2023
Annual Conservation Plan - Washington

November 15, 2022

(with updated Home Energy Savings and Wattsmart Business program details effective 7/1/2023)

PACIFIC POWER
A DIVISION OF PACIFICORP

Contents

Executive Summary

On November 1, 2021, as required by the Washington Utilities and Transportation Commission's (Commission's) direction, PacifiCorp dba Pacific Power & Light Company (PacifiCorp or Company) filed its Biennial Conservation Plan including, as an Appendix, the 2022-2023 Demand-side Management Business Plan, which contained information on budgets and programs that the Company will use to achieve its target.

To achieve its Energy Independence Act (EIA) Penalty Threshold target, the Company offers comprehensive programs for residential and non-residential customers.

Program or initiative	Residential	Non-residential
Low Income Weatherization	√	
Home Energy Savings	√	
Home Energy Reports	√	
Wattsmart Business		√

By November 15, 2022, as required by WAC 480-109-120 (2) and Items 4 and 5 of the Conditions List for order 01 of Docket UE-210830, the Company must file with the Commission an annual conservation plan containing any changes to program details and an annual budget. The Company has updated the November 2021 Demand-side Management (DSM) Business Plan to create the 2023 Annual Conservation Plan. This methodology is consistent with the last biennial period.

The 2023 Annual Conservation Plan reflects updated savings projections and budgets by program or initiative for 2022 and 2023 and utilizes the best information available in October 2022. Consistent with the development of the Biennial Conservation Plan, the 2023 Annual Conservation Plan incorporates the impacts of changes to the unit energy savings (UES) made by the Regional Technical Forum (RTF) through October 1, 2022. This "floating UES" approach is consistent with the last biennial period.

The updates in the 2023 Annual Conservation Plan reflect the following changes:

- Provides a revised estimate of savings and costs for 2022-2023 for Company programs utilizing actuals available as of August 2022 and implementer forecasts for the remainder of the biennium with the planned program changes described in this plan (e.g., incentive increases) implemented.
- Incorporates a revised NEEA savings and expenditure forecast.
- Incorporates a revised expenditure forecast for Be Wattsmart, Begin at Home (energy education in schools).
- Incorporates an expansion for Home Energy Reports to reach 15,000 new customers and a modification to the assumed measure life from two years to one year.
- Revises program details for Home Energy Savings changes effective January 1, 2023.
- Revises program details for Wattsmart Business changes effective January 1, 2023.
- Provides updated information for Pilots and Clean Energy Implementation Plan Utility Actions.
- Updates the Company's customer communications and outreach plans.
- Provides cost-effectiveness analysis for the updated 2022-2023 portfolio.

The 2022-2023 biennial forecast and targets were informed by incorporating the social cost of carbon in the selection of energy efficiency resources. Including the social cost of carbon resulted in one of the highest targets for the Company since EIA began. The EIA target is 95% of the IRP technical achievable potential for 2022-2023.

Also, the 2022-2023 EIA target was set using the pro-rata share of the ten-year conservation potential, which included higher potential in the out years. Some of this potential in the out years included efficiency expected to be accomplished through market transformation, building codes and natural market adoption. These non-utility program mechanisms for acquiring savings are not accounted for in the pro-rata methodology. While the current opportunities in the potential are likely being captured, pandemic related issues make accelerated targets and early acquisition of outer year savings more challenging to achieve.

Several prevalent challenges for program delivery stemming from and/or exacerbated by the COVID-19 pandemic persist in 2022 and are expected to continue/evolve in 2023:

- **Competing priorities –** Customers are challenged with inflation and staffing challenges in addition to their ongoing business challenges which often leaves little time to attend to energy efficiency opportunities.
- **Inflation/price increases/rising interest rates** – Inflation and price increases result in higher implementation costs for customer energy efficiency upgrades. Rising interest rates change the calculus for investing for customers.
- **Labor Shortages** – Many customers and Trade Allies do not have enough staff to take on additional projects. Demand for skilled trade work exceeds the supply of qualified workers.
- **Product Availability/Longer Lead Times** – Although in some areas, suppliers and installers have devised solutions to product availability issues by changing stocking practices, product availability continues to be a challenge and longer lead times delay project implementation.
- **General Uncertainty** – Customer uncertainty around the economy causes delays in project implementation.

Table 1 below shows the Commission approved targets and the results forecasted in this 2023 Annual Conservation Plan. **As shown, the Company is currently projecting to acquire 82,870 MWh in savings over the biennial period, which is approximately 95 percent of the Commission approved EIA Penalty Threshold.**

Table 1 – Commission Approved Targets and Forecast Results

Category	Target 2022+2023	2023 Annual Conservation Plan Forecast 2022+2023	Forecast % of Target
	Gross MWh Savings @site	Gross MWh Savings @site	
Pro-Rata Share of 10-year conservation potential	94,210		
EIA Target	94,210	89,647	95%
Decoupling threshold	4,711		
Total Utility Conservation Goal	98,921	89,647	91%
Excluded programs (NEEA)	(6,774)	(6,777)	
Utility Specific Conservation Goal	92,147	82,870	90%
EIA Penalty Threshold (EIA Target minus NEEA savings)	**87,436**	**82,870**	**95%**
EIA penalty threshold plus decoupling	92,147	82,870	90%

Table 2 below provides a summary of the variance between this plan and the DSM Business Plan filed November 1, 2021 as well as projected portfolio cost effectiveness.

Table 2

2022-2023 Savings and Expenditure Changes Compared to Original Plan		
	MWh @ site	$
Residential	(11,299)	$ (9,258,080)
Non--residential	(251)	$ 2,462,682
NEEA	3	$ 15,338
Portfolio expenses		$ (483,890)
Total	(11,547)	$ (7,263,950)
2022-2023 Total Portfolio Benefit Cost Ratios (including Non-Energy Impacts)[1]		
PacifiCorp Total Resource Cost Test (PTRC)		1.73
Utility Cost Test		1.73

[1] Appendix 1.1 AEG portfolio level cost effectiveness memo - November 9, 2022 – Table 5 – does not include impacts of NEEA

This Annual Conservation Plan includes a section with the following information for each DSM program:

- Program, initiative and/or project descriptions
- Description of planned program changes
- Program evaluation update[2]
- Program details including specific measures, incentives, and eligibility requirements

2022-2023 Budget and Savings by Program

below provides the projected savings and expenditures by program, initiative, and sector to achieve the 87,436[3] megawatt-hour (MWh) EIA Penalty Threshold for 2022-2023 described in the Company's 2022-2023 Biennial Conservation Plan, dated November 1, 2021. The "Total PacifiCorp Conservation" row, which excludes costs and savings associated with Northwest Energy Efficiency Alliance (NEEA) initiatives, is directly comparable to the EIA Penalty Threshold noted above. The Company is currently projecting to acquire 82,870 MWh in savings over the biennial period, which is approximately 95 percent of the Commission approved EIA Penalty Threshold.

[2] Final evaluation reports are available on the Company's website at: Demand-Side Management (pacificorp.com).

[3] Value at the customer site is 87,436 MWH per UE-210830 Attachment A, #1, a, iii. Value at the generator (including line losses) is 93,901 MWh per the Biennial Conservation Plan.

Table 3 - 2022-2023 Savings and Budget Projections by Program

	2022 PacifiCorp Washington Conservation Estimates			2023 PacifiCorp Washington Conservation Estimates			2022 + 2023	2022 + 2023	2022 + 2023
Program or Initiative	**Gross kWh/Yr Savings @site**	**Gross kWh/Yr Savings @gen**	**Estimated Expenditures**	**Gross kWh/Yr Savings @site**	**Gross kWh/Yr Savings @gen**	**Estimated Expenditures**	**Gross MWh Savings @site**	**Gross MWh Savings @gen**	**Estimated Expenditures**
Low Income Weatherization (114) [1]	143,110	154,095	$ 951,579	130,100	140,086	$ 1,193,659	273	294	$ 2,145,238
Home Energy Savings (118) [2]	2,225,274	2,396,086	$ 3,785,789	3,600,300	3,876,659	$ 5,665,780	5,826	6,273	$ 9,451,569
Home Energy Reports (N/A) [3]	3,126,053	3,366,009	$ 381,308	3,558,528	3,831,681	$ 462,996	6,685	7,198	$ 844,304
Total Residential Programs	**5,494,437**	**5,916,190**	**$ 5,118,677**	**7,288,928**	**7,848,426**	**$ 7,322,434**	**12,783**	**13,765**	**$ 12,441,111**
Wattsmart Business (140) - Commercial	23,035,980	24,787,175	$ 7,208,009	24,052,821	25,881,317	$ 8,838,620	47,089	50,668	$ 16,046,629
Wattsmart Business (140) - Industrial	5,346,361	5,710,716	$ 1,673,299	16,179,211	17,281,824	$ 4,591,939	21,526	22,993	$ 6,265,237
Wattsmart Business (140) - Irrigation	706,413	760,637	$ 228,139	766,007	824,805	$ 264,069	1,472	1,585	$ 492,208
Total Business Programs	**29,088,754**	**31,258,528**	**$ 9,109,446**	**40,998,039**	**43,987,947**	**$ 13,694,628**	**70,087**	**75,246**	**$ 22,804,074**
Northwest Energy Efficiency Alliance [4]	3,112,195	3,350,145	862,100	3,664,463	3,941,523	877,438	6,777	7,292	$ 1,739,538
Distribution Efficiency		82,000			83,000		-	165	$ -
Total Other Conservation Initiatives	**3,112,195**	**3,432,145**	**$ 862,100**	**3,664,463**	**4,024,523**	**$ 877,438**	**6,777**	**7,457**	**$ 1,739,538**
Be wattsmart, Begin at Home	-	-	$ 64,523	-	-	$ 70,008	-	-	$ 134,531
Customer outreach/communication	-	-	$ 250,000	-	-	$ 250,000	-	-	$ 500,000
Program Evaluations (& savings verification) [5]	-	-	$ 192,837	-	-	$ 254,497	-	-	$ 447,333
Potential study update/analysis [6]	-	-	$ 120,115	-	-	$ 15,368	-	-	$ 135,483
System Support [7]	-	-	$ 98,378	-	-	$ 98,378	-	-	$ 196,756
End use load research & RTF funding			$ 109,500			$ 65,500	-		$ 175,000
Total Portfolio-Level Expenses	-	-	**835,352**	-	-	**753,750**	-	-	$ 1,589,103
Total PacifiCorp Conservation [8]	**34,583,191**	**37,256,718**	**$ 15,063,476**	**48,286,967**	**51,919,372**	**$ 21,770,812**	**82,870**	**89,176**	**$ 36,834,288**
Total System Benefit Charge Conservation	**37,695,386**	**40,606,863**	**15,925,576**	**51,951,430**	**55,860,895**	**$ 22,648,250**	**89,647**	**96,468**	**$ 38,573,826**
Total Conservation	**37,695,386**	**40,606,863**	**$ 15,925,576**	**51,951,430**	**55,860,895**	**$ 22,648,250**	**89,647**	**96,468**	**$ 38,573,826**

Notes:

1. Low-income forecasts for 2022 and 2023 are based on forecasts from the community action agencies. The per-home savings of 1,301 kilowatt-hour (kWh) is from the 2016-2017 program evaluation.

2. The forecast for Home Energy Savings includes the impacts of adjustments for updated cost and savings information for certain appliances, lighting, building shell, and heating, ventilation and air-conditioning (HVAC) measures. Updated information becomes available as the Regional Technical Forum (RTF) updates Unit Energy Savings (UES) measures and changes to the Washington State Energy Code (WSEC) and federal energy code take effect.

3. The behavioral program forecast, and associated cost-effectiveness analysis assumes a one-year measure life. First year savings as measured by program impact evaluations will be counted toward the EIA Penalty Threshold. Normal attrition from the program over time is reflected in the table, but countered with an expansion of 15,000 new customers planned for late 2022.

4. Includes both Pacific Power's direct funding of NEEA and the Company's internal management costs. NEEA 2022 and 2023 forecasted expenditures are based on Pacific Power's share (2.55 percent) of the estimated annual costs provided by NEEA staff. The updated 2022-2023 electric savings forecast was provided by NEEA and includes savings above the Northwest Power and Conservation Council's 7th power plan baseline and includes updates to measures performed by the RTF and excludes the estimate of savings from local programs including those operated by Pacific Power and the rest of the region's utilities/program administrators. Savings from NEEA's trackable measures category are not included in this forecast. See the Biennial Conservation Target section of the 2022-2023 Biennial Conservation Plan for Pacific Power treatment of NEEA savings consistent with the Statewide Advisory Group.

5. For information on planned evaluations, see the program detail sections in this Annual Conservation Plan.

6. Potential study update and analysis costs for 2022 and 2023 represent estimated study costs for the 2023 Conservation Potential Assessment. These costs are subject to change as new requirements become effective. Per Pacific Power's Evaluation, Measurement & Verification (EM&V) framework, these costs are not included in program cost-effectiveness analysis.

7. System Support costs, including the Measure Library and Demand-side Management Central (DSMC) costs, are the costs necessary for on-going maintenance and updates to the system. Per Pacific Power's EM&V framework, these costs are not included in program- or portfolio-level cost-effectiveness analysis.

8. Excludes costs and savings associated with NEEA initiatives. Savings in this row are directly comparable to the Company's EIA Penalty Threshold.

Changes to the 2022-2023 Biennial Savings and Budget projections

The table below provides variance information by program.

Table 4 - 2022-2023 DSM Business Plan filed 11/1/2021 compared to 2023 Annual Conservation Plan

	Business Plan Nov. 1, 2021	2023 Annual Conservation Plan Nov. 15, 2022	Variance	Business Plan Nov. 1, 2021	2023 Annual Conservation Plan Nov. 15, 2022	Variance	Business Plan Nov. 1, 2021	2023 Annual Conservation Plan Nov. 15, 2022	Variance
	2022-2023			2022-2023			2022-2023		
Program or Initiative	Gross MWh Savings @ site			Gross MWh Savings @ gen			Estimated Expenditures		
Low Income Weatherization (114)	338	273	(65)	364	294	(70)	$ 1,981,250	$ 2,145,238	$ 163,988
Home Energy Savings (118)	19,814	5,826	(13,988)	21,334	6,273	(15,062)	$ 18,961,967	$ 9,451,569	$ (9,510,398)
Home Energy Reports (N/A)	3,930	6,685	2,754	4,232	7,198	2,966	$ 755,974	$ 844,304	$ 88,330
Total Residential Programs	**24,082**	**12,783**	**(11,299)**	**25,931**	**13,765**	**(12,166)**	**$ 21,699,191**	**$ 12,441,111**	**$ (9,258,080)**
Wattsmart Business (140) - Commercial	42,658	47,089	4,431	45,901	50,668	4,768	$ 13,062,312	$ 16,046,629	$ 2,984,317
Wattsmart Business (140) - Industrial	25,944	21,526	(4,418)	27,712	22,993	(4,719)	$ 6,731,486	$ 6,265,237	$ (466,249)
Wattsmart Business (140) - Irrigation	1,736	1,472	(264)	1,870	1,585	(284)	$ 547,594	$ 492,208	$ (55,386)
Total Business Programs	**70,338**	**70,087**	**(251)**	**75,482**	**75,246**	**(236)**	**$ 20,341,392**	**$ 22,804,074**	**$ 2,462,682**
Northwest Energy Efficiency Alliance	6,774	6,777	3	7,291	7,292	1	$ 1,724,200	$ 1,739,538	$ 15,338
Distribution Efficiency	-	-	-	165	165	-	$ -	$ -	$ -
Total Other Conservation Initiatives	**6,774**	**6,777**	**3**	**7,456**	**7,457**	**1**	**$ 1,724,200**	**$ 1,739,538**	**$ 15,338**
Be wattsmart, Begin at Home							$ 129,046	$ 134,531	$ 5,485
Customer outreach/communication							$ 500,000	$ 500,000	$ -
Program Evaluations (& savings verification)							$ 809,186	$ 447,333	$ (361,853)
Potential study update/analysis							$ 135,483	$ 135,483	$ -
Technical Reference Library							$ 324,278	$ 196,756	$ (127,522)
End use load research							$ 175,000	$ 175,000	$ -
Total Portfolio-Level Expenses							$ 2,072,993	$ 1,589,103	**$ (483,890)**
Total PacifiCorp Conservation	**94,420**	**82,870**	**(11,550)**	**101,413**	**89,011**	**(12,402)**	**$ 44,113,576**	**$ 36,834,288**	**$ (7,279,288)**
Total System Benefit Charge Conservation	**101,194**	**89,647**	**(11,547)**	**108,869**	**96,468**	**(12,401)**	**$ 45,837,776**	**$ 38,573,826**	**$ (7,263,950)**
Total Conservation	**101,194**	**89,647**	**(11,547)**	**108,869**	**96,468**	**(12,401)**	**$ 45,837,776**	**$ 38,573,826**	**$ (7,263,950)**

Key Changes in the Savings Forecast

- Low Income Weatherization: Savings are lower, reflecting the impacts of COVID-19 including supply chain issues and partner agency staffing shortages.

- Home Energy Savings: Savings are materially lower, reflecting the impacts of COVID-19, and supply chain issues, labor shortages and overall inflation. Lower savings were partially mitigated by the 25% increase in incentives that took effect on August 1, 2020. Subsequent program changes on January 1, 2021, January 1, 2022, and January 1, 2023 further increased incentives where possible. Additional Trade Ally engagement, vendor incentives and customer marketing have been increased dramatically, but savings are still significantly lower than the original plan due to lower participation.

- Home Energy Reports: Savings are materially higher due to the change in assumed measure life from two years to one year. Savings per home are slightly lower than the original estimates primarily as the result of lower open rates and fewer energy reductions taken by the group of customers receiving reports. The updated forecast includes savings from an expansion to provide reports to an additional 15,000 customers.

- Wattsmart Business: Savings are slightly lower, reflecting the impacts of COVID-19. Lower savings have been mostly mitigated by customer incentive increases and introduction of vendor incentives specifically for lighting projects. Trade Ally engagement and customer facing outreach have been increased dramatically, almost reaching the level of savings in the original plan. The Wattsmart Business program is not able to make up for the residential savings shortfall in this biennium.

- NEEA: Revised savings from NEEA as of August 2022 is in range of meeting the 2022-2023 targets. The updated savings forecast utilizes the same methodology used to establish the original forecast and incorporates the impacts of updated unit energy savings from the RTF.

Key Changes in the Expenditure Forecast

- Low Income Weatherization: Costs were revised downward to align with revised agency expectations for completed work reflecting impacts of COVID-19, including supply chain issues and staffing shortages.

- Home Energy Reports: The funding variance reflects the cost of an expansion to provide reports to an additional 15,000 customers.

- Home Energy Savings: Costs are lower due to lower participation. Costs do not decline by the same percentage as savings which reflects increased incentive expenditures and the need to pursue more expensive measures and pursue Clean Energy Transformation Act equity objectives.

- Wattsmart Business: Expenditures are higher as a result of the increased customer and vendor incentives needed to increase participation and increased challenges in identifying and developing projects due to COVID-19 impacts on customer businesses.

- Portfolio expenses: The updated portfolio expenses are lower than the forecast in the DSM Business Plan mainly due to lower forecasted expenses for program evaluations and systems support. The forecast for evaluations is based on current negotiated pricing, which is lower than the estimate available in 2021. The lower system support forecast is due to one-time cost reductions in this biennial period.

Direct Benefits to Customers

Estimates of direct benefits to customers delivered by the 2022-2023 expenditures including all portfolio costs are provided in **Error! Reference source not found.**

Table 5 – 2022-2023 Direct Benefits to Customers Including Portfolio Expenses

Program or Initiative	Estimated Expenditures	Direct Benefit to Customer ($)	Direct Benefit to Customer (%)
Low Income Weatherization (114)	$ 2,145,238	$ 1,821,946	85%
Home Energy Savings (118)	$ 9,451,569	$ 3,932,102	42%
Home Energy Reports (N/A)	$ 844,304		
Total Residential Programs	**$ 12,441,111**		
Wattsmart Business (140) - Commercial	$ 16,046,629		
Wattsmart Business (140) - Industrial	$ 6,265,237		
Wattsmart Business (140) - Irrigation	$ 492,208		
Total Business Programs	**$ 22,804,074**	**$ 15,485,035**	**68%**
Northwest Energy Efficiency Alliance	$ 1,739,538	$ 1,189,913	68%
Total Other Conservation Initiatives	**$ 1,739,538**		
Be wattsmart, Begin at Home	$ 134,531		
Customer outreach/communication	$ 500,000		
Program Evaluations (& savings verification)	$ 447,333		
Potential study update/analysis	$ 135,483		
Systems Support	$ 196,756		
End Use Load research & RTF Funding	$ 175,000		
Total Portfolio-Level Expenses	$ 1,589,103		
Total PacifiCorp Conservation	**$ 36,834,288**		
Total System Benefit Charge Conservation	**$ 38,573,826**		
Totals	**$ 38,573,826**	**$ 22,428,997**	**58%**

Notes

- Low Income Weatherization: Payments to community action agencies for measure installation are included as direct benefits to customers.
- Home Energy Savings: Customer incentives, partner incentives, upstream, midstream and buy downs are included as direct benefits to customers.
- Wattsmart Business: Customer and vendor incentives and expenditures for customer site-specific energy engineering ($1,059,831) are included as direct benefits to customers.
- NEEA: Company subtracted $55,000 in internal management costs and then applied the 70 percent estimate provided by Commission Staff to NEEA funding to calculate the direct benefit to customers.

Potential Shortfall Relative to the EIA Penalty Threshold

The Company has provided updated forecasts to the DSM Advisory Group in February, April, June and September 2022 in addition to the update included in this 2023 Annual Conservation Plan. All indicate a shortfall compared to the EIA Penalty Threshold given the ongoing impacts stemming from the COVID-19 pandemic. WAC language[4] applicable to target achievement is binary (target is met or not met) and if the forecasted shortfalls remain through mid-2023, the Company will take the following steps:

- Continue adaptive management of programs including review of incentive levels, measure mix and delivery channels.
- Provide updated forecasts in the same form as Table 3 in this report to the DSM Advisory Group no less frequently than once/calendar quarter.
- Consult with DSM Advisory Group on potential need to reference the language in RCW 19.285.040 (1, e) regarding events beyond the reasonable control of the utility in determining compliance with the EIA Penalty Threshold.

Pilots

Pursuant to Washington Administrative Code (WAC) 480-109-100 (1) (c), the Company must implement pilot projects when appropriate and as long as the overall portfolio remains cost effective. In considering which pilots to pursue, the Company focused on pilots that 1) make sense given its unique service territory (small towns and rural areas), 2) are resource efficient and build on prior work, 3) increase savings acquisition now or in the future, and/or 4) address an identified need or barrier. Pilots described here have been presented to the Company's DSM Advisory Group for review and comment. Using the existing programs described in detail below, the Company plans to pursue the pilot initiatives described below in 2022-2023.

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

[4] WAC 480-109-120 (5) (b)

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 accommodate the inclusion of financing for critical repairs such as asbestos remediation, roof repair, mold removal, electrical panel upgrades, etc. Critical repairs may only be financed in conjunction with, and in preparation for a rebate eligible project.
    - 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 the expenditure forecast for Home Energy Savings.

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 Update:** 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 to new home retailers.

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 Update:** Customer list for the two circuits provided to the delivery teams in mid-June 2022. Email and Direct Mail campaigns for both residential and commercial customers will be deployed in the fall/winter of 2022.

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 Update:**
    - Encourage 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/Lighting Design Lab/BPA to host a hands-on Advanced Networked Lighting Controls training course on October 4, 2022.
    - Outreach Team sent personal ANLC incentive offer reminder emails to vendors and continues to encourage them to consider lighting controls during one on one meetings.
    - Highlighted lighting controls during March 2022 in-person vendor trainings.
    - Increased incentives in 2022.
    - Three projects with ANLCs completed 2022 YTD, one project in the pipeline for estimated completion in 2022.

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 Update**:
    - 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 are ongoing. 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.
    - Recruitment is in progress for a second cohort that is expected to begin in early 2023.

Clean Energy Implementation Plan – Utility Actions

Utility Actions in the 2022-2023 DSM Business Plan filed in 2021 are listed below along with updates for 2023.

Communications:

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 has the opportunity to 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.

Update for 2023:
Continue to support programs with an increased equity focus using effective communication strategies to reach Named Communities.

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

Residential:

Home Energy Savings:

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

- Enhanced incentives for windows in multi-family units on residential rate schedules. Initial focus on buildings in Highly Impacted Communities.
- Continue direct install residential lighting in multi-family units. Continue focus in Highly Impacted Communities.
- Maintain and expand if possible general purpose lamp buy down in "dollar stores" in Highly Impacted Communities. This will be the only retail lighting buy down offer.
- Continue manufactured home direct install duct sealing and lighting. Continue focus in Highly Impacted Communities.
- Continue promoting new construction offerings for multifamily and single family units. Continue focus in Highly Impacted Communities.
- Non-Electric, Non-Natural Gas Upgrades in Named Communities
    - 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 multifamily 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.
    - 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.

Update for 2023:

The above utility actions were implemented and will continue in 2023 with the following improvements and additions:

- Non-Electric, Non-Natural Gas Upgrades in Named Communities
    - Improve the offer for residential customers in Highly Impacted Communities who use non-electric and non-natural gas fuel sources in their primary heating systems by offering an enhanced incentive to replace their system with ductless heat pump(s). This measure will be offered at a higher incentive rate than the typical ductless heat pumps measure, and will be available in single family, manufactured homes, and multifamily residences. Customers in Highly Impacted Communities will be eligible for this enhanced incentive and customer eligibility criteria will be available on the program website. This measure (with a lower incentive) will also be available for customers who do not reside in a Highly Impacted Community.
    - The program will use RTF deemed values for ductless heat pump installations modified to reflect the existing/prior system fuel type.
    - Enhanced incentives for customers in Highly Impacted Communities for the following HVAC measures

        - Ductless Heat Pump replacing heating oil/wood/propane heating (as described above)
        - Ductless Heat Pump replacing electric heating
        - Federal Standard Heat Pump Conversion
        - 9.0+ HPSF Heat Pump Conversion
    - Ramp up single-family home direct install Duct Sealing. Focus in Highly Impacted Communities.

Low Income Weatherization:
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.

Update for 2023:
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.

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

Wattsmart Business - Named community small businesses:
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.
    - 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.
- 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.

- Offer approved small business lighting vendors a higher vendor incentive for completed lighting retrofit projects with small businesses located in Highly Impacted Communities.

Update for 2023:
The above utility actions were implemented and will continue in 2023 with the following improvements and additions:

- Create a new offer within the current small business offer to include enhanced incentives for select non-lighting measures.
    - Incentives offered to small businesses for these non-lighting measures will be higher than those offered to larger businesses. Incentives offered to select very small businesses and named community small businesses will be higher than those offered to small businesses not meeting the very small and named community criteria.
- Continue development of program materials in Spanish.
- Continue and increase outreach to Latinx and Tribal community groups.

Participation Tracking and Reporting:

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)

Update for 2023:
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).

Distribution Efficiency

Background and approach described in the 2022-2023 Biennial Conservation Plan:
Distribution efficiency in this report builds upon the Company's migration to the new CYME[5] distribution analysis software, projects completed and the on-going process of updating the CYME distribution analysis model with actual field measurements. Throughout the year, and especially as scheduled planning studies are performed, connectivity corrections and equipment ratings and settings are being researched, verified and input. This process competes for time from engineers performing other routine work. The combination of CYME and updated model information will enable more robust analyses of complex scenarios and the assessment of cost-effective, efficiency projects on the distribution system such as Volt Amperes Reactive (VAR) reduction.

During 2022-2023 the Company will use the CYME model to assess energy efficiency opportunities in Washington's approximately 142 distribution circuits where VAR flow is high enough to cause voltage violations, seasonally high enough to create operational issues, or bring a circuit's average power factor below 0.95 lagging. Circuits with these characteristics offer the best opportunity for cost effective VAR reduction, although detailed analysis is required. Cost effectiveness for any potential project will be assessed with tools consistent with financial analysis used to support recovery of other distribution system investments.

The Company used the average energy savings from the three completed projects that generated energy savings to inform a forecast for distribution efficiency of 165 MWh for the 2022-2023 biennial period. The total is split between the two years and added to the target. The approach was shared with the DSM Advisory Group during the target setting process.

As part of planning for the next biennial period (2024-2025), the Company proposed the following approach and schedule to identify opportunities to inform a multi-year forecast.

- Using CYME, screen all circuits with less than 0.95 power factor for volt VAR opportunities by Oct 1, 2022.[6]
- Provide list of circuits within the range in the 2023 annual conservation report due in draft by 10-15 and final 11-15.
- Using CYME, conduct detailed analysis on circuits within range in prioritized manner based on circuit total annual MWh usage Feb 1, 2023
- Estimate costs of implementation and conduct economic analysis by May 1, 2023.

[5] CYME is a Power Engineering software program provided by EATON

[6] Over the last planning cycle (5 years), approximately 30% (or 44) circuits of the 142 circuits have shown some combination of voltage violations and/or lagging power factor and/or operations issues.

- Provide forecasted costs and savings by year for 2024 -2032 by July 1, 2023.

2023 Annual Conservation Plan update:

- There are no updates at this time to the forecast for distribution efficiency of 165 MWh for the 2022-2023 biennial period.
- Using CYME, the Company screened all circuits with less than 0.95 power factor for volt VAR opportunities.
- Based on the CYME analysis, the final list of circuits with power factor less than 0.95 is provided in the table below.

Table 6 - Final List of Circuits with Power Factor Less than 0.95

Area	Substation	Feeder name	Feeder number	Power Factor	Season
Sunnyside	Grandview	Zeus	5Y82	0.88	Summer
Sunnyside	Grandview	Euclid	5Y351	0.93	Summer
Yakima	White Swan	Wesley	5Y218	0.92	Summer
Yakima	Nob Hill	18th Ave	5Y273	0.93	Winter
Yakima	Union Gap	Old Town	5Y159	0.93	Winter
Yakima	Wiley	Tampico	5Y380	0.93	Summer

- The Company is on track to complete the remaining work on schedule:
    - Using CYME, conduct detailed analysis on circuits within range in prioritized manner based on circuit total annual MWh usage by Feb 1, 2023.
    - Estimate costs of implementation and conduct economic analysis by May 1, 2023.
    - Provide forecasted costs and savings by year for 2024 -2032 by July 1, 2023.

Residential Program Details

Home Energy Savings (Schedule 118)

Years of Implementation

Pacific Power Electric Service Schedule No. 118 for the Home Energy Savings Program was submitted under Advice Letter No. 06-004 on August 11, 2006. The program was initially approved with an effective date of September 14, 2006.

Program Description

The program provides a broad framework to deliver incentives for more efficient products and services for Washington residential customers with a new or existing home, multi-family unit or manufactured home. A third-party administrator hired by the Company delivers the savings and incentives of the program. Operating in tandem, Schedule 118 and the program website (https://wattsmartsavings.net/washington-residential/) inform customers and contractors of the offerings and qualifications for incentives.

Measures eligible for incentives include efficient clothes washers, heat pump water heaters, light emitting diode ("LED") lighting, lighting fixtures, heating and cooling equipment, HVAC equipment, insulation, and windows. In addition, the program includes performance path and pay

for savings options for new homes and separate measures for manufactured and multifamily homes.

Incentives are provided in three ways: post-purchase delivery to the customer for the majority of measures, through a retailer and/or manufacturer buy-down for LEDs and fixtures, and direct installation of a measure, such as duct sealing where the program pays all of the measure and installation cost so there is no cost to the customer. Buy-downs result in lower retail prices for customers at the point of purchase as opposed to post-purchase incentives that customers must submit an application to receive.

Complete details on incentives and services are on the program website https://wattsmartsavings.net/washington-residential/ and in the tables and copy of the program tariff below.

Planned Program Changes

The Home Energy Savings program was last updated effective January 1, 2022, using the program change process (including Advisory Group review and comment) described below. Changes are part of the adaptive management strategy for the Home Energy Savings program for the 2022-2023 biennium and are designed to increase residential energy savings and help achieve the Energy Independence Act targets. Higher customer and trade ally incentives are intended to offset increased equipment costs and labor shortages that have developed over the last two years. Changes are also intended increase the equitable distribution of benefits and inform utility actions specific to the Clean Energy Transformation ACT (CETA).

The Home Energy Savings program is not projected to be cost effective in 2022-2023. The Company prioritized improving participation (kWh savings) and equity over improving cost effectiveness at the program level while maintaining cost effectiveness at the overall portfolio level.

Changes planned for 2023 include the following:

- Add new measures:
  - Air Purifiers
  - Engine Block Heater Controls
  - Enhanced Incentives for Highly Impacted Communities
    - Ductless Heat Pump
    - Federal Standard Heat Pump Conversion
    - 9.0+ HPSF Heat Pump Conversion
- Increase customer and trade ally incentives for HVAC measures
- HVAC measures installed by customers living in Highly Impacted Communities. Expand baselines for electric heat installations in targeted communities
  - Single family, manufactured homes, and multi-family homes with non-electric fuel heating sources (wood, propane, oil, etc.) will be eligible for installation of ductless heat pumps. Natural gas system will continue to be ineligible. This measure will be offered at the same incentive rate as the ductless heat pump measure installed in single family homes. Savings were calculated by comparing NEEA Residential Building Stock Assessment data for heating oil,

propane, and wood heated homes against RTF data for efficient heat pumps. This measure will have increased incentive rates for customers living in Highly Impacted Communities.

- Remove measures:
    - CTA-2045 Heat pumps. This measure was added to the program in 2020. At the time, House Bill 1444 in Washington required that CTA-2045 capability would be incorporated into all new heat pump water heaters starting 1/1/2021. The Home Energy Savings program in Washington also sought to promote demand response capability in other potential equipment, and it was not clear at the time of measure development if or how CTA-2045 enablement would apply outside of water heating. It now seems unlikely that demand response will be managed through CTA-2045 ports for space heating.
    - Advanced Power Strips. This measure is no longer active in the RTF.
- Expand New Homes Incentives
    - Pay for Savings. Introduce measures for single family and multifamily "pay for savings" to re-engage residential builders in territory and encourage energy efficiency. This measure will provide an incentive per kWh savings based on modeled home performance and verified by an independent third-party home energy rater. The program will maintain the current Performance Path incentives for builders that exceed energy code by at least 10% for single family and 5% for multifamily homes.
    - Standalone New Construction measures. Offer standalone measures for efficient heat pumps and heat pump water heaters that are incremental to energy code. If a customer applies for a standalone new construction measure, they cannot also apply for a pay for savings or performance new construction measure, and vice versa.
- Clarify eligibility requirements for measures:
    - Electric Line Voltage Thermostats must be Connected and have 7-day programming scheduling and remote access. Measure will be available in retail or direct install delivery.
    - Smart thermostats will be available in retail or direct install delivery, and will be available in single family, manufactured homes, and multifamily homes.
    - Heat pump water heaters will have the 0-55 gallons size restriction removed, and will have home type eligibility specified to single family and manufactured homes to align with the RTF.
    - Allowing for self-install of ductless heat pumps.
- Increased targeting for measure delivery to Highly Impacted Communities
    - Maintain retail lighting lamp buy down program for general service lamps in "dollar stores" in Highly Impacted Communities.
    - Focus marketing and outreach efforts for direct install initiatives on customers

living in Highly Impacted Communities, including smart thermostats, line voltage connected thermostats, lighting, single family duct sealing, and manufactured home duct sealing.

- Targeted outreach of customers in Highly Impacted Communities using the census data, and offering higher incentives for specific high-cost HVAC measures.

- Align with the latest unit energy savings (UES) from the RTF.

On bill financing:

- Craft3, who administers the on-bill financing offer, extended eligibility in 2022 to additional housing types including 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 accommodate the inclusion of financing for critical repairs such as asbestos remediation, roof repair, mold removal, electrical panel upgrades, etc. Critical repairs may only be financed in conjunction with, and in preparation of a rebate eligible project. See the Pilots section for more information.

Complete details on the planned changes were provided for DSM Advisory Group and Equity Advisory Group review in September 2022 prior to finalizing and posting on the company website with 45 days' notice before the changes take effect on January 1, 2023.

UPDATED - There was a state energy code change expected to be effective July 1, 2023, so the program was updated in anticipation of this. Details were provided for DSM Advisory Group and Equity Advisory group review in April 2023 prior to finalizing and posting on the company website with 45 days' notice before the changes took effective on July 1, 2023. The Program Details below are for the program effective July 1, 2023.

Future changes including measure additions, deletions, and changes in qualifying standards will be based on cost-effectiveness, evaluation findings, participation and evolving codes and standards. In addition, the program is reviewed during the first year of the biennial period year and any changes from updated RTF information as of October 1 are incorporated through the program change process to be effective on January 1 of the second year of the biennial period. During the second year of the biennial period (2023), any changes from updated RTF information as of June 1 are incorporated throught the program change process to be effective on January 1 of the first year of the new biennial period (2024).

Evaluation Update

Last Evaluation Report:

Program Years	Evaluation Report Date	Completed by
2019-2020	September 2021	ADM Associates, Inc.

Future Evaluation Report(s):

Program Years	Evaluation Report Date	To be Completed by
2021-2022	Due November 2023	ADM Associates, Inc.

Program Details

General program details for this program are contained in the program tariff; additional program detail is available on the program website. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective. In addition, there are program details managed outside of the program tariff. The program tariff and the text below from the Advice Letter (Docket UE-061297), filed August 11, 2006, describe the information that is managed outside of the tariff and the process for changes.

> The comprehensive nature of the program and changing equipment standards indicate a flexible and market-driven program delivery is required. The Company is proposing that Schedule 118 outline the basic program elements including customer eligibility, use of a program administrator for delivery, the seasonal nature of selected incentive offers, and that current incentive levels may change. Specific details such as incentive levels, eligible equipment specifications and dates for incentive availability would be managed by the program administrator using a dedicated program Web site with easy links from the Company web site.
>
> Changes in equipment eligibility or minimum efficiency levels would be driven by program and market data. The Company and program administrator will be assessing program performance on an on-going basis and proposing changes at least once per year. Changes may be proposed more frequently if there is compelling market feedback that changes need to occur ahead of the annual changes. Similar to the filing process, the Company would present information on proposed changes to its Advisory Group and seek comments prior to making changes. Changes in equipment specifications or incentive levels would be clearly posted on the Web site and emailed to the appropriate Commission staff person with at least 45 days advance notice.

The incentive tables, program definitions and custom incentives offered are managed outside of the program tariff on the Company website via the process described above.

The following program information is contained either on the Company's website referenced above or in the program tariffs at the end of this business plan.

Washington Home Energy Savings
Effective 7/1/2023

APPLICABLE:
To new and existing residential customers in all territory served by Pacific Power in the state of Washington billed on Schedules 16, 17, 18 and 19. Landlords who own rental properties served by Pacific Power in the state of Washington where the tenant is billed on listed Schedules 16, 17, 18 or 19 also qualify for this program.

Definitions

British Thermal Unit (Btu): It is approximately the amount of energy needed to heat 1 pound of water from 39° to 40° Fahrenheit.

Contractor: Any party that is licensed to install or service HVAC, plumbing, or weatherization equipment or products.

Cubic Feet per Minute (CFM): A measurement of the velocity at which air flows into or out of a space.

Customer: Any party who has applied for, been accepted and receives service at the real property, or is the electricity user at the real property.

Direct Install: Installation of an Energy Efficiency Measure directly by the Program, or a Program-approved contractor or other 3rd party.

Downstream: Payment of incentive made by the Company to a customer, owner, contractor or other approved third party for the purchase or installation of an Energy Efficiency Measure pursuant to an approved energy efficiency incentive application.

Energy Efficiency Incentive: Payments of money made by Company to Owner or Customer or other approved party for installation of an Energy Efficiency Measure pursuant to an approved Energy Efficiency Incentive Application.

Gallons Per Minute (GPM): Volumetric flow rate used in rating equipment which saves water

Heating Seasonal Performance Factor (HSPF): Is the efficiency of heat pumps measured by the ratio of Btu heat output over the heating season to watt-hours of electricity used. The higher the number, the greater the efficiency.

Heating, Ventilation and Air Conditioning (HVAC): Refers to technology of indoor environmental comfort.

Integrated Modified Energy Factor (IMEF): Measures energy consumption of the total laundry cycle (washing and drying). It indicates how many cubic feet of laundry can be washed and dried with one kWh of electricity; the higher the number, the greater the efficiency.

Light Emitting Diode (LED): A semiconductor light source.

Manufactured Homes (mobile homes): A type of prefabricated housing that is largely assembled in factories and transported to the site of use. Units are at least 320 square feet and installed with a permanent chassis to assure the initial and continued transportability of the home.

Market Partner: An approved third party (contractor, retailer, dealer, wholesaler or manufacturer) who installs Energy Efficiency Measures at the real property or sells Energy Efficiency Measures to a Customer or Contractor. Applies to parties in the downstream, midstream, upstream, or direct install delivery channels.

Northwest Energy Efficient Manufactured Home (NEEM): Organization based in the Northwest that certifies new manufactured homes are built to various energy efficient standards such as ENERGY STAR or eco-rated.

New Home: A newly constructed single-family residence or a complete remodel of an existing structure into a new living space.

Owner: The person who has both legal and beneficial title to the real property, and is the mortgager under a duly recorded mortgage of real property, the trustor under a duly recorded deed of trust.

Prescriptive incentives: Per unit incentives are listed in the program incentive tables for specific EEMs. Incentives are subject to change.

RTF: Regional Technical Forum

R-Value: Indicates insulation's resistance to heat flow. The higher the R-value, the greater the insulating effectiveness.

Seasonal Energy Efficiency Ratio (SEER): Is the efficiency of air conditioners measured by the cooling output in Btu during a typical cooling-season divided by the total electric energy input in watt-hours during the same period. The higher the unit's SEER rating the more energy efficient it is.

Utility Combined Energy Factor (UCEF): ENERGY STAR uses Combined Energy Factor to compare the energy efficiency of gas and electric clothes dryers in pounds per kilowatt hour. The higher the value, the more efficient the dryer is.

U-Factor: Measures the rate of heat transfer and indicates how well the window insulates. U-factor values generally range from 0.25 to 1.25 and are measured in $Btu/h \cdot ft^2 \cdot °F$. The lower the U-factor, the better the window insulates.

Upstream: Payment of incentive made by the Company directly to a manufacturer, retailer, or other pre-approved vendor to apply a pre-purchase discount for customers.

Incentives

Table 1 – Appliance Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Clothes Washers	IMEF ≥ 2.76	$62	
Hybrid/Heat Pump Clothes Dryer	UCEF ≥ 3.20	$750	

Notes for appliance incentives table:

- Incentives for clothes washer apply to mid/upstream and/or downstream. Only one incentive will be provided per qualifying clothes washer.
- Incentives for clothes washers may be paid to the customer, retailer, and/or manufacturer and may be split between customer, retailer, and/or manufacturer. The sum of incentive payments per unit will not exceed the amounts listed in the table. The end use customer portion of the incentive will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- Homes must have either an electric water heating or an electric dryer heat for clothes washers to be eligible for incentives.
- Incentives for hybrid/heat pump clothes dryer apply to mid/upstream and/or downstream. Only one incentive will be provided per qualifying clothes dryer.
- Incentives for hybrid/heat pump clothes dryers may be paid to the customer, retailer, and/or manufacturer and may be split between customer, retailer, and/or manufacturer. The sum of incentive payments per unit will not exceed the amounts listed in the table. The end use customer portion of the incentive will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.

  See additional requirements on the program website.
- Acronyms:

  IMEF: Integrated Modified Energy Factor

  UCEF: Utility Combined Energy Factor

Table 2 – Lighting Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
LED Bulbs (General Purpose) – Not Direct Install	Qualified Product List	$0	Up to $3.00
LED Bulbs (Specialty) – Not Direct Install	Qualified Product List	$0	Up to $3.00
LED Fixtures – Not Direct Install	Qualified Product List	$0	Up to $23.00
LED Bulbs (General Purpose) – Direct Install	Qualified Product List	$0	Up to $6.00
LED Bulbs (Specialty) – Direct Install	Qualified Product List	$0	Up to $9.00
LED Fixtures – Direct Install	Qualified Product List	$0	Up to $23.00
LED Lamps – Direct Install	Qualified Product List	$0	Up to $12.00

Notes for lighting incentive table:

- Incentives for LED bulbs and fixtures (not direct install) apply to mid/upstream, and/or post-purchase through distributors.
- Direct install measures are offered on an initiative basis and may not be available for the entire year. See the program website for availability information.
- LED bulbs and fixtures must be listed on the program's qualified product list on the program website in order to qualify for an incentive. Qualifying products may be purchased at a participating retailer only for the Not Direct Install incentives.
- Reduced price LED or fixture offer may end early if entire allocation is sold.
- Acronyms:

  LED: Light Emitting Diode

Table 3 – Single Family HVAC Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Evaporative Coolers -2,000-3,499 CFM	2,000-3,499 CFM	$62	
Evaporative Coolers – 3,500+ CFM	Minimum 3,500 CFM (must be the primary cooling source)	$312	
Central Air Conditioner	≥15 SEER Central air conditioner must be installed and sized per program's requirements.	$93	$62
Duct Sealing and Insulation	$R_{initial} \leq 2$ and replace all existing insulation with at least R-8. Home's primary heat source must be either a heat pump or electric forced air furnace. Existing ducts must be unsealed. Duct sealing must be done per program's requirements.	$750	$250
Duct Sealing (not Direct Install)	Home's primary heat source must be either a ducted heat pump or electric forced air furnace. Insulation removed for purposes of sealing must be reinstalled or replaced after sealing is completed. Existing ducts must be unsealed. Duct sealing must be done per program's requirements.	$500	
Duct Sealing (Direct Install)	Test and Seal: Home's primary heat source must be either a ducted heat pump or electric forced air furnace. Insulation removed for purposes of sealing must be reinstalled or replaced after sealing is completed. Existing ducts must be unsealed. Duct sealing must be done per program's requirements.	$0	$500
	Test Only: Home's primary heat source must be either a ducted heat pump or electric forced air furnace.	$0	$80

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Ductless Heat Pump	≥ 9.0 HSPF, single-head or multi-head unit. Home's previous primary heating source must either have been an electric forced air furnace or a zonal electric system.	$1,600	$400
	≥ 9.0 HSPF, single-head or multi-head unit. Home's previous primary heating source may be any non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil).	$1,800	$400
Electronic Line Voltage Connected Thermostat	Retail: Must have 7-day programming scheduling and must be Wi-Fi enabled (or via bridge) with remote access. Home's primary heating source must be an electric zonal heating system.	$56	
	Direct Install: Must have 7-day programming scheduling and must be Wi-Fi enabled (or via bridge) with remote access. Homes primary heating source must be an electric zonal heating system.	$100	
Federal Standard Heat Pump Conversion	For replacement of existing electric resistance heating system with new federal standard efficiency heat pump. Heat Pump must include Best Practices Installation & Proper Sizing.	$2,000	$500
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,250	$500
9.0+ HSPF Heat Pump Conversion	For replacement of existing electric resistance heating system with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,500	$750

Measure	Qualifications	Customer Incentive	Market Partner Incentive
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,750	$750
12.0+ HSPF Heat Pump Conversion	For replacement of existing electric resistance heating system with new federal standard efficiency heat pump. Heat Pump must include Best Practices Installation & Proper Sizing.	$3,000	$750
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing	$3,250	$750
Heat Pump Upgrade	For upgrade of existing heat pump to new high efficiency heat pump. ≥ 9.0 HSPF must include Best Practices Installation & Proper Sizing.	$250	$125
Smart Thermostat	Unit must be on Energy Star Qualified Products List. Measure is available in retail and direct install delivery.	Retail: $100 Direct Install: $105	

Notes for HVAC incentive table:

- Incentives for all HVAC measures apply to downstream and/or mid/upstream. Only one incentive will be provided per unit.
- Incentives may be paid to the customer, dealer, manufacturer, and/or trade ally and may be split between customer, dealer, manufacturer, and/or trade ally. The sum of the incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- Maximum of 10 line voltage thermostats per household.
- Maximum one smart thermostat per household.
- Occupancy sensing feature must be enabled by customer for smart thermostats incentives.
- Homes must have a ducted electric heating system to be eligible for smart thermostat incentives. Customers may self-install smart thermostats. Contractor not required.
- Customers may self-install ductless heat pumps.
- Work must be completed per program requirements listed on the program website.
- See additional installation requirements on the program website.

- Acronyms:

  SEER: Seasonal Energy Efficiency Ratio

  HSPF: Heating Seasonal Performance Factor

  CFM: Cubic Feet per Minute

Table 4 – Single Family Weatherization Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Insulation – Attic	$R_{initial} \leq 19$ $R_{final} \geq 49$	$0.07/sq-ft. for electrically cooled home $0.46/sq-ft. for electrically heated home	
Insulation – Floor (to R-19)	$R_{initial} = 0$ $R_{final} \geq 19$ Home's primary heat source must be electric.	$0.31/sq-ft	
Insulation – Floor (to R-30)	$R_{initial} = 0$ $R_{final} \geq 30$ Home's primary heat source must be electric.	$0.46/sq-ft	
Insulation - Wall	$R_{initial} = 0$ $R_{final} \geq 13$ or fill cavity Home's primary heat source must be electric.	$0.62/sq-ft	
Windows	U-factor of 0.25 or lower. Home's primary heat source must be electric. Any pre-condition.	$1.00/sq-ft	
	U-factor of 0.30 or lower. Home's primary heat source must be electric. Specified pre-condition.	Replacing single pane wood/metal: $5/sq-ft Replacing double pane metal: $3/sq-ft	

	U-factor of 0.22 or lower. Home's primary heat source must be electric. Specified pre-condition.	Replacing single pane wood/metal: $10/sq-ft Replacing double pane metal: $6/sq-ft

Notes for weatherization incentive table:

- See additional installation requirements on the program website.
- Weatherization incentives may be paid to the customer, dealer, manufacturer, and/or contractor and may be split between customer, dealer, manufacturer, and/or contractor. The sum of the incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump heating system to qualify for the electrically heated incentive.
- Home's primary heat source must be a gas heating system to qualify for the electrically cooled incentive.

Definitions:

R-Value: Thermal resistance of a material

U-Factor: Inverse of R-value used to measure the amount of heat transmitting through a square foot of material

Table 5 – Single Family New Homes Incentives

Measure	Qualifications	Customer/ Builder Incentive	Market Partner Incentive
Performance Path	Incentives available for new electric heated or gas heated homes that exceed the prevailing code by a minimum of 10% as modeled using program required tools and software. The home's performance must be modeled and verified by an independent third-party Rater. Homes must have electric water heating to qualify.	Electric space heating, electric water heating exceeding code by 10% to 19.99%: $1,875 Electric space heating with electric water heating exceeding code by 20% or more: $3,125 Compressor based electric cooling. Electric water heating. Space heated by gas or other fuel exceeding code by 10% or more. $625	

Measure	Qualifications	Customer/ Builder Incentive	Market Partner Incentive
Single Family Pay for Savings	Incentives available for new electric heated homes that exceed the prevailing code by any percentage. The home's energy savings must be modeled and verified by an independent third-party Rater. Homes must have electric water heating to qualify.	$0.50/kWh annual energy savings	
Standalone New Construction Heat Pump	Equipment must be incremental to energy code, and standalone incentive cannot be combined with a Performance Path or Pay for Savings incentive. Incentives and minimum efficiency requirement will be listed on the program website.	$250	

Notes for New Homes incentive table:

- See additional installation requirements on the program website.
- Incentives for performance path apply to downstream and mid/upstream. Only one incentive will be provided per home. Electrically heated and non-electrically heated incentives may not be combined.
- Incentives may be paid to the customer, builder, or rater and may be split between customer, builder, and/or rater. The sum of the incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- New homes may only apply for one incentive from the New Homes table.
- Acronyms:
  HSPF: Heating Seasonal Performance Factor

  SEER: Seasonal Energy Efficiency Ratio

Table 6 –Water Heating Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Heat Pump Water Heater	NEEA Advanced Water Heating Specification Tier 3 and above replacing an existing electric tank type water heater.	$900	

Notes for water heating table:

- Incentives for heat pump water heater measures apply to downstream, mid/upstream, and direct install. Direct install will be offered on an initiative basis and may not be available for the entire year. See the program website for availability information.
- Incentives for heat pump water heaters may be paid to the customer, retailer/dealer, or manufacturer and may be split between customer retailer/dealer, and/ or manufacturer. The sum of incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- Incentives are available for single family and manufactured homes. Incentives are not available for multifamily homes.
- See additional installation requirements on the program website.
- Acronyms:

  NEEA: Northwest Energy Efficiency Alliance

Table 7 – Other Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Air Purifier	Must meet Clean Air Delivery Rate (CADR) requirements as outlined on the program website	$30	
Engine Block Heater Control	May be engine or wall mounted. Must meet requirements outlined on the program website.	$100	

Table 8 - Manufactured Homes Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Central Air Conditioner	≥15 SEER Central air conditioner must be installed and sized per program's requirements.	$93	$62
Duct Sealing (Not Direct Install)	Home's primary heat source must be either a ducted heat pump or electric forced air furnace. Existing ducts must be unsealed. Duct sealing must be done per program's requirements.	$500	
Duct Sealing (Direct Install)	Test and Seal: Home's primary heat source must be either a ducted heat pump or electric forced air furnace. Existing ducts must be unsealed. Duct sealing must be done per program's requirements.	$0	$500
	Test Only: Home's primary heat source must be either a ducted heat pump or electric forced air furnace	$0	$80
Electronic Line Voltage Connected Thermostat	Retail: Must have 7-day programming scheduling and must be Wi-Fi enabled (or via bridge) with remote access. Home's primary heating source must be an electric zonal heating system.	$56	
	Direct Install: Must have 7-day programming scheduling and must be Wi-Fi enabled (or via bridge) with remote access. Home's primary heating source must be an electric zonal heating system.	$100	

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Evaporative Coolers 2,000-3,499 CFM	2,000-3,499 CFM	$125	
Evaporative Coolers – 3,500+ CFM	Minimum 3,500 CFM (must be the primary cooling source)	$375	
Federal Standard Heat Pump Conversion	For replacement of existing electric resistance heating system with new federal standard efficiency heat pump. Heat Pump must include Best Practices Installation & Proper Sizing.	$2,000	$500
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,250	$500
9.0+ HSPF Heat Pump Conversion	For replacement of existing electric resistance heating system with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,250	$500
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,500	$500
12.0 HSPF Heat Pump Conversion	For replacement of existing electric resistance heating system with new high efficiency heat pump.	$2,500	$500

Measure	Qualifications	Customer Incentive	Market Partner Incentive
12.0 HSPF Heat Pump Conversion	Heat pump must include Best Practices Installation & Proper Sizing. For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,750	$500
Ductless Heat Pumps	≥ 9.0 HSPF single-head or multi-head unit Home's previous primary heating source must either have been an electric forced air furnace or a zonal electric system.	$1,600	$400
	≥ 9.0 HSPF, single-head or multi-head unit. Home's previous primary heating source may be any non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil).	$1,800	$400
Heat Pump Upgrade	For upgrade of existing heat pump to new high efficiency heat pump. ≥ 9.0 HSPF must include Best Practices Installation & Proper Sizing	$250	$125
Insulation – Attic (R0 to R-22)	$R_{initial} = 0$ $R_{final} \geq 22$ Homes' primary heating must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.77/sq-ft	
Insulation – Attic (R11 to R-30)	$R_{initial} \leq 11$ $R_{final} \geq 30$ Homes' primary heating must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.94/sq-ft	

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Insulation – Floor	$R_{initial} = 0$ $R_{final} \geq 22$ Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.46/sq-ft	
New Homes, ENERGY STAR Homes	Home must be new and have received ENERGY STAR certification.	$2,250	$250
New Homes, NEEM+ Homes	Home must be new and have received NEEM Plus certification.	$2,750	$250
Heat Pump, New Manufactured Homes	Central heat pump installed in a house with permanently installed central electric resistance furnace. Ductless heat pump shall be inverter-driven with an HSPF of 8.5 or better, have a nominal heating capacity of 9,000 Btu/hr or higher, and be installed in the main living area of a home with permanently installed ducted electric resistance furnace or zonal electric heat. Homes must be less than one year old and not be certified as NEEM or ENERGY STAR.	$1,000	$300
Smart Thermostat	Unit must be on ENERGY STAR Qualified Products List. Measure is available in retail and direct install delivery.	Retail: $100 Direct Install: $105	
Windows	U-factor of 0.25 or lower. Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify	$1.00/sq-ft	

Notes for manufactured homes table:

- Duct sealing (direct install) will be offered on an initiative basis and may not be available for the entire year. See the program website for availability information.
- Incentives for central air conditioner, not-direct install duct sealing, electronic line voltage, evaporative cooler, ductless heat pump, heat pump, and smart thermostat measures apply to downstream and mid/upstream. Only one incentive will be provided per unit.
- Customers may self-install ductless heat pumps.
- Incentives for central air conditioner, not-direct install duct sealing, electronic line voltage, evaporative cooler, ductless heat pump, heat pump, and smart thermostat may be paid to the customer, dealer, manufacturer, or trade ally and may be split between customer, dealer, manufacturer, and/or trade ally. The sum of the incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- Incentives for new manufactured homes may be paid to customer, dealer/retailer, or manufacturer and the available incentive per home and may be split between customer, dealer/retailer, and/or manufacturer. The sum of incentive payments per home will not exceed the amounts listed in the table. The end use customer portion of the incentive will be clearly displayed on the web site with applicable dates. The end use customer portion of the incentive may be changed.
- See additional installation requirements on the program website.
- Contractors providing the direct install duct sealing services will be reimbursed for actual job costs which may include surcharge for mileage, duct testing, and other job expenses, the total of which may not exceed the incentive. No additional costs will be billed to the customer.
- Acronyms and Definitions:

  NEEM: Northwest Energy Efficient Manufactured Homes

  IECC: International Energy Conservation Code

  HSPF: Heating Seasonal Performance Factor

  R-Value: Thermal resistance of a material

  U-Factor: Inverse of R-value used to measure the amount of heat transmitting through a square foot of material

Table 9 – Multifamily Homes Incentives

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Evaporative Coolers -2,000-3,499 CFM	2,000-3,499 CFM	$62	
Evaporative Coolers – 3,500+ CFM	Minimum 3,500 CFM (must be the primary cooling source)	$312	
Ductless Heat Pump	≥ 9.0 HSPF, single-head or multi-head unit Home's previous primary heating source must either have been an electric forced air furnace or a zonal system.	$1,600	$400
	≥ 9.0 HSPF, single-head or multi-head unit Home's previous primary heating source may be any non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil).	$1,800	$400
Electronic Line Voltage Connected Thermostat	Retail: Must have 7-day programming scheduling and must be Wi-Fi enabled (or via bridge) with remote access. Home's primary heating source must be an electric zonal heating system.	$56	
	Direct Install: Must have 7-day programming scheduling and must be Wi-Fi enabled (or via bridge) with remote access. Home's primary heating source must be an electric zonal heating system.	$100	
Insulation - Attic (R-19 to R-49)	$R_{initial} \leq 19$ $R_{final} \geq 49$ Homes' primary heating must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.46/sq-ft.	

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Insulation – Attic (R-0 to R-49)	$R_{initial} = 0$ $R_{final} \geq 49$ Homes' primary heating must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.62/sq-ft	
Insulation – Floor (R-0 to R-19)	$R_{initial} = 0$ $R_{final} \geq 19$ Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.31/sq-ft.	
Insulation – Floor (R-19 to R-30)	$R_{initial} = 19$ $R_{final} \geq 30$ Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.20/sq-ft	
Insulation – Floor (R-0 to R-30)	$R_{initial} = 0$ $R_{final} \geq 30$ Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.46/sq-ft.	
Insulation - Wall	$R_{initial} = 0$ $R_{final} \geq 11$ or fill cavity Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify for the electrically heated incentive.	$0.62/sq-ft.	

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Smart Thermostat	Unit must be on Energy Star Qualified Products List. Measure is available in retail and direct install delivery.	Retail: $100 Direct Install: $105	
Windows (U-factor 0.25 or lower)	U-factor of 0.25 or lower. Home's primary heat source must be either a heat pump, electric forced air, zonal, or ductless heat pump system to qualify.	$1.00/sq-ft.	
Windows (pre-condition baseline)	U-factor of 0.22 or lower. Home's primary heat source must be zonal, heat pump, electric forced air furnace, or ductless heat pump system to qualify. Existing window must be single glazed with wood frame, single glazed with metal frame, or double glazed with metal frame.	Up to $25/sq-ft	
Multifamily New Construction Performance	Multifamily buildings with electric space and/ or water heating that exceed the prevailing WA state energy code by a minimum of 5% as modeled using program required tools and software. The multifamily building's performance must be modeled and verified by an independent third-party Rater.	Exceeding code by 5% to 14.99%: $0.15/ kWh (first year) Exceeding code by 15% or more: $0.25/ kWh (first year)	
Multifamily Pay for Savings	Incentives available for new electric heated homes that exceed the prevailing code by any percentage. The home's energy savings must be modeled and verified by an independent third-party Rater. Homes must have electric water heating to qualify.	$0.50/kWh annual energy savings	

Notes for multifamily homes table:

- Incentives for electronic line voltage and ductless heat pump, heat pump measures apply to downstream and mid/upstream. Only one incentive will be provided per unit.
- Customers may self-install ductless heat pumps.
- Incentives for weatherization, electronic line voltage, and ductless heat pump may be paid to the customer, dealer, manufacturer, or trade ally and may be split between customer, dealer,

manufacturer, and/or trade ally. The sum of the incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.

- Multifamily new construction incentives are available for multifamily buildings that are three stories or less and serve customers who purchase their electricity from Pacific Power on rate schedules 16, 17, 18 or 19. Mixed use buildings (buildings served by a residential rate schedule and an eligible commercial rate schedule) or multifamily buildings with four or more stories and serving customers on eligible commercial rate schedules may qualify for new construction measures through the Wattsmart Business program.
- Only one new construction incentive will be provided per multifamily building.
- Incentives for multifamily new construction may be paid to the customer, builder, or rater and may be split between customer, builder, and/or rater.
- Incentives for multifamily new construction are capped at 80 percent of project costs. All final costs are subject to Pacific Power review and approval prior to paying an efficiency incentive.
- Multifamily buildings with outside lighting and common areas billed under non-residential rate schedules may be eligible to receive other incentives, but may not receive additional equipment purchase and installation incentives within other Company offered programs.
- Qualifying equipment receiving incentives within this table may not receive equipment purchase and installation incentives within other tables in this Schedule.
- See additional installation requirements on the program website.
- Acronyms:

  HSPF: Heating Seasonal Performance Factor

  R-Value: Thermal resistance of a material

  U-Factor: Inverse of R-value used to measure the amount of heat transmitting through a square foot of material

Table 10 – Enhanced Incentives for Highly Impacted Communities

Measure	Qualifications	Customer Incentive	Market Partner Incentive
Ductless Heat Pump	≥ 9.0 HSPF, single-head or multi-head unit. Home's previous primary heating source must either have been an electric forced air furnace or a zonal electric system.	$1,800	$400
	≥ 9.0 HSPF, single-head or multi-head unit. Home's previous primary heating source may be any non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil).	$2,000	$400
Federal Standard Heat Pump Conversion	For replacement of existing electric furnace with new federal standard efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing	$2,250	$500
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	$2,500	$500
9.0+ HSPF Heat Pump Conversion	For replacement of existing electric furnace with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	Manufactured Home: $2,500 Single Family: $2,750	Manufactured Home: $500 Single Family: $750
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	Manufactured Home: $2,750 Single Family: $3,000	Manufactured Home: $500 Single Family: $750
12.0 HSPF Heat Pump Conversion	For replacement of existing electric furnace with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	Manufactured Home: $2,750 Single Family: $3,250	Manufactured Home: $500 Single Family: $750

Measure	Qualifications	Customer Incentive	Market Partner Incentive
	For replacement of existing non-electric and non-natural gas heating system (i.e., wood, propane, and heating oil) with new high efficiency heat pump. Heat pump must include Best Practices Installation & Proper Sizing.	Manufactured Home: $3,000 Single Family: $3,500	Manufactured Home: $500 Single Family: $750

Notes for Enhanced Incentives for Highly Impacted Communities table.

- Customers must meet named community criteria on Pacific Power's website.
- Incentives for all HVAC measures apply to downstream and/or mid/upstream. Only one incentive will be provided per unit.
- Incentives may be paid to the customer, dealer, manufacturer, and/or trade ally and may be split between customer, dealer, manufacturer, and/or trade ally. The sum of the incentive payments per unit will clearly be displayed on the website with applicable dates. The end use portion of the incentive may be changed.
- Customers may self-install ductless heat pumps.
- Work must be completed per program requirements listed on the program website.
- See additional installation requirements on the program website.
- Acronyms:
  HSPF: Heating Seasonal Performance Factor

Home Energy Reports

Years of Implementation

The Home Energy Report program was implemented by OPower in August 2012 and expanded twice, the last time in in September 2014. OPower delivered the program through December 2017. Bidgely was selected through an RFP process to begin delivery of Home Energy Reports in 2018. During the 2018-2019 biennial period, Bidgely delivered email and paper reports to the same treatment group utilized by OPower and savings were compared to the same control group. Beginning in 2020 Bidgely started delivering digital and paper Home Energy Reports to a larger new group of customers.

Program Description

The Home Energy Report program is designed to better inform residential customers about their energy usage by providing comparative energy usage data for similar homes located in the same geographical area. In addition, the report provides the customer with information on how to modify their energy usage. Equipped with this information, customers can modify behavior and/or make structural, equipment, lighting or appliance changes to reduce their overall electric energy consumption. Reports sent by Bidgely, include energy consumption by end use (also known as disaggregated energy consumption) in addition to whole home comparative information.

Evaluation Update

Last Evaluation Report:

Program Years	Evaluation Report Date	Completed by
2020-2021	May 2022	ADM Associates. Inc.

Future Evaluation Report(s):

Program Years	Evaluation Report Date	To be Completed by
2022-2023	Estimated by April 15, 2024	ADM Associates, Inc.

Program Details

Beginning in 2020 Bidgely is delivering digital and paper Home Energy Reports to a larger treatment group with savings compared to a new control group. Both treatment and control groups were re-randomized as part of program design prior to report delivery. Another treatment and control group was added in early 2021 after consultation with the DSM Advisory Group in late 2020.

As part of the biennial planning process two approaches were considered for 2022-2023; re-randomize all customers and create new groups (treatment and control) or continue to treat the existing groups and compare with the existing control groups. Cadmus, a third-party evaluation firm with extensive home energy report experience recommended maintaining the same treatment and control groups since savings were continuing to ramp up. The Cadmus recommendation was shared with DSM AG as part of the biennial planning process.

At the beginning of 2022, approximately 11,400 customers are forecasted to receive digital (email) reports and 40,600 customers are forecasted to receive paper reports. There are approximately 105,000 residential customers in Pacific Power's Washington territory.

Measure Life and Savings Reporting Details

In the Biennial Conservation Plan for 2022-2023, the Company assumed a two-year measure life for Home Energy Reports. This assumption impacted the EIA target as well as the forecasted savings in the DSM Business Plan. At that time, the two-year life aligned with assumptions utilized by other Washington investor-owned utilities responsible for complying with I-937.

In preparing this 2023 Annual Conservation Plan, the Company learned another Washington investor-owned utility completed a review and planned to change from a two-year assumed life to one year. The Company also noted the RTF approved a new Guideline on Evaluated Savings for Residential Behavior Home Energy Reports on February 23, 2022. As part of preparing the annual conservation plan, the Company incorporates RTF updates to UES measures and standard protocols. While the Home Energy Reports RTF guideline is not a UES measure or savings protocol, given the unique nature of Home Energy Reports, the presence of a new RTF guideline and that another Washington investor owned utility was making a change, the Company revisited the measure life assumption for the 2022-2023 biennium.[7]

While the RTF Home Energy Reports guideline does not specify a measure life, it notes among other things "the best practical and reliable analysis methods and data sources should be used in estimating measure lifetime." It provides examples for this: "assumptions should be based on industry literature (i.e., well documented TRMs such as those from Pennsylvania or Illinois), regional data from similar programs, or professional judgment." In reviewing available and reliable data sources[8] on measure life for this type of program, all but one assumed a one-year life, and none assumed a two-year life.

The guideline also states based on existing RTF Guidelines for Custom measures, the lifetime for savings resulting from the delivery of Home Energy Reports should be equal to the timeframe until persisted savings degrades to 50% of the rate of savings that was generated at the time when program messaging ceased, and the measure life should be consistent with the program theory and narrative for the specific Home Energy Reports program. The Company's Home Energy Reports program is ongoing in 2022-2023 (messaging will not stop/start or cease). During a time period of ongoing delivery, a one year measure life makes sense and aligns with protocols used in other jurisdictions. Costs are incurred each year to deliver messaging and savings is reported each year also with a one year life. This approach also avoids unnecessary complexity and cost of measuring persistence beyond one year during a period when the program is ongoing as mentioned above.

[7] The Company consulted with its DSM Advisory Group via email about these changes in October and will review them at the December 2022 advisory group meeting.

[8] Sources reviewed included the Pennsylvania and Illinois Technical Reference Manuals, California Statewide Workpaper SWWB004-02 for Home Energy Reports, and Bonneville Power Administration UES Measure list (April 2022 Version 10.1). All have a one-year assumed measure life except Pennsylvania who is moving away from a one-year life to multi-year. Puget Sound Energy is implementing a one year life for the 2022-2023 biennium.

Given these factors, the measure life assumption used for cost-effectiveness analysis for this plan is one year.

This change to a one-year life reduces complexity in savings reporting. For 2022-2023, savings will be tracked and reported annually based on reporting from the provider. Home Energy Reports savings reported against the I-937 target will be first year savings in each year and will be based on an ex-post evaluation of the program performance.

Planned Program Changes

The Home Energy Reports program for 2023 will continue treating the same customers selected in the re-randomized approach used at the start of 2020-2021 plus an expansion to 15,000 new customers. The expansion treatment group will have its own control group. Bidgely will continue to update messaging to target season-specific behavior change and energy savings opportunities with all customer groups.

Low Income Residential Program Details

The Company offers a Low Income Weatherization program (Schedule 114) to its income-eligible residential customers.

Low Income Weatherization (Schedule 114)

Years of Implementation

The Low Income Weatherization program has been in effect since the mid-1980's and has successfully assisted in funding the weatherization of over 7,900 homes in Pacific Power's Washington territory.

Program Description

Pacific Power partners with four local non-profit agencies, Blue Mountain Action Council in Walla Walla, Northwest Community Action Center in Toppenish, Opportunities Industrialization Center of Washington in Yakima, and Yakama Nation Housing Authority in Wapato to provide weatherization services to income qualifying households throughout its Washington service area. The leveraging of Pacific Power funding along with Washington MatchMaker Program funds allows the agencies to provide these energy efficiency services at no cost to participating customers. The Company provides rebates to partnering agencies for 50 percent of the cost of services while MatchMaker funds are available and cover 100 percent of costs when these state funds are depleted. Participants qualify whether they are homeowners or renters residing in single-family homes, manufactured homes or apartments.

Planned Program Changes

The Low Income Weatherization program was last revised through the submission of tariff revisions in 2021. These proposed revisions were reviewed by the Low Income Weatherization Advisory Group. The changes were approved by the Commission and became effective on February 1, 2022.

In alignment to CETA, PacifiCorp strives to present opportunities to reduce customers overall energy burden through energy efficiency home improvements by reducing funding constraints or cost barriers, environmental impact and increase allowance to address challenges associated with housing condition resulting in a weatherization project deferment.

PacifiCorp's approved revisions to Schedule 114 included: 1) an increase to repair reimbursement from 15 percent to 30 percent of the annual reimbursement on energy efficient measures received to partner agency authorized to receive funds for the installation of weatherization materials in low-income dwellings and 2) allow installation of energy efficient measures and replacement of heating system in dwellings with permanently installed electric heat, space heaters or any fuel source except natural gas with adequate combustion air as determined by the Agency. Company reimburses the partner agencies 50 percent of the installed cost of repairs necessary to make the installation of the energy efficient measures included in current effective tariff when MatchMaker Funds are available, and when matching funds are exhausted funding will be at 100 percent. Increasing utility repair reimbursement provides Agencies flexibility and additional funding to leverage in conjunction with state, federal and other funding sources to address health, safety and overcome dwelling integrity issues to complete weatherization efforts successfully. Additionally, the change to the heating source requirement allows partner agencies to determine whether heating system replacement is most cost effective, improves health and safety, and reduces environmental impact of oil or wood burning.

Consistent with rules and staff direction, cost-effectiveness for the low-income weatherization program will not be assessed at a program or portfolio level. Reporting for the program will include number of residences weatherized, number of measures installed, energy savings and total expenditures.

Evaluation Update

Last Evaluation Report:

Program Years	Evaluation Report Date	Completed by
2016-2017	November 2020	ADM Associates, Inc.

Future Evaluation Report(s):

Program Years	Evaluation Report Date	To be Completed by
2018 - 2019	February 2023	Opinion Dynamics

Program Details

Details for this program are contained in the program tariff. Any changes to the details included in the program tariff must be filed with the Commission prior to becoming effective.

Non-Residential Program Details

The Company offers Wattsmart Business (Non-Residential Energy Efficiency - Schedule 140) to non-residential customers in the State of Washington. The program provides a comprehensive set of financial and service incentives to assist the Company's non-residential customers in improving the energy efficiency of their facilities.

Wattsmart Business (Schedule 140)

Years of Implementation

The Wattsmart Business program (Schedule 140) was created in 2014 by the consolidation of two existing programs: Energy FinAnswer and FinAnswer Express. The Energy FinAnswer program was originally implemented in the 1990s as an energy efficiency improvement financing program. The program was modified to an incentive based program under Schedule 125 in October 2000. The Small Retrofit Incentive and Retrofit Incentive (Schedules 115 and 116) were created in November 2000 and were improved and renamed FinAnswer Express (Schedule 115) in May 2004. The consolidation of the programs to Wattsmart Business was approved with Docket UE-132083, effective January 1, 2014.

Program Description

The Wattsmart Business program was designed to support continuing acquisition of all cost-effective conservation from business customers and help reinforce the ongoing ethos of energy efficient new construction, facility upgrades, and ongoing operations.

Prescriptive incentives ("Listed Incentives") are offered to commercial, industrial and irrigation customers for typical lighting, HVAC, motor, building envelope, food service, appliances, irrigation, dairy/farm equipment, compressed air and other retrofits or new installations. Listed Incentives include an expedited energy analysis and incentives based on the equipment installed $/horsepower, $/ton, etc.) or based on annual energy savings determined using a program simplified analysis tool.

The program includes an incentive offer specifically for small business customers receiving electric service on Schedule 24[9]. Participating customers utilizing an approved contractor are eligible for an enhanced incentive offer up to 90 percent of the project cost. Very small business customers and small business customers located in a Highly Impacted Community are eligible for an enhanced incentive offer targeted at up to 100 percent of the project cost.

There is also a midstream point-of-purchase delivery channel for lighting. Prescriptive incentives for this offer are referred to as Instant Incentives.

Custom incentives and analysis are offered for commercial, industrial, and irrigation customer retrofits and new construction measures that meet minimum efficiency qualifications of the

[9] There are maximum annual usage limits to help keep this offer targeted to small businesses. The eligibility requirements are posted on the website at https://www.pacificpower.net/savings-energy-choices/business/wattsmart-efficiency-incentives-washington/wa-small-medium-business/wa-small-business-lighting.html.

prescriptive incentives but do not have a prescriptive incentive available. The program includes a vendor neutral investment grade energy analysis and cash incentives equal to $0.24 per kWh of annual energy savings (up to 70 percent of project costs).[10] There is a cap to prevent incentives from bringing the payback for a project below one year. Custom analysis includes a post-installation verification and, if required, the program includes energy commissioning. The program provides energy project manager (EPM) co-funding to increase end user management and engineering staffing devoted to electrical energy projects/activities increasing the number of commercial and industrial projects that can be completed. EPM co-funding is performance based and contingent on customer's commitment to an energy savings goal over a prescribed timeframe; typically, 12 months. Co-funding is proportionate to the energy savings goal at $0.025/kWh (subject to a minimum co-funding level and salary cap).

Energy Management services and incentives are intended to help customers ensure ongoing efficiency improvements in the operation and management of facilities and industrial processes. Energy Management is a system of practices that creates reliable and persistent electric energy savings through improved operations, maintenance and management practices at customer sites. It is designed to complement program offerings for capital improvements and the Energy Project Manager co-funding offer.

Savings are site specific, and monitoring of building systems and industrial process controls is used to identify and quantify energy savings.

A financing offer was added to the program in 2017. This financing is optional and is available for customers who need additional help to fund the portion of the project cost not covered by incentives. Financing can be in the form of a capital equipment lease, tax exempt municipal lease, Energy Services Agreement, etc. The financing is offered through a third party, National Energy Improvement Fund.

A Clean Buildings Accelerator offer was added in 2022. See the Pilots section for more detail.

The program is marketed primarily via Pacific Power account managers, Wattsmart Business vendors and the Wattsmart Business program delivery team. Other leads come via advertising, word-of-mouth, past participants returning for additional projects and a combination of other Company outreach efforts.

Planned Program Changes

Changes are part of the adaptive management strategy for the Wattsmart Business program for the 2022-2023 biennium and are designed to increase energy savings and help achieve the Energy Independence Act targets. Higher customer and trade ally incentives are intended to offset increased equipment costs and labor shortages that have developed as a result of the COVID-19 pandemic. Changes for the small business offer are intended to increase the equitable distribution of benefits and inform utility actions specific to the Clean Energy Transformation ACT (CETA).

[10] Note there are no incentive caps for new construction projects where energy code applies.

The changes for 2023 are intended to

a) Further adaptively manage the program in response to inflation, supply chain and labor shortage challenges caused by the pandemic that are impacting program participation levels.
b) Increase participation by increasing incentives for most lighting measures.
c) Update the small business offer to increase participation from small businesses and Named Community small businesses in alignment with the Clean Energy Transformation Act by expanding the small business offerings to include enhanced incentives for non-lighting measures.
d) Expand the existing offerings for Advanced Rooftop Unit Controls (ARC) to include equipment that is less than 5 tons.
e) Align the program's measure offerings and incentives with the latest unit energy savings (UES) and Standard Protocols from the Regional Technical Forum (RTF).
f) Align the program with the latest third party specifications such as Consortium for Energy Efficiency (CEE) and Energy Star.
g) Update the list of eligible rate schedules.
h) Make other minor administrative changes.

Other Adaptive Management Improvements

Expanded Customer Eligibility for the Small Business Offer

The small business eligibility criteria will be revised to include slightly bigger small businesses.

Customer eligibility for the small business offers is managed on the Pacific Power website.[11] Here is the current customer eligibility for the small business lighting offer:

> *"Washington small businesses on rate schedule 24 with annual usage less than or equal to 200,000 kWh (non-residential facility total) and/or total non-residential facility square footage of 20,000 square feet or less are eligible to participate."*

The Named Community Small Business customer eligibility has the same 200,000 kWh maximum annual usage. The maximum annual usage for both the small business and the Named Community small business offers will be increased from 200,000 to 300,000 kWh per year to increase participation.

Expanded Small Business Offer – Non-Lighting (Retrofit only)

To offer a range of energy efficiency opportunities to help smaller non-residential customers save energy and money, the small business lighting offer will expand to include non-lighting measures with enhanced incentives. These measures will include Engine Block Heater Controls, Ductless Heat Pumps, Thermostats, Anti-sweat Heater Controls, Electronically Commutated Motors (ECM) and Heat Pump Water Heaters. Small business customers will be required to use an approved Wattsmart Business vendor to be eligible for the enhanced small business non-lighting incentives. Complete participation steps will be available on the program website. Vendors will receive training and marketing support options to help them target small businesses in Highly Impacted Communities.

[11] Washington Small Business Lighting (pacificpower.net)

As part of the outreach plan, approved Small Business vendors will be eligible for an additional partner incentive when a valid referral is made for a small business non-lighting measure/project. The vendor will complete a simple questionnaire with the small business customer and in return receive a referral bonus with the approved project. This will be adaptively managed and may change over the course of the year.

Vendor Incentives

To encourage participation in the overall Wattsmart Business incentives and to increase participation in select measures and for targeted customers, vendor incentives will continue to be offered to Washington Wattsmart Business vendors in good standing for qualifying projects. These incentives will be first come, first served until funding is exhausted, with per vendor caps for specific measures, such as lighting, to provide motivation for vendors to complete multiple projects. Vendor incentives for 2023 will begin on January 1st and be for lighting, select non-lighting, and small business lighting/non-lighting projects.

Pacific Power is specifically interested in using vendor incentives to promote participation in non-lighting measures, such as advanced rooftop unit controls, and to encourage vendors to pursue potential energy efficiency upgrades for Named Community small businesses, with a focus on those located in Highly Impacted Communities. Pacific Power is planning on continuing vendor incentives for listed retrofit lighting projects to encourage current vendors to maintain interest in serving Washington customers, as well as attracting new vendors to the program.

Complete details on the planned changes were provided for DSM Advisory Group and Equity Advisory Group review in September 2022 prior to finalizing and posting on the company website with 45 days' notice before the changes take effect on January 1, 2023.

UPDATED - There was a state energy code change expected to be effective July 1, 2023, so the program was updated in anticipation of this. Details were provided for DSM Advisory Group and Equity Advisory group review in April 2023 prior to finalizing and posting on the company website with 45 days' notice before the changes took effect on July 1, 2023. The Program Details below are for the program effective July 1, 2023.

Future changes will be based on changes in Washington State Energy Code, federal standards, third party specifications, cost-effectiveness, participation and updated market information.

Evaluation Update

Last Evaluation Report:

Program Years	Evaluation Report Date	Completed by
2018-2019	July 8, 2021	The Cadmus Group

Future Evaluation Report(s):

Program Years	Evaluation Report Date	To be Completed by
2020-2021	In progress	The Cadmus Group

Program Details

General program details for this program are contained in the program tariff; additional program detail is available on the program website. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective. In addition, there are program details managed outside of the program tariff. The program tariff utilizes the modification procedure established with the approval of Advice No. 06-008[12] by the Washington Utilities and Transportation Commission. The program tariff and the text below from the Advice Letter 06-008 (Docket UE-061710), filed on November 8, 2006, describe the information that is managed outside of the tariff and the process for changes.

> Future changes in the … incentive tables and definitions would be driven by program and market data. The Company assesses program performance on an ongoing basis and would propose changes at least annually. Changes may be proposed more frequently if there is compelling market data. Similar to the filing process, the Company would present information on proposed changes to its Advisory Group and seek comments prior to making changes. Changes would be clearly posted on the program web site and e-mailed to the appropriate Commission staff person with at least 45 days advance notice.

The incentive tables, program definitions and custom incentives offered are managed outside of the program tariff on the Company website via the process described above.

The current information for the program can be found on the Company's website at www.BeWattsmart.com.

[12] The description of the process for changes was also included in the Wattsmart Business program filing, Advice 13-08, filed November 12, 2013 and approved by the Commission.

Washington Wattsmart Business
Effective 7/1/2023

APPLICABLE:
To service under the Company's General Service Schedules 24, 29, 33, 36, 40, 47T, 48T, 51, 53 and 54 in all territory served by Pacific Power in the State of Washington.

Definitions

Customer: Any party who has applied for, been accepted and receives service at the real property, or is the electricity user at the real property.

Energy Efficiency Incentive: Payments of money made by Pacific Power to Owner or Customer for installation of an Energy Efficiency Measure pursuant to an acknowledged Energy Efficiency Incentive Offer Letter or approved Energy Efficiency Incentive Application.

Energy Efficiency Incentive Offer Letter: An offer made by Pacific Power to the Owner or Customer providing for Pacific Power to furnish Energy Efficiency Incentives for an Energy Efficiency Project.

Incentive Application: An application submitted by Owner or Customer to Pacific Power for Energy Efficiency or Energy Management Incentives.

Energy Efficiency Measure (EEM): Qualifying measures are any measures which, when installed in an eligible facility, result in verifiable electric energy efficiency improvement compared to a baseline as determined by Pacific Power. The baseline will be determined with reference to existing equipment, applicable state or federal energy codes, industry standard practice and other relevant factors. Qualifying measures include Waste Heat to Power and regenerative technologies.

Energy Efficiency Measure (EEM) Cost:

- New Construction/Major Renovation: EEM Cost is the total installed cost of energy efficiency equipment or system minus the cost of the code compliance/common practice equipment or system.
- Retrofit: EEM Cost is the total installed cost of the energy efficiency equipment or modification.
- In the case of New Construction, Major Renovations, and Retrofits, EEM Costs shall mean the Owner or Customer's reasonable costs incurred (net of any discounts, rebates or incentives other than Energy Efficiency Incentives from Pacific Power, or other consideration that reduces the final actual EEM Cost incurred by the Owner or Customer) to purchase and install EEMs at the Owner's or Customer's facility. If the Owner or Customer installs the EEM then the cost of installation shall be equal to the Owner's or Customer's actual labor costs for such installation.

Energy Efficiency Project: One or more EEM(s) at a Non-residential Facility[13] with similar one year payback limitations (see below) covered by one Energy Efficiency Incentive Offer Letter.

Energy Efficiency Project Cost: The sum of EEM Costs for one or more EEM(s) with similar one year payback limitations (see below) covered by one Energy Efficiency Incentive Offer Letter.

Energy Management Offer Letter: An offer made by Pacific Power and acknowledged by Owner or Customer and Pacific Power providing for Pacific Power to furnish Energy Management Incentives for an Energy Management Project.

Energy Management Incentive: Payments of money made by Pacific Power to Owner or Customer for implementation of an Energy Management Measure pursuant to an executed Energy Management Offer Letter.

Energy Management Measure (EMM): an operational improvement which, when implemented in an eligible facility, result in electric savings compared to current operations as determined by Pacific Power.

Energy Management Project: One or more EMM(s) at a Non-residential Facility covered by one Energy Management Offer Letter.

Energy Project Manager: an employee or direct contractor of the Customer who will manage electrical energy efficiency projects that deliver savings toward the Customer/Owner's energy savings goal.

Energy Project Manager Co-funding: funding towards the Energy Project Manager agreed upon full value salary that is solely attributable to electrical energy efficiency work.

Major Renovation: A change in facility use type or where the existing system will not meet Owner/Customer projected requirements within existing facility square footage.

Mixed Use: Buildings served by a residential schedule and a rate schedule listed in the applicability section above shall be eligible for services under this schedule provided the Energy Efficiency Project meets the definition of New Construction or Major Renovation.

New Construction: A newly constructed facility or newly constructed square footage added to an existing facility.

Non-residential Facility: A Customer site that is served by Pacific Power and meets the applicability requirements listed above.

Owner: The person who has both legal and beneficial title to the real property, and is the mortgager under a duly recorded mortgage of real property, the trustor under a duly recorded deed of trust.

[13] Measures at multiple Non-residential Facilities may be included in one Offer Letter for convenience; however, project incentive caps (if any) are applied per individual Non-residential Facility.

Retrofit: Changes, modifications or additions to systems or equipment in existing facility square footage.

Waste Heat to Power: Waste heat to power is the process of capturing heat discarded by a process (with no increase in fuel input for the process) and using that heat to generate electricity for use by the Non-residential Facility in place of electricity provided by Pacific Power.

Incentives – General Information

Incentives for measures listed in the incentive tables

Per unit incentives are listed in the program incentive tables for specific Energy Efficiency Measures (EEMs) and are subject to the incentive caps below. Incentives are subject to change and current incentives can be found at www.pacificpower.net.

Custom incentives

Energy Efficiency Measures not listed in the prescriptive incentive tables (typical upgrades) may be eligible for a Custom Energy Efficiency Incentive. Pacific Power will complete an analysis of the EEM Cost and electric energy savings and determine whether to offer a custom Energy Efficiency Incentive and the incentive amount.

Energy management incentives

Non-capital improvements to operations and maintenance within a qualifying facility may be eligible for an Energy Management Incentive. Pacific Power will partner to complete an analysis of the electric energy savings of potential energy management measures and determine whether to offer an Energy Management Incentive and the incentive amount.

Energy project manager co-funding

Pacific Power can fund an additional $0.025/per kWh of verified Wattsmart Business energy savings, up to 100 percent of the Energy Project Manager's salary. Salary is based on a letter from the Customer/Owner's human resources or accounting department stating the base annual salary and an appropriate overhead percentage, and subject to approval by Pacific Power.

Baseline adjustments

Pacific Power may adjust baseline electric energy consumption and costs to reflect any of the following: energy codes, standard practice, changes in capacity, changes in production or facility use and equipment at the end of its useful life. Such adjustments may be made for lighting energy efficiency measures installed in new construction projects where energy code does not apply.

INCENTIVES:[14,15]

Category		Incentive	Percent Project Cost Cap[16]	1-Year Simple Payback Cap for Projects[17]	Other Limitations
Prescriptive Incentives (Listed Incentives)[18]	Lighting - Retrofit	See incentive lists	70%	Yes	See incentive lists
	Lighting - New Construction/ Major Renovation (Facilities where energy code applies)		None	No	
	Lighting - New Construction/ Major Renovation (Facilities where energy code does not apply)		70%	Yes	
	Motors		None	No	
	HVAC[19]		None	No	
	Building Envelope		None	No	
	Food Service[20]		None	No	
	Appliances		None	No	
	Other		None	No	
	Irrigation Pump VFD		70%	Yes	
	Irrigation Water Distribution		None	No	

[14] The Customer or Owner may receive only one financial incentive from Pacific Power per measure. Financial incentives include energy efficiency incentive payments and energy management payments. Energy Project Manager Co-Funding is available in addition to the project incentives.

[15] Incentives for prescriptive measures are restricted to the amounts shown on the website.

[16] All EEM Costs are subject to Pacific Power review and approval prior to making an Energy Efficiency Incentive Offer. All final EEM Costs are subject to Pacific Power review and approval prior to paying an Energy Efficiency Incentive per the terms of the Energy Efficiency Incentive Offer or approved Application. Pacific Power review and approval of EEM Costs may require additional documentation from the Customer or Owner.

[17] The 1 year simple payback cap means incentives will not be available to reduce the simple payback of a project below one year. If required, individual measure incentives will be adjusted downward pro-rata so the project has a simple payback after incentives of one year.

[18] For Rate Schedule 51 Street Lighting Service, the street lighting owner (Pacific Power) is not eligible for incentives.

[19] Evaporative pre-cooler incentives are subject to the 70% project cost cap and the one-year payback cap.

[20] Demand controlled kitchen ventilation exhaust hood incentives are subject to the project cost cap and the one-year payback cap.

Category		Incentive	Percent Project Cost Cap[16]	1-Year Simple Payback Cap for Projects[17]	Other Limitations
	Farm and Dairy		70%	Yes	
	Compressed Air		70%	Yes	
	Wastewater and other Refrigeration		70%	Yes	
Enhanced Incentives for Small Businesses	Lighting –Retrofit	See incentive lists	90%	No	Available to all Schedule 24 customers meeting small business criteria on Pacific Power's website. Qualifying equipment must be installed by an approved small business contractor/vendor.
			100%	No	Available to all Schedule 24 customers meeting very small business or named community small business criteria on Pacific Power's website. Qualifying equipment must be installed by an approved small business contractor/vendor.
	Non-lighting - Retrofit	See incentive lists	No[21]	No	Available to all Schedule 24 customers meeting small business criteria on Pacific Power's website. Qualifying equipment must be installed by an approved contractor/vendor.
			No[22]	No	Available to all Schedule 24 customers meeting very small business or named community small business criteria on Pacific Power's website. Qualifying equipment must be installed by an approved contractor/vendor.
Mid-market incentives		Determined by Pacific Power with not-to-exceed amounts as shown in	No	No	Incentives available at the point of purchase through approved distributors/retailers or via a

[21] Small business non-lighting enhanced incentives are capped at 90% of Energy Efficiency Measure Costs

[22] Very small business and Named Community small business non-lighting enhanced incentives are capped at 100% of Energy Efficiency Measure Costs.

Category	Incentive	Percent Project Cost Cap[16]	1-Year Simple Payback Cap for Projects[17]	Other Limitations
	incentive table for this offer			post-purchase customer application process.
Direct Install incentives	Determined by Pacific Power with not-to-exceed amounts as shown in incentive table for this offer	No	No	Specific limitations will be outlined on the program website.
HVAC Check-up incentives	See incentive lists	No	No	Qualifying measures must be installed or provided by an approved HVAC check-up contractor/vendor.
Custom Non-Lighting Incentives for qualifying measures not on the prescriptive list.[23], [24]	$0.24 per kWh annual savings	70%	Yes	N/A
Energy Management	$0.025 per kWh annual savings	No	No	N/A
Energy Project Manager Co-Funding	$0.025 per kWh annual savings	100% of salary and eligible overhead	No	Minimum savings goal posted on Pacific Power website.

[23] Project Cost and 1-Year Simple Payback Caps do not apply to New Construction and Major Renovation projects that are subject to state energy code.
[24] Refer to the Pacific Power website for Waste Heat to Power incentive eligibility requirements.

Energy Project Manager Co-funding Incentives

Payment No.	Payment Amount	Milestone
1 - Initial payment	1/3 of funding amount* (not to exceed $25,000)	1. You select an Energy Project Manager 2. We work together on Comprehensive Plan for electric energy savings 3. You sign the Energy Project Manager Offer Letter
2 - Final payment	$0.025 per kwh of energy savings achieved, to a maximum 100 percent of approved Energy Project Manager Salary and less the initial payment	1. At the end of performance period as defined in the Energy Project Manager Offer Letter

**Funding amount is based on the lesser of (a) $0.025 per kWh or (b) the total annual cost of the Energy Project Manager (salary plus overhead).*

Lighting System Retrofits Incentive Table

Category	Eligibility Requirements		Customer Incentive
Interior Lighting	Full Fixture Replacement	With upgrade to Advanced Controls	$0.38/kWh
		With upgrade to Basic Controls	$0.32/kWh
		Without controls upgrade	$0.29/kWh
	Fixture Retrofit Kits	With controls upgrade to Basic or Advanced Networked Lighting Controls	$0.29/kWh
		Without controls upgrade	$0.23/kWh
	Lamp Replacement	Lamp-only Replacements	See Mid-market incentive table
	Controls-only Retrofit	Controls-only upgrade to Advanced Networked Lighting Controls	$0.38/kWh
		Controls-only upgrade to Basic Controls	$0.29/kWh
Exterior Lighting	Full Fixture Replacement (except Street Lighting)	With upgrade to Advanced Dimming Controls	$0.18/kWh
		Without controls upgrade	$0.10/kWh
	Fixture Retrofit Kits (except Street Lighting)	With upgrade to Advanced Dimming Controls	$0.12/kWh
		Without controls upgrade	$0.09/kWh
	Lamp Replacement (except Street Lighting)	Lamp-only Replacements	See Mid-market incentive table
	Street Lighting	With upgrade to Advanced Dimming Controls	$0.12/kWh
		Without controls upgrade	$0.09/kWh
	Controls-only Retrofit	Controls-only upgrade to Advanced Dimming Controls	$0.12/kWh
Non-General Illuminance	LED Case Lighting – Refrigerated Case	LED replacing fluorescent lamp in existing refrigerated cases. LED must be listed on qualified equipment list.	$14/linear foot
	LED Case Lighting – Freezer Case		$14/linear foot
	Refrigerated Case Occupancy Sensor	Installed in existing refrigerated case with LED lighting	$1.50/linear foot
Controlled Environment Agriculture (CEA)	Full Fixture Replacement	With or without controls upgrade	$0.20/kWh
	Lamp Replacement	Lamp-only Replacements With or without controls upgrade	See Mid-market incentive table
Custom Lighting	Custom	Not listed above	$0.11/kWh

Notes for retrofit lighting incentive table

1. To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced or the baseline lighting system as determined by Pacific Power. To be eligible for an incentive for a system with controls, the new controls must save energy relative to existing controls.
2. Incentives are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy Efficiency Project Costs are subject to Pacific Power approval.
3. Incentives listed as $/kWh are paid per kWh annual energy savings as determined by Pacific Power.
4. Eligible retrofit lighting equipment is defined in qualified equipment lists posted on the Washington energy efficiency program section of Pacific Power's website.
5. A complete list of lighting equipment not eligible for retrofit incentives is available on the Washington energy efficiency program section of Pacific Power's website.

New Construction/Major Renovation Lighting Incentive Table

Measure	Category	Eligibility Requirements	Customer Incentive
Interior Lighting	Troffer	Product must be listed on qualified equipment list. Products must be installed in facilities where energy code applies.	$14/Fixture
	Linear Ambient		$14/Fixture
	High Bay		$30/Fixture
	Other Fixtures (not listed above)		$0.74/Fixture Wattage
	Advanced Networked Lighting Controls		$1.20/W Controlled
	Custom Interior Lighting	Products must be installed in facilities where energy code does not apply.	$0.10/kWh annual energy savings
Controlled Environment Agriculture (CEA)	LED Fixture	Product must be listed on qualified equipment list. Products must be installed in facilities where energy code does not apply.	$0.12 /kWh

Notes for New Construction/Major Renovation Lighting Incentive Table

1. Project Cost Caps of 70% and 1-Year Simple Payback Caps apply to New Construction and Major Renovation projects that are not subject to state energy code. The 1-Year simple payback cap means incentives will not be available to reduce the simple payback of a project below one year. If required, individual measure incentives will be adjusted downward pro-rata so the project has a simple payback after incentives of one year.
2. Lighting equipment installed to comply with the applicable version of the state energy code, but not exceeding that code, is not eligible for incentives. Lighting equipment that exceeds the applicable version of the state energy code is eligible for incentives.
3. Eligible lighting equipment is defined in qualified equipment lists posted on the Washington energy efficiency program section of Pacific Power's website.

Motor Incentives Table

Equipment Type	Size Category	Sub-Category	Minimum Efficiency Requirement	Customer Incentive
Variable-Frequency Drives (HVAC fans and pumps)	≤ 100 horsepower	HVAC fans and pumps	See Note 2	$81 /horsepower
Green Motor Rewinds	≥ 15 and ≤ 5,000 hp	--	Must meet GMPG Standards	$1/horsepower (See Note 3)
Electronically Commutated Motor (ECM) - Retrofit Only	≥ 1 and ≤ 10 hp	HVAC fans and pumps	Must meet NEMA Standards	$93/horsepower

Notes for other motor incentives table:

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Throttling or bypass devices, such as inlet vanes, bypass dampers, three-way valves, or throttling valves must be removed or permanently disabled to qualify for HVAC fan or pump VFD incentives. VFDs required by or used to comply with the applicable version of the energy code are not eligible for incentives. Savings will only be realized for installations where a variable load is present.
3. Green Motor Rewind motors that are installed or placed in inventory may qualify for an incentive. For Green Motor Rewinds, the participating electric motor service center is paid $2/horsepower for eligible Green Motor Rewinds. A minimum of $1/hp is paid by the service center to the Customer as a credit on the motor rewind invoice. The balance is retained by the service center.

GMPG = Green Motors Practices Group
HP = Horsepower
HVAC = Heating, Ventilating and Air Conditioning
NEMA = National Electrical Manufacturers Association
VFD = Variable Frequency Drive

New Construction/Major Renovation HVAC Equipment Incentive Table

Measure	Eligibility Requirements	Customer Incentive
HVAC Systems	Systems must be installed in office, retail, library, education, and multi-family occupancies where the applicable state energy code is Washington State Energy Code 2018 or 2021 and the Total System Performance Ratio (TSPR) requirement applies. The TSPR must exceed that of the standard reference design specified by the applicable version of the Washington State Energy Code.	$0.18/kWh

Notes for New Construction/Major Renovation HVAC Equipment incentive table

1. For HVAC systems serving occupancy types not subject to or exempt from TSPR requirement, see the HVAC Equipment Incentive Table or the Other HVAC Equipment and Controls Incentive Table below.
2. Incentives listed as $/kWh are paid per kWh annual energy savings as determined by Pacific Power.

HVAC = Heating, Ventilation and Air-Conditioning
TSPR = Total System Performance Ratio

HVAC Equipment Incentive Table

			Minimum Efficiency Requirement & Customer Incentive		
Equipment Type	**Size Category**	**Sub-Category**	**$31/ton**	**$62/ton**	**$93/ton**
Unitary Commercial Air Conditioners, Air-Cooled (See note 7)	< 65,000 Btu/hr (single phase)	Split system and single package	--	CEE Tier 2 or ENERGY STAR® Certified	CEE Advanced Tier
	All equipment sizes (three phase)	Split system and single package	--		CEE Advanced Tier
Unitary Commercial Air Conditioners, Water Cooled (See note 7)	All equipment sizes	Split system and single package	CEE Tier 1	--	--
Unitary Commercial Air Conditioners, Evaporatively Cooled (See note 7)	All equipment sizes	Split system and single package	--	CEE Tier 1	--
Packaged Terminal Air Conditioners (PTAC)	≤ 7,000 Btu/hr	Single package	14.3 EER	--	--
	> 7,000 Btu/hr and ≤ 15,000 Btu/hr	Single package	12.8 EER	--	--
	> 15,000 Btu/hr	Single package	11.4 EER	--	--
Packaged Terminal Heat Pumps (PTHP) (Heating & Cooling Mode)	≤ 7,000 Btu/hr	Single package	--	14.3 EER and 4.0 COP	--
	> 7,000 Btu/hr and ≤ 15,000 Btu/hr	Single package	--	12.8 EER and 3.8 COP	--
	> 15,000 Btu/hr	Single package	--	11.4 EER and 3.5 COP	--
Heat Pumps, Air-Cooled (Cooling Mode) (See note 7)	< 65,000 Btu/hr (single phase)	Split system and single package	--	ENERGY STAR® Certified	--
	< 65,000 Btu/hr (three phase)	Split system and single package		ENERGY STAR® Certified	--
	≥ 65,000 Btu/hr and < 240,000 Btu/hr (three phase)	Split system and single package			--
Heat Pumps, Air-Cooled (Heating Mode)	< 65, 000 Btu/hr (single phase)	Split system and single package (See note 3)	--	ENERGY STAR® Certified	--
	< 65,000 Btu/hr (three phase)	Split system and single package (See note 3)		ENERGY STAR® Certified	--
	≥ 65,000 Btu/hr and < 240,000 Btu/hr (three phase)	(See note 3)			
Heat Pumps, Water-Source (Cooling Mode)	< 135,000 Btu/hr	(See note 3)	--	CEE Tier 1	--
Heat Pumps, Water-Source (Heating Mode)	< 135,000 Btu/hr	(See note 3)	--	CEE Tier 1	--

			Minimum Efficiency Requirement & Customer Incentive		
Equipment Type	**Size Category**	**Sub-Category**	**$31/ton**	**$62/ton**	**$93/ton**
VRF Air-Cooled Heat Pumps (Cooling Mode)	<65,000 Btu/hr	Multisplit System or Multisplit System with Heat Recovery	--	--	15 SEER and 12.5 EER
	≥65,000 Btu/hr and <135,000 Btu/hr		--	--	11.5 EER and 16 IEER
	≥135,000 Btu/hr and <240,000 Btu/hr		--	--	10.9 EER and 15.4 IEER
	>240,000 Btu/hr		--	--	9.6 EER and 14.3 IEER
VRF Air-Cooled Heat Pumps (Heating Mode) (See note 3)	<65,000 Btu/hr	--	--	--	8.5 HSPF
	≥65,000 Btu/hr and <135,000 Btu/hr	47°Fdb/43° wb outdoor air	--	--	3.4 COP
		17°Fdb/15° wb outdoor air	--	--	2.4 COP
	>135,000 Btu/hr	47°Fdb/43° wb outdoor air	--	--	3.2 COP
		17°Fdb/15° wb outdoor air	--	--	2.05 COP
VRF Water-Cooled Heat Pumps (Cooling Mode)	< 135,000 Btu/hr	Multisplit System or Multisplit System with Heat Recovery	--	--	CEE Tier 1
VRF Water-Cooled Heat Pumps (Heating Mode) (See note 3)	< 135,000 Btu/hr	Multisplit System or Multisplit System with Heat Recovery	--	--	CEE Tier 1
Heat Pumps, Ground-Source or Groundwater-Source (Heating & Cooling Mode)	All sizes	(See note 3)	--	ENERGY STAR® Certified	--
Ground Source or Groundwater-Source Heat Pump Loop	All sizes	Open Loop	**$31/ton**	--	--
		Closed Loop			

Equipment Type	Size Category	Sub-Category	Minimum Efficiency Requirement & Customer Incentive	
			$250/ton	**$312/ton**
Heat Pumps, Air-Cooled, replacing electric resistance heating (Cooling Mode) (Retrofit only) (See note 3 and 7)	All sizes	Split system and single package		ENERGY STAR® Certified
	< 65,000 Btu/hr		CEE Tier 1	CEE Tier 2 or ENERGY STAR® Certified
Heat Pumps, Air Cooled, replacing electric resistance heating (Heating Mode) (Retrofit only) (See note 3 and 7)	All sizes	Split system and single package		ENERGY STAR® Certified
	< 65,000 Btu/hr		CEE Tier 1	CEE Tier 2 or ENERGY STAR® Certified

Notes for HVAC Equipment incentive tables

1. Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for the listed incentive. Equipment must meet all listed efficiency requirements to qualify for the listed incentives.
2. PTHPs can replace electric resistive heating, which must be removed.
3. Incentives for heat pumps are available per ton of cooling capacity ONLY. No incentives are paid per ton of heating capacity. Heat Pumps must meet both the cooling mode and heating mode efficiency requirements to qualify for per ton cooling efficiency incentives.
4. Equipment size categories are specified in terms of net cooling capacity at AHRI standard conditions as determined by AHRI Standard 210/240 for units <65,000 Btu/hr, AHRI Standard 340/360 for units ≥65,000 Btu/hr, AHRI Standard 1230 for VRF systems, and AHRI Standard 310/380 for PTAC and PTHP units.
5. Ground and Water Source Heat Pumps must meet or exceed listed efficiency requirements when rated in accordance with ISO-13256-1 to qualify for the listed incentive.
6. Efficiency requirements align with the Consortium for Energy Efficiency (CEE) Unitary Air-Conditioning and Heat Pump Specification or ENERGY STAR for equipment with heating sections other than electric resistance. Minimum efficiency requirements are listed on Pacific Power's website.
7. Equipment must meet CEE/ENERGY STAR part load efficiency requirements (SEER/SEER2 or IEER/IEER2). Equipment does not need to meet CEE/ENERGY STAR full load efficiency requirements (EER/EER2), as long as the part load efficiency requirement is also specified for the equipment by CEE/ENERGY STAR. If CEE/ENERGY STAR only lists full load efficiency requirements (EER/EER2), then equipment must meet this standard. Additionally, the equipment must meet or exceed state or federal full load efficiency standards, whichever is more stringent.
8. Incentives listed in the above table are not available for New Construction and Major Renovation project HVAC systems serving office, retail, library, educational, and multi-family occupancies that are subject to the HVAC total system performance ratio (TSPR) requirement in Washington State Energy Code 2018 or 2021. See New Construction/Major Renovation HVAC Equipment Incentive Table for incentive information.

AHRI = Air-Conditioning, Heating and Refrigeration Institute
CEE = Consortium for Energy Efficiency
COP = Coefficient of Performance

EER/EER2 = Energy Efficiency Ratio
HSPF/HSPF2 = Heating Seasonal Performance Factor
HVAC = Heating, Ventilation and Air-Conditioning
IEER/IEER2 = Integrated Energy Efficiency Ratio
PTAC = Packaged Terminal Air Conditioner
PTHP = Packaged Terminal Heat Pump
SEER/SEER2 = Seasonal Energy Efficiency Ratio
VRF = Variable Refrigerant Flow
TSPR = Total System Performance Ratio

Other HVAC Equipment and Controls Incentive Table

Equipment Type	Size Category	Sub-Category	Minimum Efficiency Requirement	Customer Incentive
Evaporative Cooling	All sizes	Direct or Indirect		$0.07/ CFM
Indirect-Direct Evaporative Cooling (IDEC)	All sizes	--	Applicable system components must exceed minimum efficiencies required by energy code	$0.18/kWh annual energy Savings (See Note 2)
Chillers	All except chillers intended for backup service only	Serving primarily occupant comfort cooling loads (no more than 20% of process cooling loads)	Must exceed minimum efficiencies required by energy code	$0.18/kWh annual energy Savings (See Note 3)
365/366 day Programmable or Occupancy-based Thermostat	All sizes in portable classrooms with mechanical cooling	Must be installed in portable classroom unoccupied during summer months	365/366 day thermostatic or occupancy based setback capability	$187/thermostat
Occupancy Based PTHP/PTAC control (Retrofit only)	All sizes with no prior occupancy based control	--	See Note 4	$62/controller
Evaporative Pre-cooler (Retrofit Only)		For single air-cooled packaged rooftop or matched split system condensers only.	Minimum performance efficiency of 75%. Must have enthalpy controls to control pre-cooler operation. Water supply must have chemical or mechanical water treatment.	$93/ton of attached cooling capacity (See Note 5)
Advanced Rooftop Unit Control (Existing RTU)	< 5 ton	Must be installed on existing unitary packaged rooftop units (no split-systems), with constant speed supply fans.	Controls must include: - Either a supply fan VFD or multi-speed supply fan motor with controller that meets ventilation and space conditioning needs - Digital, integrated economizer control	$500
	≥ 5 tons and ≤ 10 tons			$2,900
	> 10 tons and ≤ 15 tons			$3,900
	> 15 tons and ≤ 20 tons			$5,400
	> 20 tons			$6,000
Advanced Rooftop Unit Control (Existing RTU, Demand-Controlled Ventilation only)	< 5 ton	Must be installed on existing unitary packaged rooftop units (no split-systems).	Controls must include: - Digital, integrated economizer controls that modulate based on occupancy - CO2 or occupancy-based sensor	$350
	≥ 5 tons and ≤ 10 tons			$625
	> 10 tons and ≤ 15 tons			$750
	> 15 tons and ≤ 20 tons			$875
	> 20 tons			$1,000

Advanced Rooftop Unit Control (New RTU)	< 5 ton	Must be installed on unitary packaged rooftop units (no split-systems), See Note 6	Controls must include: - Either a supply fan VFD or multi-speed supply fan motor with controller that meets ventilation and space conditioning needs - Digital, integrated economizer control	$200
	≥ 5 tons and ≤ 10 tons			$1,400
	> 10 tons and ≤ 15 tons			$2,000
	> 15 tons and ≤ 20 tons			$2,800
	> 20 tons			$3,200
Smart Thermostat	Residential (used in a business)		See Home Energy Savings program	

Notes for other HVAC equipment and controls incentive table

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Incentives are paid at $0.18/kWh annual energy savings. IDEC energy savings subject to approval by Pacific Power.
3. Incentives are paid at $0.18/kWh annual energy savings. Chiller energy savings subject to approval by Pacific Power.
4. Controller units must include an occupancy based control and include the capability to set back the zone temperature during extended unoccupied periods and set up the temperature once the zone is occupied.
5. Incentives for Evaporative Pre-coolers are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy Efficiency Project Costs are subject to Pacific Power approval.
6. Incentives are not available for new Advanced Rooftop Unit Control required by the applicable version of the state energy code.
7. Incentives listed in the above table are not available for New Construction and Major Renovation project HVAC systems serving office, retail, library, educational, and multi-family occupancies that are subject to the HVAC total system performance ratio (TSPR) requirement in Washington State Energy Code 2018 or 2021. See New Construction/Major Renovation HVAC Equipment Incentive Table for incentive information.

CFM = Cubic Feet per Minute
DCV = Demand-Controlled Ventilation
IDEC = Indirect Direct Evaporative Cooling
HVAC = Heating, Ventilation and Air-Conditioning
PTHP = Packaged Terminal Heat Pump
PTAC = Packaged Terminal Air Conditioner
TSPR = Total System Performance Ratio

Building Envelope (Retrofit) Incentives

Equipment Type	Category	Minimum Efficiency Requirement	Customer Incentive
Cool Roof	--	Must meet the minimum SRI specified by the Green Globes Building Certification v1.0	$0.06/square foot
Roof/Attic Insulation	--	Minimum increment of R-10 insulation	$0.08/square foot
Wall Insulation	--	Minimum increment of R-10 insulation	$0.10/square foot
Windows (See Note 3, 4)	Site-Built	U-Factor ≤ 0.30 and SHGC ≤ 0.33 (Glazing Only Rating)	$0.42/square foot
	Assembly	U-Factor ≤ 0.30 and SHGC ≤ 0.33 (Entire Window Assembly Rating)	$0.42/square foot
Window Film	Existing Windows	See Note 5	$0.18/kWh annual energy savings (See Note 5)

Notes for retrofit building envelope incentive table

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Building must be conditioned with mechanical cooling to be eligible for envelope incentives.
3. Energy performance of window assemblies and glazing products must be rated in accordance with NFRC. Site-Built metal window systems must include a thermal break within the frame or other appropriate NFRC certification to qualify for incentives. Skylights are not eligible to receive incentives.
4. Window square footage is determined by the dimensions of the entire window assembly, not just the window glass.
5. Incentives for window film are calculated based on film specifications and window orientation at $0.18/kWh annual energy savings. Energy savings subject to approval by Pacific Power.

NFRC = National Fenestration Rating Council
SHGC = Solar Heat Gain Coefficient
SRI = Solar Reflectance Index

Building Envelope (New Construction/Major Renovation) Incentives

Equipment Type	Category	Minimum Efficiency Requirement	Customer Incentive
Windows (See Note 3, 4)	Site-Built	U-Factor ≤ 0.30 and SHGC ≤ 0.33 (Glazing Only Rating)	$0.42/square foot
	Assembly	U-Factor ≤ 0.30 and SHGC ≤ 0.33 (Entire Window Assembly Rating)	$0.42/square foot

Notes for building envelope (new construction/major renovation) incentives table

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Building must be conditioned with mechanical cooling to be eligible for envelope incentives.
3. Window square footage is determined by the dimensions of the entire window assembly, not just the window glass.
4. Energy performance of window assemblies and glazing products must be rated in accordance with NFRC. Site-Built metal window systems must include a thermal break within the frame or other appropriate NFRC certification to qualify for incentives. Skylights are not eligible to receive incentives.
5. Equipment installed to comply with the applicable version of the state energy code, but not exceeding that code, is not eligible for incentives.

NFRC = National Fenestration Rating Council
SHGC = Solar Heat Gain Coefficient

Food Service Equipment Incentives

Equipment Type	Equipment Category	Minimum Efficiency Requirement	Customer Incentive
Commercial Dishwasher (High Temperature models w/ electric boosters Only)	Undercounter	ENERGY STAR Certified	$125
	Stationary Rack, Single Tank, Door Type		$500
	Single Tank Conveyor		$1,250
	Multiple Tank Conveyor		$625
Electric Insulated Holding Cabinet	Double Size	ENERGY STAR Certified	$400
	Full Size		$857
	Half Size		$250
Electric Convection Oven	Full Size	ENERGY STAR Certified	$250
	Half Size		
Electric Griddle	Single-sided	ENERGY STARCertified	$400
Electric Combination Oven	3 - 40 pans	ENERGY STAR Certified	$650
Demand Controlled Kitchen Ventilation Exhaust Hood	Must be installed on commercial kitchen exhaust system.	Variable speed motors must be controlled to vary fan speed depending upon kitchen demand, as indicated by connected sensors.	$0.18 /kWh annual energy savings (See note 2)
Anti-Sweat Heater Controls (Retrofit Only)	Low-Temp (Freezing) Cases	Technologies that reduce energy consumption of anti-sweat heaters based on sensing humidity.	$25 /linear foot (case length)
	Med-Temp (Refrigerated) Cases		$20 /linear foot (case length)

Notes for food service equipment incentives table

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Incentives are paid at $0.18/kWh annual energy savings. Demand controlled kitchen ventilation exhaust hood energy savings subject to approval by Pacific Power.
3. Demand controlled kitchen ventilation exhaust hoods required by or used to comply with the applicable version of the energy code are not eligible for incentives.
4. Incentives for Demand Controlled Kitchen Ventilation Exhaust Hoods are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy Efficiency Project Costs are subject to Pacific Power approval.

Appliances Incentive Table

Equipment Type	Equipment Category	Minimum Efficiency Requirement	Customer Incentive
High-Efficiency Clothes Washer	Residential (used in a business)	See Home Energy Savings program	
	Commercial Front-load (must have electric water heating and/or electric clothes dryer)	ENERGY STAR Certified	$300
Heat Pump Water Heater	Residential (used in a business)	NEEA Tier 3 or higher	$900
Heat Pump Clothes Dryer	Residential (used in a business)	See Home Energy Savings program	
Hybrid Heat Pump Clothes Dryer	Residential (used in a business)	See Home Energy Savings program	

Notes for appliances incentive table

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Equipment must meet the efficiency rating standard that is in effect on the date of purchase.
3. Refer to Pacific Power's Home Energy Savings program for efficiency requirements and incentives for listed residential appliances used in a business.
4. Additional incentive may be available to an approved Wattsmart Business Vendor contractor involved in the installation of an eligible heat pump water heater. Please see the Home Energy Savings program.

Incentives for Other Energy Efficiency Measures

Equipment Type	Replace	Minimum Efficiency Requirements	Customer Incentive
Engine Block Heater Control	No existing control	Controller must function thermostatically and be compatible with 110-volt, single-phase resistance immersion heaters. In addition, controller must be permanently installed at the participant site or on a vehicle. This incentive is only available for buses, delivery vehicles, and mass transit vehicles.	$120/qualifying unit

Notes for other energy efficiency measures incentives table

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.

Irrigation Incentives for Wheel Line, Hand Line, or Other Portable Water Distribution Systems (Retrofit Only)

Irrigation Measure	Replace	With	Limitations	Customer Incentive
New rotating, sprinkler replacing worn or leaking impact or rotating sprinkler	Leaking or malfunctioning impact rotating sprinkler	Rotating sprinkler	1. Fixed-in-place (solid set) systems not eligible. 2. Incentive limited to two sprinklers per irrigated acre.	$0.50 each
New impact Sprinkler replacing worn or leaking impact sprinkler	Leaking or malfunctioning impact sprinkler	New impact sprinkler	1 1. Fixed-in-place (solid set) systems not eligible. 2. Incentive limited to two sprinklers per irrigated acre.	$0.50 each
New nozzle replacing worn nozzle of same design flow or less on existing sprinkler	Worn nozzle	New nozzle (including flow control nozzles) of same design flow or less	1. Flow rate shall not be increased. 2. Fixed-in-place (solid set) systems not eligible. 3. Incentive limited to two nozzles per irrigated acre.	$1.50 each
New gasket replacing leaking gasket, including mainline valve or section gasket, seal, or riser cap (dome disc)	Leaking gasket	New gasket, including mainline valve or section gasket, seal, or riser cap (dome disc)	1. New gasket must replace leaking gasket. 2. Fixed-in-place (solid set) systems not eligible. 3. Incentive limited to two gaskets per irrigated acre.	$2 each
New drain replacing leaking drain	Leaking drain	New drain, including drains on pivots and linears	1. New drain must replace leaking drain. 2. Fixed-in-place (solid set) systems not eligible. 3. Incentive limited to two drains per irrigated acre.	$2 each
New or rebuilt wheel line leveler replacing leaking or malfunctioning leveler	Replace leaking or malfunctioning leveler	New or rebuilt leveler	1. Applies to leaking or malfunctioning levelers only. 2. For rebuilds, invoice must show number of rebuild kits purchased and installed.	$1 each

Irrigation Incentives for Pivot and Linear Water Distribution Systems (Retrofit Only)

Irrigation Measure	Replace	With	Limitations	Customer Incentive
Pivot and linear sprinkler package replacement, high pressure	Worn impact sprinkler	New impact sprinkler or rotator, including nozzle	Design flow shall not be increased	$7 each
Pivot and linear sprinkler package replacement, MESA	Worn low pressure sprinkler and regulator	New low pressure sprinkler, including nozzle, and regulator	Applicable to MESA-configured center pivots and linears. Design flow rate shall not be increased.	$4 each
Pivot and linear sprinkler package replacement, LESA/LEPA/MDI	Worn low pressure sprinkler and regulator	New low pressure sprinkler, including nozzle, and regulator	Applicable to LESA/LEPA/MDI-configured center pivots and linears. Design flow rate shall not be increased.	$2 each
Pivot and linear upgrade from high pressure to MESA	Conversion of center pivot or linear move from high pressure (impact) sprinklers on top.	Conversion of center pivot or linear move to MESA configuration	Incentive is per drop. Design flow rate shall not be increased.	$7 each

Pivot and linear upgrade from high pressure to LESA/LEPA/MDI	Conversion of center pivot or linear move from high pressure (impact) sprinklers on top.	Conversion of center pivot or linear move to LESA/LEPA/MDI configuration	Incentive is per drop. Design flow rate shall not be increased.	$7 each
Pivot and linear upgrade from MESA to LESA/LEPA/MDI	Conversion of center pivot or linear move from MESA configuration	Conversion of center pivot or linear move to LESA/LEPA/MDI configuration	Incentive is per drop. Design flow rate shall not be increased.	$5 each

Irrigation Incentives for Any Type of System (Retrofit or New Construction, Including Non-agricultural Irrigation Applications)

Irrigation Measure	Replace	With	Limitations	Customer Incentive
Irrigation pump VFD		Add variable frequency drive to existing or new irrigation pump	1. Pumps serving any type of irrigation water transport or distribution system are eligible – wheel lines, hand lines, pivots, linears, fixed-in-place (solid set). 2. Both retrofit and new construction projects are eligible. 3. Incentives are capped at 70 percent of Energy Efficiency Project Costs, and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy savings and Energy Efficiency Project Costs are subject to Pacific Power approval.	$0.24/kWh annual savings

Notes for irrigation incentive tables
1. Equipment that meets or exceeds the requirements above may qualify for the listed incentive.
2. Except for the pump VFD measure, incentives listed here are available only for retrofit projects where new equipment replaces existing equipment (i.e., new construction is not eligible).
3 Except for the pump VFD measure, equipment installed in fixed-in-place (solid set) systems is not eligible. Incentive is limited to two units per irrigated acre.

LESA/LEPA/MDI = Low-Elevation Spray Application/ Low Energy Precision Application/ Mobile Drip Irrigation
MESA = mid-elevation spray application
VFD = Variable Frequency Drive

Farm and Dairy Incentives

Equipment Type	Equipment Category	Minimum Efficiency Requirements	Customer Incentive
Automatic Milker Takeoffs (Retrofit Only)	--	Equipment must be able to sense milk flow and remove milker when flow reaches a pre-set level. The vacuum pump serving the affected milking units must be equipped with a VFD. Incentive is available for adding automatic milker takeoffs to existing milking systems, not for takeoffs on a brand new system where there was none before. Replacement of existing automatic milker takeoffs is not eligible for this listed incentive, but may qualify for a Custom Energy Efficiency Incentive.	$294 each
High Efficiency Circulating Fans (See Note 2)	12-23" Diameter	Fan must achieve an efficiency level of 11 cfm/W	$31/fan
	24-35" Diameter	Fan must achieve an efficiency level of 18 cfm/W	$44/fan
	36-47" Diameter	Fan must achieve an efficiency level of 18 cfm/W	$62/fan
	≥48" Diameter	Fan must achieve an efficiency level of 25 cfm/W	$94/fan
Heat Recovery	--	Heat recovery unit must use heat rejected from milk cooling refrigeration system to heat water. Customer must use electricity for water heating.	$0.24/kWh annual energy savings
High-efficiency Ventilation Fans (See Note 2)	12-23" Diameter	Fan must achieve an efficiency level of 11 cfm/W	$56/fan
	24-35" Diameter	Fan must achieve an efficiency level of 13 cfm/W	$94/fan
	36-47" Diameter	Fan must achieve an efficiency level of 17 cfm/W	$156/fan
	≥48" Diameter	Fan must achieve an efficiency level of 19.5 cfm/W	$188/fan
Milk Pre-coolers (Retrofit Only)	--	The equipment must cool milk with well-water before it reaches the bulk cooling tank.	$0.24/kWh annual energy savings
Programmable Ventilation Controllers	--	Controller must control ventilation fans based on temperature or other applicable factors such as humidity, odor concentration, etc.	$25/fan controlled
Variable Frequency Drives for Dairy Vacuum Pumps (Retrofit Only)	--	VFD must vary motor speed based on target vacuum level. Incentive available for retrofit only (i.e., new construction and replacement of existing VFD not eligible.).	$206/hp
Potato or Onion Storage Fan VFD	--	Add variable frequency drive to existing or new fan in potato or onion storage	$219/hp

Notes for farm and dairy incentives table

1. Equipment that meets or exceeds the efficiency requirements above may qualify for the listed incentive.
2. Fan performance must be rated by an independent testing body in accordance with the appropriate ANSI/AMCA standards.
3. Incentives are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy savings and Energy Efficiency Project Costs are subject to Pacific Power approval.
4. Except where noted, all equipment listed in the table is eligible for incentives in both new construction and retrofit projects.

AMCA = Air Movement and Control Association International, Inc.
ANSI = American National Standards Institute
VFD = Variable Frequency Drive
cfm = cubic feet per minute
W = watt

Compressed Air Incentives

Equipment Category	Replace	With	Limitations	Customer Incentive
Receiver Capacity Addition	Limited or no receiver capacity (≤ 2 gallons per scfm of trim compressor capacity)	Total receiver capacity after addition must be > 2 gallons per scfm of trim compressor capacity	1. Compressor system size ≤ 75 horsepower, not counting backup compressor(s). 2. Trim compressor must use load/unload control, not inlet modulation or on/off control. 3. Systems with VFD compressor or using variable displacement compressor are not eligible.	$3.75/gallon above 2 gallons per scfm
Cycling Refrigerated Dryers	Non-cycling refrigerated dryer	Cycling refrigerated dryer	1. Rated dryer capacity must be ≤ 500 scfm 2. Dryer must operate exclusively in cycling mode and cannot be equipped with the ability to select between cycling and non-cycling mode. 3. Refrigeration compressor must cycle off during periods of reduced demand	$2.50/scfm
VFD Controlled Compressor (Retrofit Only)	Fixed speed compressor	≤ 75 hp VFD controlled oil-injected screw compressor operating in system with total compressor capacity ≤ 75 hp, not counting backup compressor capacity	1. Total compressor capacity in upgraded system is ≤ 75 hp, not counting backup compressor capacity. 2. Compressor must adjust speed as primary means of capacity control.	$0.24/kWh annual energy savings
Zero Loss Condensate Drains	Timer drain	Zero loss condensate drain (See Note 4)	Drain is designed to function without release of compressed air into the atmosphere. Any size system is eligible – there is no restriction on compressor size.	$125 each
Outside Air Intake	Compressor intake drawing air from compressor room	≤ 75 hp compressor where permanent ductwork between compressor air intake and outdoors	Ductwork must meet manufacturer's specifications, which may include: (a) ≤ 0.25" W.C. pressure loss at rated flow, and (b) allow use of compressor room air during extremely cold outside air conditions	$7.50/hp

Notes for compressed air incentive table

1. Equipment that meets or exceeds the efficiency requirements above may qualify for the listed incentive.
2. Except for the zero loss condensate drain measure, eligibility for incentives is limited to compressed air systems with total compressor capacity of 75 hp or less, not including backup compressor capacity that does not normally run.
3. Incentives are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy savings and Energy Efficiency Project Costs are subject to Pacific Power approval.
4. Zero Loss Condensate Drains purchased as an integral part of another measure are eligible for the incentive shown above.

hp = horsepower
PPM = parts per million
PSI = pounds per square inch
scfm = cubic feet of air per minute at standard conditions (14.5 psia, 68°F, and 0% relative humidity)
VFD = Variable Frequency Drive

Incentives for Wastewater and other Refrigeration Energy Efficiency Measures

Equipment Type	Replace	With	Customer Incentive
Adaptive refrigeration control	Conventional controls (defrost timeclock, space thermostat, evaporator fan control, if any, thermal expansion valve in some instances)	Adaptive refrigeration controller and, in some instances, electric expansion valve	$0.24/kWh annual energy savings
Fast acting door	Manually operated door, automatic door with long cycle time, strip curtain, or entryway with no door in refrigerated/conditioned space	Fast acting door	$0.24/kWh annual energy savings
Wastewater – low power mixer	Excess aeration capacity	Extended range circulator	$0.24/kWh annual energy savings

Notes for wastewater and other refrigeration energy efficiency measures incentives table

1. Equipment that meets or exceeds the efficiency requirements above may qualify for the listed incentive.
2. Incentives are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year. Energy savings and Energy Efficiency Project Costs are subject to Pacific Power approval.

Enhanced Incentives for Small Businesses – Lighting (Retrofit only)

Customer Eligibility Requirements	Equipment Eligibility Requirement		Customer Incentive
Small business	LED Lighting Retrofits (not listed below)		$0.38/kWh
	LED Exterior Full Fixture Replacement (except Street Lighting)	With upgrade to Advanced Dimming Controls	$0.18/kWh
		Without controls upgrade	$0.10/kWh
	LED Exterior Fixture Retrofit Kits (except Street Lighting)	With upgrade to Advanced Dimming Controls	$0.12/kWh
		Without controls upgrade	$0.09/kWh
	LED Exterior Replacement Lamps (except Street Lighting)	With or without controls upgrade	$0.07/kWh
	Lighting Controls (interior only)	PIR, Dual Tech, Integral Sensor, or Basic Controls	$0.32/kWh
		Advanced Networked Lighting Controls	$0.38/kWh

Notes for enhanced incentives for small businesses – lighting table:

1. Incentives for equipment listed in this table are only available for small business customers meeting customer eligibility requirements posted on Pacific Power's website.
2. To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced or the baseline lighting system as determined by Pacific Power.
3. Incentives are paid per kWh annual energy savings as determined by Pacific Power. Incentives are capped at 90 percent of Energy Efficiency Project Costs. Energy Efficiency Project Costs and energy savings are subject to Pacific Power approval.
4. Eligible lighting equipment is defined in qualified equipment lists posted on the Washington energy efficiency program section of Pacific Power's website.
5. Lighting control incentives ($/kWh) are paid per kWh annual energy savings from the installation of lighting controls as determined by Pacific Power.

LED –Light Emitting Diode
PIR – Passive infrared

Enhanced Incentives for Select Very Small Businesses and Named Community Small Businesses – Lighting (Retrofit only)

<table>
<tr><th>Customer Eligibility Requirements</th><th colspan="2">Equipment Eligibility Requirement</th><th>Customer Incentive</th></tr>
<tr><td rowspan="3">Small businesses that meet specific eligibility requirements

Named community small business</td><td colspan="2">LED Lighting Retrofits</td><td>$0.50/kWh</td></tr>
<tr><td rowspan="2">Lighting Controls (interior only)</td><td>PIR, Dual Tech, Integral Sensor, or Basic Lighting Controls</td><td>$0.32/kWh</td></tr>
<tr><td>Advanced Networked Lighting Controls</td><td>$0.38/kWh</td></tr>
</table>

Notes for enhanced incentives for very small businesses and named community small businesses – lighting table:

1. Incentives for equipment listed in this table are only available for select very small business customers and named community small business customers meeting customer eligibility requirements posted on Pacific Power's website.
2. To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced or the baseline lighting system as determined by Pacific Power.
3. Incentives are paid per kWh annual energy savings as determined by Pacific Power. Incentives are capped at 100 percent of Energy Efficiency Project Costs. Energy Efficiency Project Costs and energy savings are subject to Pacific Power approval.
4. Eligible lighting equipment is defined in qualified equipment lists posted on the Washington energy efficiency program section of Pacific Power's website.
5. Lighting control incentives ($/kWh) are paid per kWh annual energy savings from the installation of lighting controls as determined by Pacific Power.

LED –Light Emitting Diode
PIR – Passive infrared

Enhanced Incentives for Small Businesses, Select Very Small Businesses, and Named Community Small Businesses – Non-lighting (Retrofit only)

Category	Measure	Eligibility Requirements	Maximum Incentive
Vehicle	Engine Block Heater Control	Controller must function thermostatically and be compatible with 110-volt, single-phase resistance immersion heaters. In addition, controller must be permanently installed at the participant site or on a vehicle. This incentive is only available to buses, delivery vehicles, and mass transit vehicles with no existing engine block heater controls.	Up to $200 per qualifying unit
HVAC	Ductless Heat Pump	Ductless heat pump must be 3 ton or less The zone where the DHP is installed must have pre-existing zonal electric resistance heat, may or may not have pre-existing cooling, and must not have or be served by a non-electric heating source. Applicable space types are offices, grocery and non-grocery retail, lodging common areas, and lodging guest rooms. Commercial kitchen, computer server room, or other space where heating is not required are not eligible.	Up to $2,500 per ton
	Thermostat	Qualified thermostat must have these capabilities: - Multiple temperature set-back schedules - Fan-mode scheduling (continuous-on versus auto mode) - Limited-duration over-rides (reverts to programming after 24 hours) - Remote (web-based) monitoring and programming - Automatic restoration after power outage - Support multiple cooling stages Thermostat must be web-connected (LAN or WAN), and remote programming must be operational.	Up to $300 per qualifying unit
Refrigeration	Anti-sweat Heater Controls (Retrofit Only)	Technologies that reduce energy consumption of anti-sweat heaters based on sensing humidity.	Up to $80 per linear ft
	Evaporator Fan Motor for Walk-in Cooler or Freezer	Installation of an electronically commutated motor (ECM) to replace a functioning shaded pole (SP) motor on an existing walk-in cooler or freezer evaporator fan motor.	Up to $200 per motor
	Evaporator Fan Motor for Display Case Cooler or Freezer	Installation of an electronically commutated motor (ECM) or permanent magnet synchronous motor (PMSM) to replace a functioning shaded pole (SP) or permanent split capacitor (PSC) on a display case cooler or freezer evaporator fan motor.	Up to $200 per motor
Water Heating	Heat Pump Water Heater (HPWH)	Residential heat pump water heater used in a business Must be NEEA Tier 3 or higher	Up to $1,500 per unit

Notes for enhanced incentives for very small businesses and named community small businesses – non-lighting table:

1. Incentives for equipment listed in this table are only available for small business customers, select very small business customers, named community small business customers meeting customer eligibility requirements posted on Pacific Power's website.
2. Incentives are capped at 90 percent of qualifying Energy Efficiency Measure Costs for customers meeting small business criteria. Energy Efficiency Measure Costs are subject to Pacific Power approval.
3. Incentives are capped at 100 percent of qualifying Energy Efficiency Measure Costs for customers meeting very small business or named communities business criteria. Energy Efficiency Measure Costs are subject to Pacific Power approval.

Mid-Market Incentives

Measure	Category	Eligibility Requirements	Maximum Incentive
LED	PLC Pin-based Lamp <10 W	LED must be listed on qualified equipment list	Up to $10/Lamp
	PLC Pin-based Lamp ≥ 10 W	LED must be listed on qualified equipment list	Up to $15/Lamp
	PLL Pin-based Lamp	LED must be listed on qualified equipment list	Up to $15/Lamp
	T8 TLED Lamp –	LED must be listed on qualified equipment list	Up to $10/Lamp
	T5 TLED Lamp	LED must be listed on qualified equipment list	Up to $15/Lamp
	HID Replacement Lamp <40 W	LED must be listed on qualified equipment list	Up to $50/Lamp
	HID Replacement Lamp ≥40 and < 70 W	LED must be listed on qualified equipment list	Up to $70/Lamp
	HID Replacement Lamp ≥70 and < 140 W	LED must be listed on qualified equipment list	Up to $90/Lamp
	HID Replacement Lamp ≥140W	LED must be listed on qualified equipment list	Up to $110/Lamp
	Wall Pack Fixture	LED must be listed on qualified equipment list	Up to $30/Fixture

Notes for mid-market incentives:

1. Incentives are capped at 70 percent of qualifying equipment costs. Qualifying equipment costs are subject to Pacific Power approval.
2. Qualified equipment lists referenced in the above table are posted on the Washington energy efficiency program section of Pacific Power's website.
3. Incentives for measures in this table are available through Pacific Power-approved retailers/distributors or a customer application process.
4. Actual incentives will be posted on Pacific Power's website and subject to change with 45 days' notice. Change notices will be prominently displayed on program website and communicated to participating retailers/distributors and Trade Allies.

HID = High Intensity Discharge (e.g., high pressure sodium, metal halide)
PLC = Pin Lamp Compact Fluorescent
PLL = Pin Lamp Long Compact Fluorescent
TLED = Tubular Light Emitting Diode
W = Watt

Direct Install Incentives

Measure	Category	Eligibility Requirements	Maximum Incentive
LED	T8 TLED Lamp – Type A, A/B Dual Mode	LED must be listed on qualified equipment list	Up to $10/Lamp

Notes for Direct Install Incentives

1. Incentives will be set at the full cost of the installed equipment, without exceeding the "up to" amount.

TLED = Tubular Light Emitting Diode

HVAC Check-up Incentives

Measure	Customer Incentive
Maintenance Agreement	$75/RTU
Thermostats	$350/Thermostat
Economizer	$150/RTU
Refrigerant	$35/Ton RTU Capacity

Notes for HVAC Check-up incentives:

Incentives are capped at 70 percent of qualifying Energy Efficiency Measure Costs. Qualifying Energy Efficiency Measure Costs are subject to Pacific Power approval.

RTU – Rooftop Unit

Other Programs & Initiatives

This section of the business plan includes information on the Company's Energy Education in Schools program, a general "education only" program; NEEA, an external group partly funded through Company dollars; and Production Efficiency, energy efficiency improvements at Company owned non-hydro generation facilities serving the Company's Washington territory.

Energy Education in Schools

Years of Implementation

This "education only" program replaced the previous "education and savings" program which ran from April 2003 through June 2012. The program, Be Wattsmart, Begin at Home, was implemented with school presentations beginning in February 2013 (See "Year One Timeline" below under "Program Details"). Program costs are reflected in Tables 1, 2 and 3 of this report.

Program Description

The Company has established multiple contracts over the past decade with the National Energy Foundation (NEF) as a result of competitive RFPs to implement the Be Wattsmart, Begin at Home program in schools during the fall of each school year from 2013 through 2028.

Program costs fall under Paragraph (7) (d) in Order 01 of Docket UE-132047, Conservation Efforts without Approved EM&V Protocol, where the Company can spend up to ten (10) percent of its conservation budget on programs whose savings impact has not yet been measured provided the overall portfolio of programs still pass the Total Resource Cost as described in Paragraph (10) (a) of the same Order 01.

NEF is a non-profit corporation with more than 40 years providing energy education and awareness. The mission of NEF is to "cultivate and promote an energy literate society".

Program Changes

The Company's current contract with NEF concludes with the Fall 2022 school assembly presentations and the delivery of final reports in early 2023. The Company issued a competitive RFP in 2022 that resulted in a new contract with NEF in order to continue the education program for the 2023/2024 school year and beyond. There are no plans at this time to change the fundamentals of the education program. The budget provided in Table 2 is based on the newly established contract.

Evaluation Information

As this is an "education only" initiative, no third-party impact evaluation is anticipated beyond verification that the program is being delivered as reported. See "household audits cards" in "Program Details" section below.

Program Details

The centerpiece of the program is a series of 40 to 60 minute 4th grade appropriate presentations to educate students on core electricity components and efficient use, including the importance of energy efficiency and how students can become more energy efficient. The targeted grade level is 4th grade based on curriculum correlations with the Washington Office of Superintendent of Public

Instruction Learning Standards. Typically, the school visit includes a custom designed presentation and hands-on group activities. Teachers receive a packet of instructional materials in advance of the school presentations to assist with the energy literacy education. In response to the COVID-19 pandemic, NEF has prepared online presentations that teachers can share in their classroom or with students at home if in-person presentations are not possible.

The school presentations are designed to get students "thinking" about energy and energy efficiency. In addition, an integrated follow-up to the school presentations is provided through a home audit and household audit activity that is intended to provide students and their parents with an opportunity to "act" on the information they have learned. Students are provided informational booklets and a household audit activity to fill out regarding the energy use and energy efficiency topics they were taught. Students return the household audit report to their teachers, who in turn submit them to NEF. Students and teachers also have the option to fill out the report online. NEF provides teachers with an incentive for collecting the household audit cards. Each teacher returning at least 80 percent of their students' completed household audit cards receive a $50 mini-grant. Those returning 50-79 percent of the household audit cards receive a $25 mini-grant. The data is summarized and reported to determine energy efficiency behavioral data and other program participation information.

Program Metrics per Year
Total number of schools: approximately 47
Total number of students: approximately 3,600
Total teachers approximately 145

Anticipated Outcomes

- Teachers, students, and families become more energy literate, particularly in the understanding of energy efficiency.
- Teachers, students, and families learn to become responsible energy stewards for the future of their community and state.
- Teachers, students, and families make a commitment to use energy more wisely at home, at school, at work, and in the community.
- Teachers, students and families will have a greater awareness of what it means to be Wattsmart, and the resources available to them.
- A culture of energy efficiency will be developed among teachers, students, and families.
- Families will become more aware and motivated to take advantage of energy efficiency programs provided by the Company.
- Data will be gathered, analyzed, summarized, and reported regarding student sharing of energy efficiency messages with their family, home energy use, energy efficiency practices, and how the program is achieving its anticipated outcomes.

Northwest Energy Efficiency Alliance

Years of Implementation
NEEA has been serving the Northwest region of Oregon, Washington, Idaho, and Montana since 1997.

Program Description
NEEA is a non-profit corporation supported by, and working in collaboration with, the Bonneville Power Administration, Energy Trust of Oregon and more than 100 Northwest utilities including Pacific Power.

Program Details
NEEA works in collaboration with its funders and other strategic market partners to accelerate the innovation and adoption of energy-efficient products, services, and practices.

Costs include both Pacific Power's direct funding of NEEA and the Company's internal management costs. NEEA 2022 and 2023 forecasted expenditures are based on Pacific Power's share (2.55 percent) of the estimated annual costs provided by NEEA staff.

The updated 2022-2023 electric savings forecast was provided by NEEA as of 8/30/2022 and includes savings above the Council's 7th power plan baseline and excludes the estimate from savings from local programs including those operated by Pacific Power and the rest of the region's utilities/program administrators. Savings from NEEA's trackable measures category are not included in this forecast. Refer to Appendix 4 for the updated forecast from NEEA.

NEEA's savings counting methodology (including provisions to prevent double counting) can be found in the Q2 2019 Cost Effectiveness Advisory Committee (CEAC) Packet. The savings calculation is found in Appendix A to Appendix 3 of the 2022-2023 Biennial Conservation Plan. Advisory Committee information (including CEAC) can be found on NEEA's web site at: https://neea.org/get-involved/advisory-committee-resources?committeeTypes=cost-effectiveness-type

See Appendix 3 to the 2022-2023 Biennial Conservation Plan for more detail on NEEA's forecast and savings calculation methodology and Pacific Power's regional savings share. See the Biennial 2022-2023 Conservation Target section of the Biennial Conservation Plan for Pacific Power treatment of NEEA savings consistent with Statewide Advisory Group report filed in docket UE-171092.

In summary NEEA's plan to accomplish this goal includes:

- Building and leveraging relationships to influence the market.
- Designing and executing strategic market interventions to expand the availability and demand for energy efficient products, services and practices.
- Identifying, developing and advancing emerging opportunities to fill the pipeline for energy efficiency.

- Delivering education and training to expand market capacity to deliver and maintain energy-efficient products, services and practices.
- Facilitating regional coordination, collaboration and knowledge sharing to align interests and accelerate energy efficiency efforts.
- Demonstrating and promoting the value of energy efficiency to increase demand.
- Developing market intelligence and resources to help NEEA partners achieve their goals.
- Advancing the adoption and implementation of increasingly efficient energy codes and standards to lock in long-term savings.

NEEA's initiatives are outlined in the 2020-2024 Business and Strategic Plans and annual reports. More information on NEEA's initiatives and business and strategic plans can be found at the following on the NEEA website:

- Market Transformation Programs
  https://neea.org/our-work/programs

- Strategic and business plans for 2020-2024
  https://neea.org/resources/neea-2020-2024-strategic-and-business-plans

Customer Outreach and Communications

Years of Implementation
In 2011, the Company implemented Wattsmart, the demand-side management communication and outreach campaign. The Wattsmart program was put into action to meet the program design principal conditions of Order 02 in Docket UE-100170 specific to energy efficiency program outreach.

Program Description
The conditions for outreach for programs required Pacific Power to establish a strategy for informing participants about program opportunities. The Wattsmart communications campaign was designed to create awareness of the importance of being energy efficient, and to help increase participation in the Company's demand-side management programs. The programs are funded through the system benefit charge adjustment (Schedule 191) collected on customer bills.

Program Details
Provided in the table below is a summary of the media channels that were used to deliver the Wattsmart campaign in 2022.

Communication Channel	Value to Communication Portfolio
Cable TV	Cable TV advertising targeting residential customers were featured broadcast for 10-weeks in Q2 & Q3, delivering over 500 Spanish-language spots on Univision.
OTT (over-the-top) / Pre-roll	Digital video advertisements targeting both residential and business customers were featured throughout the year. OTT and Pre-Roll spots ran all year, except in August (wildfire messaging) and December (holidays) in 2022 on both English and Spanish channels. These channels delivered just over 900,000 impressions.
Radio	Advertisements targeting both residential and business customers were featured throughout the year. Radio spots ran extensively in Q2 & Q4 (excluding August) delivering over 825 spots, primarily on KDNA (English and Spanish) in the Yakima, Washington area.
Newspaper	Newspaper placement included Yakima Business Times
Website: Pacificpower.net/wattsmart, BeWattsmart.com	Pacific Power's Wattsmart website, pacificpower.net/wattsmart and promotional URL BeWattsmart.com link directly to the energy efficiency landing page and fulfill the campaign's call to action to engage customers in the company's energy efficiency programs. These sites further support all other forms of communication by serving as a source for detailed information regarding the company's programs and other energy efficiency opportunities.
Social Media (Facebook / Instagram / Twitter	ORGANIC/OWNED CHANNELS: Facebook helps build awareness as information and tips are posted monthly. Pacific Power used promoted and mobile posts to help expand reach. In addition, paid ads drive traffic to the website. Other interactive campaign elements such as online media and social media work with traditional media to enhance the campaign by driving traffic to the program website. Energy efficiency posts are scheduled monthly. PAID CHANNEL: Full year Facebook & Instagram presence (excluding August) driving awareness and seasonally relevant messaging to geo-targeted customers in both English and Spanish-languages. Channel delivered over 3.1-million impressions.
Digital Display	Digital advertising reinforcing in-market messages to customers who are likely to be receptive to energy-savings messaging. Pacific Power used banner ads on regional news sites, entertainment platforms, behavioral, demographic and geographic targeting and pay-per-click ad placements, delivering over 3.2-million impressions.

The 2022 Communications and Outreach plan was reviewed with the Demand-side Management Advisory Group in December 2021. The 2022 plan contained the same components of the 2021 plan with an increased digital, social and radio presence, an increase in OTT (over-the-top) advertising, a decrease of newspaper advertising.

The Company's 2019 research showed that among respondents 77 percent (residential) and 71 percent (non-residential) think Pacific Power is doing a good job of offering solutions to help customers use energy more efficiently. Similarly 78 percent (residential) and 71 percent (non-residential) report the Company is doing a good job of providing information on how to control electricity costs.

Among residential customers, 64 percent are familiar with "being Wattsmart". Of those familiar, 73 percent attribute the phrase to Pacific Power. Among non-residential customers, 67 percent report the company is doing a good job of giving customers information to help them save money by using less energy.

More than 70 percent of residential and 54 percent of non-residential respondents report taking action to reduce their energy use in the past year. Of those taking action, the most common actions are installing energy-efficient lighting, turning off lights more frequently, and reducing heating thermostat settings.

The primary reason customers are taking action is to save money 81 percent (residential) and 73 percent (non-residential) the secondary reason customer take action is to help the environment.

The objectives of the communications and outreach campaign in the 2022-2023 biennium are to continue to increase awareness of the availability and benefits of energy efficiency programs, cash incentives and resources in order to boost participation and achieve energy conservation targets in Washington. The campaign will also integrate messaging that reflects where customers are at in the current economic climate as a result of COVID-19.

In 2022, the Company developed new residential and business creative, simplified the website and created a fully-integrated campaign to capture the attention of customers and empower them to participate in energy efficiency to meet their goals. The Company also translated many materials, the website and advertisements to Spanish to reach those audiences. Going forward, we intend to continue to use media channels that reach our business and residential customers, and will look at new methods of targeting different demographic groups. The Company will create new business focused advertising to amplify customers who are benefitting from the Wattsmart Business program and encourage other businesses to pursue energy efficiency upgrades in order to boost their bottom lines, enhance their workplaces and realize other benefits.

Proposed adjustments for 2023:

Communication Tactic	2023/2024
Television/OTT (over-the-top): A selection of ads will be rotated, both 30-second and 15-second spots. TV stations on which the campaign spots will air include: KAPP (ABC), KIMA (CBS), KNDO (NBC), and KCYU (FOX)	Review residential and business creative and continue to refine messaging based on customer research and the current economic climate.
Radio: Radio stations on which campaign spots will air include KATS-FM (Adult Oriented Rock), KMNA-FM (Mexican Regional), KXDD (Country), KFFM (Top 40) Tri Cities Stations:, KEYW-FM (Hot AC), KXRX (Rock), KIOK (Country), KEGX (Rock), and KZTB-FM and KDNA-FM (Mexican Regional)	Review residential and business creative and continue to refine messaging based on customer research and the current economic climate.
Newspaper Dayton Chronicle, The East Washingtonian, La Voz Hispanic News, The Waitsburg Times, Walla Walla Union Bulletin, Sunnyside Daily News, Yakima Business Times, Yakama Nation Review, and Yakima Herald-Republic.	Review opportunities and continue to refine messaging based on customer research and the current economic climate.
Web: pacificpower.net/wattsmart, and promotional URL BeWattsmart.com link directly to the energy efficiency landing page.	Update web pages to offer new ways for customers to engage online.
Twitter	Tweets posted on a weekly basis.
Facebook/Instagram/LinkedIn	Information and tips posted weekly. Promoted video and static posts and mobile ads will be added where appropriate. Promote business case studies, to get additional leverage from these tools.
Digital	Continue to include video and static banner ads on local sites, blogs, behavioral ad targeting, and pay-per-click ad placements and digital search for business customers.

PR: Capitalize on existing assets and tools to deploy news media outreach and consumer engagement efforts that are aligned with marketing (corporate) objectives.	Pitches will be focused on promoting business case studies and seasonal messaging.

Business Energy Reports
In 2022, the Company added a new outreach channel for small/medium businesses called Business Energy Reports, where personalized reports are delivered each month via email to small and medium-sized business customers. The reports contain disaggregated customer usage data, an interactive web portal with recommendations for savings and links to program offers. Customers can input information about their facility to create deeper personalization. Customers began receiving reports in September 2022 and reports will continue in 2023.

Given the dynamic nature of communications, the company will review the proposed plan with the Demand-side Management Advisory Group in the fourth quarter of 2022 and seek their comments to shape the final 2023 plan.

Cost Effectiveness

2022-2023 Portfolio
The cost effectiveness of individual programs proposed for the 2022-2023 biennium period and the portfolio views described below was assessed based on forecasted expenditures and energy savings.

Cost effectiveness is provided at the following levels:

- Individual program[25] or initiative[26] level
- Residential energy efficiency portfolio (Company programs)
- Non-residential energy efficiency portfolio (Company programs) [27]
- Total Company portfolio with portfolio costs added
- Total Company portfolio with portfolio costs and non-energy benefits added
- Total Company portfolio with portfolio costs and NEEA added
- Total Company portfolio with portfolio costs, NEEA and non-energy benefits added

Forecasted energy savings utilized in this analysis are gross savings and the impact of line losses is indicated with an "at site" or "at generation" designation. Line losses for retail customer programs are based on the Company's 2018 line loss study.

[25] Home Energy Savings, Home Energy Reports
[26] NEEA
[27] Wattsmart Business

Consistent with the new rules and staff direction, cost-effectiveness for the low-income weatherization program will not be assessed at a program or portfolio level. Reporting for the program will include number of residences weatherized, number of measures installed, energy savings and total expenditures.

All cost effectiveness calculations utilize a Net-to-gross ratio of 1.0 consistent with the Council's methodology and 8(a) of Order 01 in Docket UE-210830. The energy savings attributed to each program are shaped according to specific end-use savings (the hourly calculation of when energy is used for the various end-use measures from which the savings are derived). Program costs and the value of the energy savings are then compared on a present value basis with the 2021 IRP preferred portfolio (P02-MM-CETA) proxy decrement values described below.

The Company derived energy efficiency avoided costs (known as decrement values) from the preferred portfolio in the 2021 IRP filed on September 1, 2021. The passage of Senate Bill 5116 enabling CETA requires the use the social cost of carbon and expanded use of NEI's. The Company hired a third-party consultant (DNV) to quantify known NEI values for a broad array of energy efficiency measures. The DNV NEI values were then mapped to applicable measures in the portfolio. The DNV values will be utilized to provide information on the distribution of non-energy benefits and in the assessment of cost effectiveness for the 2022 and 2023 results. In addition to the DNV NEIs, two types of NEIs are included in the program and portfolio cost effectiveness calculation. Measure level (from the RTF or the "wood smoke" study) are included based on the measure forecast. Additionally, the Company expects to continue research and examine additional NEIs that may be included in future assessments of cost-effectiveness and distribution of non-energy benefits. The cost effectiveness memos provide tabular display by program of the values. This approach is similar to prior biennial periods.

The decrement process starts with premise that the highest cost Washington energy efficiency bundle selected in each year in the preferred portfolio establishes the value of the energy efficiency. It is assumed that the cost and value of the highest cost bundle are equal. This is a reasonable premise as the absence of selections from the next higher cost bundle indicates that higher cost bundles are not economic. The next step is to spread the value across the year such that the hourly values and the load profile of the highest cost bundle are equal to the bundle cost. This accounts for the variations in energy and capacity values over the course of a year. The energy price component is built up from the Company's marginal costs, and includes energy, avoided ancillary service costs, and the value of stochastic risk reduction. The energy value reflects the locational marginal price in Washington and reflects either the marginal market purchase or marginal resource costs, including the social cost of carbon for any incremental emissions from the Company's resources. The capacity price component is built up from the Company's avoided generation, transmission, and distribution costs. Capacity value is based on the net cost of a non-emitting peaking resource and is allocated to high-cost hours in each year, because high-cost hours indicate that available resources are limited and shortfalls could occur. The benefits also include a 10 percent credit consistent with the Northwest Power and Conservation Council's modeling and the Northwest Power Act.

The result of this process is 8,760 hourly decrement values that correspond to the value of the highest cost Washington energy efficiency bundle, recognizing both energy and capacity impacts

of energy efficiency savings. These hourly decrement values can be applied to any energy efficiency load profile to determine cost-effectiveness of specific programs or measures.

Costs utilized in the portfolio analysis are those with no direct energy savings attributed to them and include Energy Education in Schools, Customer outreach/communications and Program Evaluations (and savings verification).

The Technical Reference Library and potential study update costs required by I-937 are considered initiative compliance costs rather than program costs and will not be included in the determination of the demand-side management program cost effectiveness. Per Pacific Power's EM&V framework, these costs are not included in program- or portfolio-level cost-effectiveness analysis.

The five California Standard Practice Manual cost effectiveness tests as modified in the Northwest were utilized in the cost benefit analysis. Additional information on cost effectiveness in WAC and the test utilized by the council is provided below.

As specified in WAC 480-109-100 "A utility's conservation portfolio must pass a cost effectiveness test consistent with that used in the Northwest Conservation and Electric Power Plan. A utility must evaluate conservation using the cost effectiveness test consistent with those used by the council and as required by the commission except as provided by WAC 480-109-100 (10)."

The Northwest Power and Conservation Council's 2021 Power Plan provides information on cost effectiveness on their website[28]. Avoided cost values and measure costs were developed and applied in a manner consistent with how the Council performed cost-effectiveness calculations, with the exception of the DNV NEIs which the Council does not utilize in its modeling.

[28] https://www.nwcouncil.org/2021powerplan_cost-effective-methodology#_msocom_1

Appendix 1 – Program and Portfolio Level Cost-Effectiveness

Appendix 2 - Program Tariffs

Appendix 3 – Evaluation Measurement & Verification Framework

Appendix 4 – NEEA 2022-2023 Savings Forecast (8/30/2022)