation Plan filings.
  - Expand HVAC participation by adding a new heating, ventilation, and air conditioning (HVAC) check-up offer performed by approved Wattsmart Business Vendors. This offering will encourage customers to maintain existing rooftop units (RTUs) to optimize equipment efficiency and install energy saving measures on existing HVAC equipment.
  - Align the program's measure offerings and incentives with the latest unit energy savings (UES) and Standard Protocols from the Regional Technical Forum (RTF).
- Program changes effective September 4, 2022, increased incentives for some midstream/Lighting Instant Incentive lamp measures to align with lamp pricing increases and to increase program participation.

## **Adaptive Management**

The Company made substantial changes through an adaptive management approach and attempted to “leave no stone unturned” in terms of effort.

**Vendor Incentives.** As a key part of the adaptive management strategy to increase participation, vendor incentives introduced in April 2021 for lighting projects were updated and offered again in 2022. These vendor incentives helped keep lighting vendors focused on proposing projects in Pacific Power’s Washington service area. Vendor incentives were also available again for interior Advanced Networked Lighting Controls and Advanced Rooftop Unit Controls in 2022. Vendor incentives piqued an interest from out-of-state lighting vendors to seek opportunities in the Washington service area. The additional vendor incentives allowed funds to help offset their salespersons’ travel costs to the area, encouraging the vendors to work outside of their home state. Vendors also saw the value of proposing lighting controls for additional savings opportunities to obtain greater vendor incentives. Some vendors also successfully re-visited customers that they proposed projects to in the past and the additional vendor incentives gave them the ability to reduce their projects costs which helped to move projects forward. Total vendor incentives paid by category are listed below:

- Advanced Networked Lighting Controls Vendor Incentives
  - Four projects, \$11K in vendor incentives
- Lighting Vendor Incentives:
  - Listed Incentive, 63 projects, \$112.9K vendor incentives and 4.1 million in kWh savings
  - Lighting Instant Incentive, 4 projects, \$5.0K vendor incentives and 30K in kWh savings
  - Small Business Lighting, 130 projects, \$60.1K vendor incentives and 3.7 million in kWh savings

**Small Business Lighting.** With the program changes and CETA Utility Actions related to small business, the Small Business Lighting offer saw strong participation in 2022 with 156 projects completed and achieved 136% of plan with a total of 4,087,813 kWh. Overall, seven approved Vendors participated in 2022, including five new vendors. Continued the postcard campaign that focused on hard-to-reach small business customers. Small Business Vendors who signed a non-disclosure agreement were provided with customer lists (containing business name, address, phone number only) to allow them to connect with customers who received a postcard from Pacific Power 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 addition, co-branded shirts are made available to vendors who participated in the postcard campaign. These shirts help in promoting vendor credibility with small business customers. In addition to the mailed postcards, the program also offered co-branded leave-

behind postcards to share with customers that included a QR Code for information in English and Spanish.

**Energy Management.** In response to equipment shortages and capital constraints due to ongoing supply chain issues, the team increased focus on energy management opportunities with refrigeration in tree fruit industry facilities. Pacific Power staff and Cascade Energy, an implementer for the custom offering, approached two large refrigeration fruit storage customers in Yakima about a refrigeration “find and fix” opportunity. These tune up events identified quick, low-cost controls setpoints changes that yielded large energy savings with minimum or no impact on fruit quality. These two projects resulted in 3,232,437 kWh. The success of these projects and the willingness of these customers to implement the recommendations, influenced a targeted effort in 2023 to do more tune-ups with similar customers.

### Other Highlights

- **Program-Specific Field Outreach including Diversity, Equity, Inclusion Efforts**
  - The outsourced delivery implementation team’s Diversity & Community Outreach Coordinator continued to focus on in-person outreach to named community/Highly Impacted Community customers and vendors.
  - Reached out to non-participating vendors and minority-owned vendors to share program opportunities and encourage them to participate.
  - Continued efforts to promote the Lighting Instant Incentive offer to distribution vendors by offering to meet in person, educate staff, and assist with program submittals.
  - Leveraged relationships with vendors from outlying territories and had program Outreach Specialists join them during project presentations to customers. This resulted in multiple large lighting projects.
  - Encouraged two active Vendors to complete NEEA’s NXT Level courses, receive their training certification, and reach Premium Vendor status.
  - More program materials were translated from English into Spanish.
  - Followed up on past prospects that we are aware of who have not moved forward with their efficiency upgrade opportunities.
  - Performed joint presentations with vendors and customers to help customers understand benefits and program opportunities.
  - Program outreach staff succeeded in cultivating one-on-one relationships with vendors of irrigation equipment, adaptive refrigeration controls, and fast acting doors through repeat calls and visits, subject to COVID restrictions.
  - Reached out to over 200 customers within highly impacted communities.
  - Attended Central Washington Hispanic Chamber of Commerce Meet and Greets - July 29th, Aug 31st, Sept 28th, Oct 26th, Nov 30th, Dec 28th
  - Attended Central Washington Hispanic Chamber of Commerce Board of Directors Meeting - Aug 3rd, Sept 7th, Oct 5th, Nov 2nd, Dec 7th
  - Attended Walla Walla Sustainability Committee meetings (occurs every 2 months)

- **Clean Buildings Performance Standard** – Please see the Pilots section for additional updates.
- **Vendor eLearning Platform** - The eLearning Platform has a variety of courses for participating vendors that cover available incentives, measure requirements, and resources for applying. In 2022, the program added two new courses for Washington vendors: Pacific Power OnSite Online Lighting Tool Tutorial Videos and a DesignLights Consortium (DLC) Networked Lighting Controls training course.

### *Program Performance Compared to the 2022-2023 DSM Business Plan*

Overall, 2022 Wattsmart Business energy savings results were 77% of plan. Measure categories with the highest energy savings for 2022 in the 2022-2023 DSM Business Plan were Lighting, Refrigeration, Energy Management and Compressed Air. Lighting savings results in 2022 were 98% of plan, Refrigeration savings were 77% of plan, Energy Management savings (including Strategic Energy Management) was 98% of plan and Compressed Air was 22% of plan. Total incentives were 85% of plan and incentives per kWh in 2022 were \$0.197/kWh on average compared to \$0.179/kWh in the plan mostly due to more small business lighting participation which has enhanced incentives. In addition to the general factors described in the executive summary, contributing factors are outlined below.

- Customers were wary about investing capital funds during an uncertain and unstable economic environment that has followed the pandemic.
- Many businesses were impacted by lingering pandemic related challenges. Staff shortages added pressure to already-scarce time availability for maintenance people and management. Supply chain issues delayed implementation for projects and some projects in the forecast for 2022 slipped to 2023 late in the year, including some large projects.
- Customers had trouble not only with supply chain delays, but cost increases required immediate action to secure pricing, giving customers limited time to engage with Pacific Power prior to purchase deadlines.
- Vendors experienced labor shortages and supply chain shortages which limited their ability to sell and install upgrades.
- Climate changes impacted the tree fruit industry significantly in 2022. A late spring snow and a very hot August resulted in a reduction in bloom counts and a small apple harvest both in size and volume. These weather-related impacts reduced profits for the fifth year in a row in the Yakima Valley. Low fruit yield limits the need for new construction storage projects and has a cascading effect on the support industry customers such as cardboard and plastic packaging.
- Program outreach activities with large customers were mostly done in-person and at similar levels to 2019. Due to more customer familiarity with virtual meetings because of the pandemic, program staff were able to rely on virtual follow-up meetings which lessens the impact on customer's time.

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>7</sup>

[https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/washington/Washington\\_Program\\_Administration\\_NonResidential.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/washington/Washington_Program_Administration_NonResidential.pdf)

## DISTRIBUTION EFFICIENCY

Distribution efficiency is one of the six types of efficiency in the WAC 480-10-100 Energy Efficiency Resource Standard.

### Projects Completed

The following distribution efficiency Voltage Optimization improvements were completed on Wiley Substation feeder 5Y380:

- Installed new line voltage regulator to address voltage concerns.
- Energy savings for the improvements (as built) is 24.6 MWh<sup>8</sup>
  - Note this energy savings is not included in the portfolio cost effectiveness analysis but is reported as company conservation against the Energy Independence Act Target.
- Total cost was \$82,093.
  - Note in accordance with Docket UE-210830 Order O1 Attachment A, item 12c, recovery of costs associated with distribution and production efficiency initiatives are not funded through the Electric Conservation Tariff Rider because these programs are not customer conservation initiatives. They are company conservation programs. As such these costs are recovered in the general rate making process over time. These costs are not included in Tables 2 and 3 below.

### Projects in Progress

There are two other projects in progress that may be completed in time for energy savings reporting in the 2023 DSM Annual Report (or possibly for 2024):

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<sup>7</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.

<sup>8</sup> Note this value is based on data collected on the feeder at the substation. For purposes of this report, this savings is considered "at site". The conversion from "at site" to "at generation" is based on the total system line loss factor of 0.07486. The savings "at generation" is 26,453 kWh.

### Grandview Substation feeder 5Y303

- Replace existing capacitor banks with switched capacitor banks and install three additional switched capacitor banks.
- Project is designed, budget approvals being verified by local district, and tentatively scheduled to be complete end of year 2023. Total cost \$33,097.
- The initial annual energy savings estimate was 244 MWh. This work will be revisited once the improvements are complete.

### Wiley Substation feeder 5Y164 Reconductor and Voltage Optimization

- Replace 3,400 feet of #6 steel mainline with 4/0 AAC.
- Install voltage regulator bank.
- Project is designed, budget approvals being verified by local district, and tentatively scheduled to be complete end of year 2023. Total cost \$366,500.
- The initial annual energy savings estimate was 227 MWh. This work will be revisited once the improvements are complete.

### *Program Performance Compared to the 2022-2023 DSM Business Plan*

The estimated annual energy savings in the 2022-2023 DSM Business Plan for 2022 for Distribution Efficiency was 82,000 kWh (at the generator). The annual savings for 2022 is lower at 26,453 kWh (at the generator).

## NORTHWEST ENERGY EFFICIENCY ALLIANCE

### *Description*

The Northwest Energy Efficiency Alliance (NEEA) is a non-profit corporation that works collaboratively with its funders and other strategic market partners to accelerate the innovation and adoption of energy-efficient products, services, and practices. NEEA is supported by BPA, Energy Trust of Oregon, and more than 100 Northwest utilities, including Pacific Power.

Program performance for 2022 is being reported based on NEEA's results for Pacific Power of 3,329 MWh (at site). Consistent with the reporting convention approved in Docket UE-132047 the savings represent Pacific Power's portion of Total Regional Savings less the Company's local program savings.

In 2022, the Company had a representative on the NEEA board of directors as well as representatives on the coordinating committees.

## *Program Performance Compared to the 2022-2023 DSM Business Plan*

NEEA savings for 2022 is 108% of plan. Expenditures for NEEA in 2022 were 105% of plan. Expenditures for the combination of NEEA, end use load research and RTF funding for 2022 are 99% of plan.

## PILOT PROJECTS

The Company offers pilot projects to residential and nonresidential sectors. This section briefly describes the pilots underway in the 2022-2023 biennial period and key activities that occurred in 2022.

### **On-Bill Financing for owned manufactured homes located on rented space and homes on tribal trust lands in addition to current offer for owned homes**

- **Purpose:** Reduce upfront cost barrier to participation in residential energy efficiency programs by offering on-bill financing. This offer further complements the third-party financing in residential and business customers currently being offered Craft3. This additional offer is contingent on Craft3 being awarded a grant from the Energy Revolving Loan Fund administered by the Washington State Department of Commerce. Craft3 has submitted a proposal and a response is expected by the end of September 2021.
- **Costs:** No additional start-up costs or per application costs. Pacific Power internal on-going loan administration costs will also be included as a program expense and recovered through the tariff rider. Pacific Power is not loaning its own funds and will not be receiving any interest income from loan payments.
- **Size:** The Company expects between 60-100 completed loans over the two-year period.
- **History:** Builds on work from pilot in prior biennial period.
- **Implementation:** Build upon current experience utilizing Craft3, to operate as funder and loan administrator for on-bill financing for residential customers who participate in the Home Energy Savings program. Financing will be available for the net (after incentives) costs of equipment eligible for Home Energy Savings incentives.
- **Marketing:** Home must be in good condition and built after June 15, 1976 (the first HUD standard). The offer will be marketed primarily through installing contractors and the program administrator. Craft3 will work jointly to identify and train contractors. Marketing and screening will be in place to help ensure customers eligible for low-income services are directed to the community action agencies instead of participating in the loan offer. Individual loan offers are subject to both customer and home park screening by Craft3.
- **2022 Update:**



- The expansion is made possible by a grant Craft3 was awarded by the Energy Revolving Loan Fund administered by the Washington State Department of Commerce. Craft3 was awarded and will match a \$2 million award, for a total of up to \$4 million. This is in addition to past awards Craft3 has received from Commerce to do similar work. This new infusion of capital will allow Craft3 to partner with Pacific Power to reach communities that did not have access to the financing previously.
- New eligible households include manufactured homes on leased land and homes in tribal communities where loans cannot be secured by a lien.
- Additionally, Craft3 increased the maximum loan amount to \$50,000 (\$25,000 for unsecured loans) to accommodate the inclusion of financing for critical repairs such as asbestos remediation, roof repair, mold abatement, electrical panel upgrades, etc. Critical repairs may only be financed in conjunction with, and in preparation for a rebate eligible project.
- Lower interest rate offered to households who earn equal to or less than 100% area median income (AMI).
- The expansion of the on-bill financing was implemented as of August 1, 2022.
- Craft3 worked jointly to update program marketing materials and presented at an in-person Home Energy Savings vendor event on August 24, 2022, in Kennewick, Washington.
- **2022 Update on Costs:**
  - In the 2022-2023 biennial conservation plan, it was stated that there would be no fees associated with this expansion. However, there will be up to \$20,000 in start-up costs to perform website, application, system, training, underwriting, and marketing updates. Additionally, Craft3 will receive \$200 per funded loan application, and \$300 per application underwriting fee (regardless of loan funding) for unsecured loans. Craft3 reports that unsecured lending in manufactured home parks tends to be higher touch, requiring additional due diligence on the part of the lender, and this is the reason for the application fees.
  - Costs will be included as a residential program expense and recovered through the System Benefits Charge and are included in Home Energy Savings expenditures.
- **2022 activity:** Individual training conducted with trade allies and Craft3 through digital communications, phone outreach and in person training including the presentation and distribution of a bilingual brochures (Spanish). There were 169 applications received; 102 approved (funded and billing), 43 applications declined (all referred to regional community action agencies) and 24 applications withdrawn.

### **Manufactured Homes Targeted Delivery**

- **Purpose:** Increase installation of energy efficiency measures within new and existing manufactured homes.

- **Costs:** Costs are included in the existing program delivery and incentive budgets for the biennial period.
- **Size:** The Program Administrator expects 500-1,000 manufactured home projects over the two-year period.
- **History:** Builds on work from pilot in prior biennial period.
- **Implementation:** Build awareness and utilization of available customer incentives for manufactured home measures, including new manufactured homes and existing manufactured home duct sealing, direct install lighting, heat pumps, evaporative coolers, central air, windows, and insulation.
- **Marketing:** Utilize geo-targeted analysis, marketing, outreach, and lead sharing methods to optimally reach customers, including customers in underserved areas or non-participating areas.
- **2022 activity:** Signed up five additional contractors focused on Manufactured Homes weatherization. Partnering with Energy Works NW to identify potential new construction homes that qualify for the program. Providing point of purchase signage and marketing materials for new homes retailers. Field staff also identified and conducted program kickoff visits to seven manufactured homes dealers in or near Pacific Power territory. 2022 also saw the team begin updating existing POP to reflect program changes for 2022 and beyond, including a rebate pad and a-frame piece, both of which call out available rebates and the benefits of upgrading to an ENERGY STAR or NEEM+ manufactured home.
  - In 2022, five manufactured new homes were incentivized accounting for nearly 12,000 kWh.
  - Heat pump measures in manufactured homes accounted for approximately 312,000 kWh and Direct Install Duct Sealing for 279,000 kWh. Savings were also accrued by way of smart thermostats, LED Lighting, water heating and appliances.

#### **CTA-2045 enabled heat pumps for space heating**

- **Purpose:** Increase deployment of CTA-2045 enabled heat pumps. This new approach to demand response greatly reduces the cost of controlling space heaters, while at the same time allowing daily control and improving the customer experience. The prior pilot would be continued to increase stocking, sales and incentive applications for heat pumps. In 2022-2023, the pilot will also focus on increasing sales of CTA-2045 equipped units by providing an additional incentive of \$100 for each heat pump space heating unit purchased with CTA-2045 capability.
- **Costs:** Costs are included in the program delivery and incentive budgets for the biennial period.
- **Size:** 10 to 20 units.
- **History:** Builds on work from pilot in prior biennial period
- **Implementation:** Home Energy Savings program team will build new relationships with heat pump space heating manufacturers and distributors to increase availability of models and push sales of CTA 2045 equipped units.

- **Marketing:** Continue sales training and enhanced outreach to manufacturers with existing relationships. Promote the additional incentive for CTA-2045 ready models through direct outreach email and phone communications. Create cobranded materials with manufacturers to increase visibility.
- **2022 Update:** The company and its program implementer initially researched and created the CTA-2045 incentives back in 2019. At the time, HB1444 in WA required that CTA-2045 capability be incorporated into all new heat pump water heaters starting 1/1/2021. The HPWH CTA-2045 incentive was to increase early adoption of equipment with this technology. For the heat pump (space heating) measure, the company wanted to promote the demand response capability in other potential equipment as well. It wasn't clear at the time if/how CTA-2045 enablement would apply outside of water heating, so the company wanted to get ahead of potential adoption. However, it now seems unlikely that demand response will be managed through CTA-2045 ports for space heating. Given that, this pilot will no longer be pursued and the CTA-2045 incentive for heat pumps will be removed from Home Energy Savings. The Company is exploring including electric water heating devices, which may or may not be CTA-2045 enabled, for a future residential demand response program.

### Geo-Targeted Energy Efficiency

- **Purpose:** Focus on increasing participation in specific area(s) where additional value such as preventing or deferring possible infrastructure investments has been identified. This builds up work in targeted areas identified in prior periods which, while successful, did not eliminate or defer the traditional construction solution. Two circuits (5Y164 and 5Y380) in the Yakima area with summer constraints (approximately 2 MW for each circuit) and multi-year construction lead time have been identified and in 2022 program implementers will begin targeting efficiency installations on these circuits.
- **Costs:** Costs are included in the existing program delivery and incentive budgets for the biennial period.
- **Size:** to be determined.
- **History:** Concept of pilot is a continuation of prior work, but any target areas defined for this biennial period would be new.
- **Implementation:** Determine if there are areas appropriate to target. Identify the scope, timing and characteristics of the need for these areas. Obtain customer lists for these areas.
- **Marketing:** Increase frequency of existing program incentives and outreach tactics including direct mail/email, trade ally engagement and personal selling.
- **2022 activity:** The customer list for the two circuits was provided to the delivery team in mid-June 2022. Approximately 2,500 residential customers on the specified feeders were sent a postcard and email promoting insulation measures in November of 2022. On the business side, approximately 250 customers received a postcard and email on "Starting a Project", which outlined how to contact an approved contractor and apply for Pacific Power incentives online. Another round of postcards/emails is planned for early 2023. In

2022, residential customers on the targeted feeders completed 74 Home Energy Savings projects totaling 67,896 kWh (18.9 KW). One business customer on the targeted feeders completed a Wattsmart Business lighting project totaling 24,647 kWh (5.3 KW). In addition, 2 homes on the targeted feeders received services from the Low-Income Weatherization program with savings totaling 2,423 kWh/yr.

### Non-Residential Lighting Controls

- **Purpose:** Increase installation of lighting controls as part of business customer lighting retrofit projects.
- **Costs:** Included in existing program delivery budgets.
- **Size:** Up to 15 projects.
- **History:** Continuation of pilot from the last biennial period as part of an overall effort in the region to build momentum and market support for advanced lighting controls.
- **Implementation:** Leverage NEEA's Luminaire Level Lighting Control (LLLC) initiative including vendor training support. Customer incentives are structured so that lighting upgrades combined with advanced networked lighting controls provide the highest incentive for lighting projects. Continue and evolve vendor incentives for lighting controls.
- **Marketing:** NXT Level training and good/better/best communications, continuing and improving lighting controls training for vendors, and providing outreach coordinator feedback to approved Wattsmart Business Vendors on lighting control opportunities in their projects.
- **2022 Activity:**
  - Encouraged savvy vendors (including from out-of-state) that promote lighting controls to participate in the program.
  - During meetings and pre-inspections, the Outreach Team recommends the use of lighting controls opportunities where applicable.
  - Partnered with NEEA and BPA to host an in-person hands-on Luminaire Level Lighting Controls training course in Kennewick, WA on October 4, 2022. Eleven vendors attended. Representatives from Northwest Energy Efficiency Alliance (NEEA) Luminaire Level Controls Initiative and Evergreen's outreach team presented. Participants learned about the variety of lighting controls and how to appropriately apply controls to lighting projects. After the presentations, there was an opportunity for hands-on learning with three local lighting manufacturer representatives in attendance. They conducted live demonstrations with their control products and answered questions from the audience.
  - Outreach Team sent personal ANLC incentive offer reminder emails to vendors and continued to encourage them to consider lighting controls during one-on-one meetings.
  - Highlighted lighting controls during March 2022 in-person vendor trainings.
  - Increased customer incentives in 2022.
  - In 2022, added new DesignLights Consortium (DLC) Networked Lighting Controls training course for Washington vendors on the Wattsmart eLearning platform.

- Vendor Incentive: In 2022, Pacific Power continued the \$/fixture Vendor Incentive for advanced networked lighting controls that was promoted and offered since 2019. Contractors/vendors face up-front costs of time and money to obtain manufacturer certification(s) to install advanced lighting controls products. A vendor incentive (focused on the vendor’s first three projects) along with the vendor support provided by the program is intended to boost participation. In 2022, vendors received the lighting controls vendor incentive for each of the four projects with interior Advanced Networked Lighting Controls.
- Energy savings results: Lighting controls were present in approximately 80 completed projects; savings associated with controls totaled approximately 4.5 million kWh per year. There were ten projects with Advanced Exterior Dimming, and four projects with interior Advanced Networked Lighting Controls.

### Clean Buildings Accelerator

- **Purpose:** Help commercial building owners who must comply with the Clean Buildings law (House Bill 1257) get a jump start while also identifying savings opportunities and achieving savings results (reported in the Wattsmart Business program).
- **Costs:** Costs are included in the Wattsmart Business program delivery and incentive budgets for the biennial period.
- **Size:** Up to 40 commercial buildings over 50,000 square feet (approximately 10-20 buildings per year in 2022 and 2023).
- **History:** New pilot
- **Implementation:** Leverage Puget Sound Energy development work to offer similar services for commercial buildings located in Pacific Power’s service area. Outreach for the offer will include customers in Highly Impacted Communities and other customers who may lack resources to get started with Clean Buildings. Services and incentives will be offered as part of the Wattsmart Business Strategic Energy Management offer. Services include
  - Coffee chats to provide general information and enroll customers
  - Sprints including monthly virtual workshops for 4 months
  - Virtual energy scans to identify energy savings opportunities
  - Cohort elevate workshops (quarterly for graduates)
  - Coaching calls
  - Energy Star Portfolio Manager training
- **2022 activities:**
  - Hosted four coffee chats in April and May to recruit the first Clean Buildings Accelerator cohort. Of the 22 coffee chat attendees representing 15 different businesses/organizations, 7 were businesses/organizations with buildings in a Highly Impacted Community.

- The first cohort includes nine businesses/organizations with 41 buildings. Of these, five businesses/organizations have buildings located in a Highly Impacted Community.
- For the first cohort, provided four monthly workshops for the “sprint” from May through August 2022, and coaching calls and virtual energy scans. Some participants have a mix of buildings over and under 50,000 square feet. While the focus of this pilot is on buildings over 50,000 square feet, energy scans can be completed for smaller buildings if requested. Although there was 1 million kWh in energy management savings projected for 2022 in the 2022-2023 DSM Business plan, there was no energy management savings reported in 2022.
- Began recruiting and hosted “coffee chats” (11/1/2022, 12/7/2022 plus one on 1/12/2023) for a second cohort that will begin in early 2023. Recruiting included a direct mail (834 letters sent) and email (306 sent) in October 2022 to larger customers likely to have commercial buildings over 50,000 square feet.

## CLEAN ENERGY IMPLEMENTATION PLAN – UTILITY ACTIONS

The Utility Actions in the 2022-2023 DSM Business Plan and the Clean Energy Implementation Plan (both filed in 2021) are listed below with status updates for 2022 in bold font. All are either completed in 2022 and/or are ongoing.

### **Communications:**

The following utility actions defined in the 2022-2023 Demand-side Management Business Plan and Clean Energy Implementation Plan (both filed in 2021) are either complete or continuing:

Utility Actions from the 2022-2023 DSM Business Plan filed in 2021:

Through the programs identified in the 2021 IRP preferred portfolio – including energy efficiency and demand response – PacifiCorp can deliver programs with an increased equity focus utilizing more effective communication strategies to reach its Named Communities.

- Improve culturally and linguistically responsive outreach and marketing to increase awareness of energy and conservation programs.
- Expand in-language services across written, spoken, and visual services.
  - As appropriate, include Spanish versions of collateral and/or posters at community events where Pacific Power is sponsoring. Have interpreters and translated materials at public meetings.

***The above utility actions are ongoing. PacifiCorp is working to address cultural barriers and embrace cultural differences by obtaining a deeper understanding of the communities within its service area. PacifiCorp’s EAG has advised that the company needs to further its***

*understanding of different communities so that we can refine and enhance our mechanisms for outreach and communication, which is why we are exploring new advertising channels to better reach Spanish-speaking customers more directly in their communities. For example, PacifiCorp is launching a pilot program to increase awareness and participation in Pacific Power’s Wattsmart energy efficiency programs. For this initiative, the Company is working closely with a multi-cultural marketing agency to develop an earned media plan that will connect, resonate and strengthen media and customer relationships to reach the Hispanic community using culturally relevant messaging and content. Through contacts with community organizations, we are continually learning and working toward accommodating cultural differences. Along with continuing to nurture relationships with local chambers of commerce to better reach communities.*

### **Residential:**

#### **Home Energy Savings:**

The following utility actions defined in the 2022-2023 Demand-side Management Business Plan and Clean Energy Implementation Plan (both filed in 2021) are either complete or continuing:

Utility Actions from the 2022-2023 DSM Business Plan filed in 2021:

- Enhanced incentives for windows in multi-family units were added to the program in 2022. Initial focus will be on buildings in Highly Impacted Communities. ***(The enhanced incentives were added to the program effective 1/1/2022; there were no incentives paid in 2022. This utility action is ongoing.)***
- Continue direct install residential lighting in multi-family units. Continue focus on Highly Impacted Communities. ***(The direct-install lighting implementer installed 510 screw-in LED bulbs and LED T-8 lamps to upgrade the lighting of apartment units and common areas of four apartment buildings achieving 15,960 kWh in savings. This utility action is ongoing with changes for 2023.)***
- Maintain and expand if possible general-purpose lamp buydown in “dollar stores” in Highly Impacted Communities. This will be the only retail lighting buy down offer. ***(Ongoing: Discounted lighting was available only at approved value retailers located in Highly Impacted Communities. Retailers at 20 locations who participated in the lamp buydown included True Value, Ace Hardware, Dollar Store, Goodwill, and Habitat for Humanity.)***
- Continue manufactured home direct install duct sealing and lighting. Continue focus on Highly Impacted Communities. ***(Ongoing efforts to provide direct install duct sealing and lighting to manufactured homes with a focus on Highly Impacted Communities. In 2022, served 415 customers with duct sealing achieving 278,899 kWh in energy efficiency savings through this program offering. Direct install lighting accounted for 46,222 kWh in energy savings.)***
- Continue promoting new construction offerings for multifamily and single-family units. Continue focus on Highly Impacted Communities. ***(Ongoing effort to recruit and***

***engage builders and raters with a focus on Highly Impacted Communities. Program had two new home projects but they were not located in Highly Impacted Communities.)***

- Non-Electric, Non-Natural Gas Upgrades in Named Communities. ***(Ongoing with changes for 2023.)***
  - Serve named community residential customers who use non-electric and non-natural gas fuel sources in their primary heating systems by decommissioning these systems and installing ductless heat pumps. This measure will be offered at the same incentive rate as the typical ductless heat pumps measure, and will be available in single family, manufactured homes, and multi-family residences. Customers in Highly Impacted Communities will be eligible for this incentive and customer eligibility criteria will be available on the program website. The standard ductless heat pump measure replacing electric forced air furnace or zonal electric primary heating systems is still available for all residential customers. ***(There were no completed ductless heat pump projects in 2022 involving decommissioning of non-electric or non-natural gas heating. Incentives for 2023 will be higher for this measure for residential customers located in highly impacted communities than for customers who do not reside in a highly impacted community.)***
  - The program will use RTF deemed values for ductless heat pump installations that assume a zonal electric resistance baseline since RTF does not have any measures for alternative fuel source replacement or conversions. Highly impacted community determination will be included in customer data provided by Pacific Power.

### **Low Income Weatherization:**

The following utility actions defined in the 2022-2023 Demand-side Management Business Plan and Clean Energy Implementation Plan (both filed in 2021) are either complete or continuing:

Utility Actions from the 2022-2023 DSM Business Plan filed in 2021:

- Increase funds available for repairs from 15 percent to 30 percent.
- Permit installation of electric heat to replace permanently installed electric heat, space heaters or any fuel source except natural gas with adequate combustion air as determined by the Agency. The changes are designed to promote the installation of electric heat and minimize use of wood heat, solid fuels or natural draft equipment in specific applications where combustion safety (and indoor air quality) cannot be maintained.
- Changes to Schedule 114 are required to implement these changes. Amended tariff sheets will be filed with the Commission to enable these changes.



**To implement the above utility actions, the company submitted a filing with the Commission on December 21, 2021, to make changes to Schedule 114 and received approval for the following effective February 1, 2022:**

- **Increase funds available for repairs from 15 percent to 30 percent.**
- **Permit installation of electric heat to replace permanently installed electric heat, space heaters or any fuel source except natural gas with adequate combustion air as determined by the Agency. The changes are designed to promote the installation of electric heat and minimize use of wood heat, solid fuels, or natural draft equipment in specific applications where combustion safety (and indoor air quality) cannot be maintained.**

**In 2022, the combined total annual reimbursement on repair cost was 5 percent of the annual reimbursement on energy efficient measures installed by the four weatherization partner agencies. There were no installations of ductless heat pumps to replace any non-electric fuel source.**

### **Non-residential:**

Wattsmart Business

The following utility actions defined in the 2022-2023 Demand-side Management Business Plan and Clean Energy Implementation Plan (both filed in 2021) are either complete or continuing:

Utility Actions from the 2022-2023 DSM Business Plan filed in 2021:

Increase outreach and participation for small businesses and named community small businesses identified by census tract and rate schedule.

- Create a new offer within the current small business enhanced incentive offer targeting the smallest businesses using less than 30,000 kilowatt-hours per year and Named Community small businesses on Schedule 24. **(This was implemented with the program changes effective January 1, 2022.)**
  - Offer a higher incentive and increase the incentive cap for this new offer from 90 percent to 100 percent of project costs to reduce the customer out-of-pocket cost barrier. **(This was implemented with the program changes effective January 1, 2022. Incentives for very small businesses and small businesses located in highly impacted communities were set higher than the regular small business lighting incentives. The incentive cap for very small businesses and small businesses located in Highly Impacted Communities is 100% of project costs rather than the 90% cap for the regular small business offer. This reduced the out-of-pocket cost for lighting retrofits and made it easier for customers to move forward with vendor project proposals.)**
- Target a portion of company initiated proactive outreach to small businesses located in Highly Impacted Communities. Continue to tie proactive outreach to approved

small business vendor capacity to respond to customer inquiries. ***(Continued the postcard campaign in 2022 that focused on hard-to-reach small business customers. Approved Small Business Lighting Vendors who signed a non-disclosure agreement were provided with customer lists (containing business name, address, phone number only) to allow them to connect with customers who received a postcard from Pacific Power containing an introduction to the program and an approved vendor. Of the 108 postcards sent in 2022, 85 went to customers located in a highly impacted community. The intent is to improve efficiency of the approved vendors sales processes and boost small business participation. In addition, co-branded shirts are made available to vendors who participated in the postcard campaign. These shirts help in promoting vendor credibility with small business customers. In addition to the mailed postcards, the program also offered co-branded leave-behind postcards to share with customers that included a QR Code for information in English and Spanish.)***

- Offer approved small business lighting vendors a higher vendor incentive for completed lighting retrofit projects with small businesses located in Highly Impacted Communities. ***(This was implemented in 2022. Vendor incentives of \$500 per project were paid in 2022 for 63 completed small business lighting retrofits for small businesses located in Highly Impacted Communities. The \$500 per project vendor incentive was also available for completed lighting projects for very small businesses. The vendor incentive for completed lighting projects for other small businesses (not very small and not in a Highly Impacted Community) was \$300 per completed project.)***

### **Participation Tracking and Reporting:**

The participation tracking improvements have been implemented and will continue. In addition, the Highly Impacted Community tracking will also include tracking for participants located on Tribal Lands (based on census tract data).

Utility Actions from the 2022-2023 DSM Business Plan filed in 2021:

Track program participation for the following and include in annual reports starting in 2022 (noting 2022 will be a transition year as applications are revised to collect additional information).

- Low Income Weatherization
  - Participants located in a Highly Impacted Community
  - Participants whose primary language spoken is other than English (question asked of the contact person completing the incentive application)
  - Participants who rent or lease rather than own
  - Participants living in a manufactured home
- Home Energy Savings

- Participants located in a Highly Impacted Community
  - Participants whose primary language spoken is other than English (question asked of the contact person completing the incentive application)
  - Participants who rent or lease rather than own
  - Participants living in a manufactured home
  - Participants living in a multi-family unit
- 
- Wattsmart Business (except midstream)
    - Participants located in a Highly Impacted Community
    - Participants whose primary language spoken is other than English (question asked of the contact person completing the incentive application)
    - Participants who rent or lease rather than own
    - Participants who are smaller businesses (e.g., account associated with project receives electric service on Schedule 24)

## EXPENDITURES AND SAVINGS RESULTS

### TOTAL PORTFOLIO BUDGET AND EXPENDITURES

**Table 1: DSM Balancing Account<sup>9</sup>**

| Month      | Expenditure <sup>10</sup> | S-191 Revenue <sup>11</sup> | Cash Basis Accumulative Balance <sup>12</sup> | Net Cost Accrual <sup>13</sup> | Accrual Basis Accumulative Balance <sup>14</sup> |
|------------|---------------------------|-----------------------------|---|--------------------------------|--|
| 21-Dec     |                           |                             | \$ (4,355,762)                                |                                |  |
| 22-Jan     | \$ 1,218,611              | \$ (1,169,025)              | \$ (4,306,176)                                | \$ (175,748)                   | \$ (3,441,698)                                   |
| 22-Feb     | \$ 474,721                | \$ (1,018,030)              | \$ (4,849,485)                                | \$ 332,430                     | \$ (3,652,577)                                   |
| 22-Mar     | \$ 1,051,513              | \$ (865,600)                | \$ (4,663,573)                                | \$ 245,747                     | \$ (3,220,917)                                   |
| 22-Apr     | \$ 1,044,018              | \$ (783,995)                | \$ (4,403,550)                                | \$ (435,759)                   | \$ (3,396,653)                                   |
| 22-May     | \$ 1,364,413              | \$ (842,006)                | \$ (3,881,143)                                | \$ 1,901                       | \$ (2,872,345)                                   |
| 22-Jun     | \$ 1,234,250              | \$ (651,245)                | \$ (3,298,138)                                | \$ 247,254                     | \$ (2,042,085)                                   |
| 22-Jul     | \$ 1,064,738              | \$ (954,899)                | \$ (3,188,299)                                | \$ (352,284)                   | \$ (2,284,531)                                   |
| 22-Aug     | \$ 1,254,329              | \$ (1,259,056)              | \$ (3,193,026)                                | \$ (28,509)                    | \$ (2,317,767)                                   |
| 22-Sep     | \$ 626,687                | \$ (1,640,391)              | \$ (4,206,730)                                | \$ 621,535                     | \$ (2,709,937)                                   |
| 22-Oct     | \$ 1,557,646              | \$ (1,269,935)              | \$ (3,919,019)                                | \$ (441,795)                   | \$ (2,864,020)                                   |
| 22-Nov     | \$ 1,057,043              | \$ (1,553,265)              | \$ (4,415,241)                                | \$ 220,723                     | \$ (3,139,520)                                   |
| 22-Dec     | \$ 1,438,571              | \$ (2,033,571)              | \$ (5,010,241)                                | \$ 92,490                      | \$ (3,642,029)                                   |
| 2022 Total | \$ 13,386,541             | \$ (14,041,019)             |   | \$ 327,985                     |  |

<sup>9</sup> The DSM balancing account is the mechanism used for managing the DSM Tariff Rider revenues and actual DSM-incurred expenditures.

<sup>10</sup> Monthly expenditures for approved energy efficiency programs.

<sup>11</sup> Revenue collected through the DSM Tariff Rider.

<sup>12</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>13</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>14</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.

**Table 2: Washington Results January 1, 2022 – December 31, 2022<sup>15</sup>**

| Energy Efficiency Program                        | kWh Savings<br>(at site) | kWh Savings<br>(at gen) | Estimated Systems<br>Benefit<br>Expenditures |
|--|--------------------------|-------------------------|--|
| Low Income Weatherization (114)                  | 261,515                  | 281,589                 | \$ 747,702                                   |
| Home Energy Savings (118)                        | 2,625,379                | 2,826,903               | \$ 3,629,851                                 |
| Home Energy Reports (N/A)                        | 4,289,670                | 4,618,945               | \$ 137,990                                   |
| <b>Total Residential Programs</b>                | <b>7,176,564</b>         | <b>7,727,437</b>        | <b>\$ 4,515,543</b>                          |
| Wattsmart Business (140) Commercial              | 21,570,220               | 23,209,989              | \$ 6,779,816                                 |
| Wattsmart Business (140) Industrial              | 4,727,777                | 5,049,975               | \$ 1,486,005                                 |
| Wattsmart Business (140) Irrigation              | 552,321                  | 594,717                 | \$ 173,602                                   |
| <b>Total Business Program</b>                    | <b>26,850,318</b>        | <b>28,854,680</b>       | <b>\$ 8,439,423</b>                          |
| Northwest Energy Efficiency Alliance             | 3,328,800                | 3,582,421               | \$ 905,984                                   |
| Distribution Efficiency Savings                  | 24,611                   | 26,453                  | \$ -   |
| <b>Total Other Conservation Initiatives</b>      | <b>3,353,411</b>         | <b>3,608,875</b>        | <b>\$ 905,984</b>                            |
| Be Wattsmart, Begin at Home                      |                          |                         | \$ 64,523                                    |
| Customer outreach/communication                  |                          |                         | \$ 217,121                                   |
| Program Evaluations (& savings verification)     |                          |                         | \$ 276,541                                   |
| Potential study update / analysis                |                          |                         | \$ 117,239                                   |
| System Support                                   |                          |                         | \$ 70,863                                    |
| End use load research & RTF Funding              |                          |                         | \$ 58,090                                    |
| <b>Total Portfolio -Level Expenses</b>           |                          |                         | <b>\$ 804 378</b>                            |
| <b>Total PacifiCorp Conservation</b>             | <b>34,051,493</b>        | <b>36,608,571</b>       | <b>\$ 13,759 344</b>                         |
| <b>Total System Benefits Charge Conservation</b> | <b>37,380,293</b>        | <b>40,190,992</b>       | <b>\$ 14,665 328</b>                         |
| <b>Total Conservation</b>                        | <b>37,380,293</b>        | <b>40,190,992</b>       | <b>\$ 14,665 328</b>                         |

<sup>15</sup> Gross Savings

**Table 3: Washington Gross Results January 1, 2022 – December 31, 2022<sup>16</sup>**

| Energy Efficiency Program                        | 2022 from 2022-2023 PacifiCorp Washington DSM Business Plan |                      |  | 2022 PacifiCorp Washington DSM Actual |                      |  |
|--|---|----------------------|--|---------------------------------------|----------------------|--|
|  | kWh Savings (at site)                                       | kWh Savings (at gen) | Estimated Systems Benefit Expenditures | kWh Savings (at site)                 | kWh Savings (at gen) | Estimated Systems Benefit Expenditures |
| Low Income Weatherization (114)                  | 169,130   | 182,112              | \$ 937,500                             | 261,515                               | 281,589              | \$ 747,702                             |
| Home Energy Savings (118)                        | 9,610,833   | 10,348,560           | \$ 9,274,502                           | 2,625,379                             | 2,826,903            | \$ 3,629,851                           |
| Home Energy Reports (N/A)                        | 4,099,518   | 4,414,197            | \$ 372,430                             | 4,289,670                             | 4,618,945            | \$ 137,990                             |
| <b>Total Residential Programs</b>                | <b>13,879,481</b>   | <b>14,944,869</b>    | <b>\$ 10,584,432</b>                   | <b>7,176,564</b>                      | <b>7,727,437</b>     | <b>\$ 4,515,543</b>                    |
| Wattsmart Commercial (140)                       | 21,044,900  | 22,644,733           | \$ 6,469,109                           | 21,570,220                            | 23,209,989           | \$ 6,779,816                           |
| Wattsmart Industrial (140)                       | 13,046,890  | 13,936,036           | \$ 3,359,433                           | 4,727,777                             | 5,049,975            | \$ 1,486,005                           |
| Wattsmart Irrigation (140)                       | 868,229   | 934,874              | \$ 272,733                             | 552,321                               | 594,717              | \$ 173,602                             |
| <b>Total Business Program</b>                    | <b>34,960,019</b>   | <b>37,515,643</b>    | <b>\$ 10,101,275</b>                   | <b>26,850,318</b>                     | <b>28,854,680</b>    | <b>\$ 8,439,423</b>                    |
| Northwest Energy Efficiency Alliance             | 3,078,115   | 3,313,583            | \$ 862,100                             | 3,328,800                             | 3,582,421            | \$ 905,984                             |
| Distribution Efficiency                          |   | 82,000               |  | 24,611                                | 26,453               |  |
| <b>Total Other Conservation Initiatives</b>      | <b>3,078,115</b>  | <b>3,395,583</b>     | <b>\$ 862,100</b>                      | <b>3,353,411</b>                      | <b>3,608,875</b>     | <b>\$ 905,684</b>                      |
| Be Wattsmart, Begin at Home                      |   |                      | \$ 64,523                              |                                       |                      | \$ 64,523                              |
| Customer outreach/communication                  |   |                      | \$ 250,000                             |                                       |                      | \$ 217,121                             |
| Program Evaluations (& savings verification)     |   |                      | \$ 549,524                             |                                       |                      | \$ 276,541                             |
| Potential study update / analysis                |   |                      | \$ 120,115                             |                                       |                      | \$ 117,239                             |
| System Support                                   |   |                      | \$ 166,735                             |                                       |                      | \$ 70,863                              |
| End use load research & RTF Funding              |   |                      | \$ 109,500                             |                                       |                      | \$ 58,090                              |
| <b>Total Portfolio – Level Expenses</b>          |   |                      | <b>\$ 1,260,397</b>                    |                                       |                      | <b>\$ 804,378</b>                      |
| <b>Total PacifiCorp Conservation</b>             | <b>48,839,500</b>   | <b>52,542,512</b>    | <b>\$ 21,946,104</b>                   | <b>34,051,493</b>                     | <b>36,608,571</b>    | <b>\$ 13,759,344</b>                   |
| <b>Total System Benefits Charge Conservation</b> | <b>51,917,615</b>   | <b>55,856,095</b>    | <b>\$ 22,808,204</b>                   | <b>37,380,293</b>                     | <b>40,190,992</b>    | <b>\$ 14,665,328</b>                   |
| <b>Total Conservation</b>                        | <b>51,917,615</b>   | <b>55,856,095</b>    | <b>\$ 22,808,204</b>                   | <b>37,380,293</b>                     | <b>40,190,992</b>    | <b>\$ 14,665,328</b>                   |

<sup>16</sup> Consistent with requirements under WAC 480-109-120 (3)(b)(ii) and (iii), provides a comparison of the Company's business plan to actual program performance.

**Table 4: Estimated Peak Contribution**

| Description   | Value       |
|---|-------------|
| First year Energy Efficiency program MWh savings acquired during 2022 (@ Generator)                   | 40,191      |
| Conversion factor: Coincident MW/MWh  | 0.000167664 |
| Estimated coincident peak MW contribution of 2022 Energy Efficiency acquisitions                      | 6.74        |
| Estimated Lifecycle Energy Efficiency program MWh savings from savings acquired in 2022 (@ Generator) | 426,632     |

**Table 5: Direct Benefit to Customers<sup>17</sup>**

| Program or Initiative   | Expenditures         | Direct Benefits to Customers | % Direct Benefit to Customers |
|---|----------------------|------------------------------|-------------------------------|
| Low Income Weatherization (114) <sup>18</sup>                   | \$ 747,702           | \$ 637,517                   | 85%                           |
| Home Energy Savings (118) <sup>19</sup>                         | \$ 3,629,851         | \$ 1,692,287                 | 47%                           |
| Home Energy Reports   | \$ 137,990           | \$ -                         | 0%                            |
| <b>Total Residential Programs</b>                               | <b>\$ 4,515,543</b>  | <b>\$ 2,329,804</b>          | <b>52%</b>                    |
| Wattsmart Business (140) Commercial                             | \$ 6,779,816         | \$ 4,619,681                 |                               |
| Wattsmart Business (140) Industrial                             | \$ 1,486,005         | \$ 879,589                   |                               |
| Wattsmart Business (140) Irrigation                             | \$ 173,602           | \$ 123,881                   |                               |
| <b>Total Business Programs<sup>20</sup></b>                     | <b>\$ 8,439,423</b>  | <b>\$ 5,623,151</b>          | <b>67%</b>                    |
| <b>Northwest Energy Efficiency Alliance (NEEA)<sup>21</sup></b> | <b>\$ 905,984</b>    | <b>\$ 625,355</b>            | <b>69%</b>                    |
| Be Wattsmart, Begin at Home                                     | \$ 64,523            |                              |                               |
| Customer outreach/communication                                 | \$ 217,121           |                              |                               |
| Program Evaluations (& savings verification)                    | \$ 276,541           |                              |                               |
| Potential study update / analysis                               | \$ 117,239           |                              |                               |
| System Support  | \$ 70,863            |                              |                               |
| End use load research & RTF Funding                             | \$ 58,090            |                              |                               |
| <b>Total Portfolio – Level Expenses</b>                         | <b>\$ 804,378</b>    |                              |                               |
| Total PacifiCorp Conservation                                   | \$ 13,759,344        |                              |                               |
| Total System benefits Charge Conservation                       | \$ 14,665,328        |                              |                               |
| <b>Total Conservation</b>                                       | <b>\$ 14,665,328</b> | <b>\$ 8,578,310</b>          | <b>58%</b>                    |

<sup>17</sup> This additional metric to assess program impacts is consistent with conversations between Commission Staff and the Company that occurred during the preparation of prior conservation plan(s) and reports. Direct benefits are in addition to the benefits all customers receive through implementation of cost-effective energy efficiency resources, lower energy costs.

<sup>18</sup> Low Income Weatherization: Payments to community action agencies for measure installation were classified as incentives

<sup>19</sup> Home Energy Savings: Customer and partner incentives are included in the direct benefit to customer calculation.

<sup>20</sup> Wattsmart Business: Customer and vendor incentives (\$5,283,169) and expenditures for customer site specific energy engineering (\$339,982) are included in the direct benefit to customer calculation.

<sup>21</sup> NEEA: Company subtracted for NEEA program administration. Calculation utilized the assumption provided by WUTC staff that 70% of the NEEA expenditures are a direct benefit to customers.

## GROSS SAVINGS BY MEASURE CATEGORY

**Table 6: 2022 Annual Savings by Home Energy Savings**

| Measure Category   | Total kWh (at Site) | Total Incentive     | Total Measure Quantity |
|--------------------|---------------------|---------------------|------------------------|
| Appliances         | 13,282              | \$ 9,720            | 68                     |
| Building Shell     | 25,645              | \$ 32,497           | 95,653 sq ft           |
| HVAC               | 2,411,270           | \$ 1,532,927        | 2,350                  |
| Lighting           | 115,669             | \$ 75,343           | 49,708                 |
| Water Heating      | 34,559              | \$ 22,350           | 25                     |
| Whole Home         | 24,954              | \$ 19,450           | 7                      |
| <b>Grand Total</b> | <b>2,625,379</b>    | <b>\$ 1,692,287</b> |                        |

**Table 7: Participation by Manufactured Home Residents**

| Program                          | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021 | 2022 |
|----------------------------------|--------|--------|--------|--------|--------|--------|------|------|
| Low Income Weatherization Homes  | 44     | 49     | 45     | 41     | 7      | 12     | 8    | 12   |
| Home Energy Savings Participants | 1,028  | 403    | 954    | 872    | 648    | 169    | 813  | 781  |
| Appliances                       | 10     | 10     | 4      | 8      | 2      | 11     | 6    | 2    |
| Duct Sealing                     | 187    | 12     | 795    | 492    | 488    | 9      | 618  | 433  |
| Heat Pump                        | 26     | 18     | 79     | 90     | 67     | 99     | 121  | 114  |
| Heat Pump Water Heater           | 0      | 1      | 3      | 0      | 0      | 0      | 0    | 1    |
| Smart Thermostat                 | 0      | 0      | 0      | 0      | 0      | 0      | 0    | 4    |
| Kits                             | 817    | 362    | 73     | 282    | 42     | 0      | 0    | 0    |
| Lighting                         | 17     | 1      | 0      | 0      | 0      | 0      | 244  | 222  |
| Lighting Buy Down                | 86,318 | 54,508 | 50,953 | 33,936 | 34,791 | 19,400 | 0    | 0    |
| Weatherization [FK3]             | 8      | 3      | 1      | 4      | 2      | 1      | 2    | 0    |
| Whole Home                       | 0      | 0      | 0      | 0      | 0      | 0      | 10   | 5    |



**Table 9: Low Income Homes Served and Measures Installed**

| Measure Type                              | Installed      |
|---|----------------|
| Air Sealed/Infiltration                   | 144            |
| Insulation                                | 298            |
| Attic Ventilation                         | 58             |
| Lighting CFL/LED                          | 67             |
| Weather Strip Doors                       | 10             |
| Duct Sealing and/or Insulation            | 41             |
| Ductless Heat Pump                        | 30             |
| Thermal Doors and/or Window Replacement   | 10             |
| Water Heater Replacement                  | 7              |
| Low Flow Shower Heads and Faucet Aerators | 75             |
| Ground Cover                              | 81             |
| Thermostat                                | 8              |
| Refrigerator Replacement                  | 3              |
| <b>Total Number of Homes Served</b>       | <b>142</b>     |
| <b>Total kWh Savings @ Site</b>           | <b>261,515</b> |

**Table 11: Wattsmart Business Savings by Sector**

| Sector             | Total kWh (at Site) | Total Incentive     |
|--------------------|---------------------|---------------------|
| Commercial         | 21,570,220          | \$ 4,343,192        |
| Industrial         | 4,727,777           | \$ 823,931          |
| Irrigation         | 552,321             | \$ 116,046          |
| <b>Grand Total</b> | <b>26,850,318</b>   | <b>\$ 5,283,169</b> |

**Table 12: 2022 Annual Savings by Wattsmart Business**

| Measure Category       | Total kWh (at Site) | Total Incentive     | Total Projects |
|------------------------|---------------------|---------------------|----------------|
| Additional Measures    | 199,583             | \$ 47,125           | 3              |
| Compressed Air         | 791,351             | \$ 130,517          | 12             |
| Energy Management      | 4,303,543           | \$ 106,794          | 37             |
| Food Service Equipment | 30,854              | \$ 4,464            | 4              |
| HVAC                   | 483,636             | \$ 80,197           | 34             |
| Irrigation             | 552,321             | \$ 116,046          | 38             |
| Lighting               | 15,448,934          | \$ 3,960,659        | 847            |
| Motors                 | 1,200,827           | \$ 202,249          | 5              |
| Refrigeration          | 3,834,555           | \$ 633,738          | 35             |
| Building Shell         | 4,715               | \$ 1,380            | 1              |
| <b>Grand Total</b>     | <b>26,850,318</b>   | <b>\$ 5,283,169</b> |                |

## COST EFFECTIVENESS

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.

Each of the cost-effectiveness tests for Pacific Power's programs is outlined below.

- 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, 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.

All cost effectiveness calculations assume a net-to-gross (NTG) of 1.0, consistent with the Northwest Power and Conservation Council's methodology. Portfolio level cost effectiveness includes portfolio costs such as the Process and Impact Evaluations, Class 2 demand-side management (DSM) Potential Assessment, End Use Load Research, and the DSM system database. Consistent with the Northwest Power and Conservation Council's methodology, the Company includes quantifiable non-energy benefits at the portfolio and program level. *Low Income Weatherization* is not included in the portfolio or sector-level cost effectiveness analysis per WAC 480-109-100(10)(b). Appendix A provides 2021 cost effectiveness performance

**Table 13: 2022 Cost-Effectiveness Results by Program**

| Program                                  | Benefit/Cost Test |      |      |      |      |
|--|-------------------|------|------|------|------|
|  | PTRC              | TRC  | UCT  | PCT  | RIM  |
| Total Portfolio (not inc. NEI or NEEA)   | 1.86              | 1.69 | 2.02 | 3.01 | 0.76 |
| Residential (not inc. NEI or NEEA)       | 0.69              | 0.63 | 0.91 | 1.32 | 0.53 |
| Home Energy Savings (not inc. NEI)       | 0.58              | 0.53 | 0.77 | 1.21 | 0.47 |
| Home Energy Reports                      | 4.81              | 4.37 | 4.37 | n/a  | 1.17 |
| Low Income Weatherization (not inc. NEI) | 0.42              | 0.38 | 0.41 | n/a  | 0.32 |
| Wattsmart Business (not inc. NEI)        | 2.69              | 2.44 | 2.70 | 3.92 | 0.83 |

## 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 2022 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 14: 2022 Evaluation Activities**

| <b>Evaluation</b>                       | <b>Responsible Consultant</b> | <b>Status</b> | <b>Published</b> |
|---|-------------------------------|---------------|------------------|
| Wattsmart Business Evaluation 2020-2021 | Cadmus                        | Complete      | 2023             |
| Home Energy Reports 2020-2021           | ADM                           | Complete      | 2023             |

APPENDIX A – COST-EFFECTIVENESS

APPENDIX B – NEEA SUPPLY CHAIN MEMOS

APPENDIX C – NEEA 2022 SAVINGS REPORT MEMO