



Washington Annual Report on Conservation Acquisition

January 1, 2020 – December 31, 2020



Final
May 20, 2021



 **PACIFIC POWER**
A DIVISION OF PACIFICORP

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List of Abbreviations and Acronyms

ARC	Advanced Rooftop Unit Controls
BPA	Bonneville Power Administration
CPA	Conservation Potential Assessment
CEE	Consortium for Energy Efficiency
DSM	Demand-side Management
Schedule 191	Schedule 191 System Benefits Charge Adjustment
EM&V	Evaluation, Measurement & Verification
GWh	Gigawatt-hour(s)
HVAC	Heating, Ventilation and Air Conditioning
IRP	Integrated Resource Plan
kWh	Kilowatt-hour
MW	Megawatt
MWh	Megawatt-hour
NEEA	Northwest Energy Efficiency Alliance
NTG	Net-to-Gross
PCT	Participant Cost Test
PTRC	PacifiCorp Total Resource Cost test
RIM	Ratepayer Impact Measure test
RSAT	Retail Store Allocation Tool
RTF	Regional Technical Forum
RVT	Resource Value Test
SWAG	Statewide Advisory Group
TRC	Total Resource Cost test
UCT	Utility Cost Test
VFD	Variable-Frequency Drive

Executive Summary

PacifiCorp is a multi-jurisdictional electric utility providing retail service to customers in Washington, California, Idaho, Oregon, Utah, and Wyoming. PacifiCorp dba Pacific Power & Light Company (“Pacific Power or Company”) serves approximately 134,317 customers in Washington. The Company works with its customers to reduce the need for investment in supply side resources and infrastructure by reducing energy consumption and peak demand through cost effective energy efficiency programs.

The Company is required to comply with the requirements of the Energy Independence Act (also known as I-937) codified in RCW19.285 and WAC 480-109. This report provides information on the Company’s 2020 activities and expenditures related to pursuing all conservation in accordance with the I-937 framework, including Washington Utilities and Transportation Commission (Commission) orders and administrative rules.

In 2020, the Company offered four energy efficiency programs in Washington and received energy savings and market transformation benefits through its affiliation with the Northwest Energy Efficiency Alliance (NEEA). The Company recovers expenditures associated with these programs through the System Benefits Charge Adjustment, Schedule 191.

This report also provides details on Schedule 191 revenue for the performance period from January 1, 2020, through December 31, 2020. The Company, on behalf of its customers, invested \$10.8m in energy efficiency information, services, and incentives during the reporting period. The investment yielded approximately 46 gigawatt-hours (GWh) in first year savings¹ and approximately 6.3 megawatts (MW) of energy efficiency savings related capacity reductions.² Net benefits over the life of the individual measures are estimated at \$22,504m.³

As shown in Table 1, the portfolio was cost effective based on four of the five standard cost effectiveness tests for the reporting period, including the Total Resource Cost test + 10% adder (PTRC), Utility Cost Test (UCT) and Participant Cost Test (PCT). The Total Resource Cost Test (TRC) Project costs used in the cost tests were adjusted downward to account for the Transportation Improvement Board (TIB) Relight Washington funding⁴ for customer costs beyond utility incentives for 3 LED streetlight projects completed in 2020. The ratepayer impact measure test was less than 1.0, indicating near-term upward pressure was placed on the price per kilowatt-hour (kWh) given a reduction in sales.

¹ Gross reported savings at the generation.

² See Energy Efficiency section for explanation on how the capacity contribution savings values are calculated.

³ See Appendix 1 – Table 8 - 2020 Total Portfolio Cost Effectiveness Results (including NEEA and NEIs) – Total Resource Cost Test (PTRC) + Conservation Adder.

⁴ TIB funding comes from the state of Washington’s gas tax and is collected from fuel purchasers who are not PacifiCorp customers and is treated in a comparable manner to tax credits; i.e., removed from costs. TIB funding of \$109,374 was provided to customers for the 3 projects. The Company’s reported project costs were \$122,621 and incentives paid totaled \$13,317. Measure costs were adjusted downward by \$109,374 (\$122,691 minus \$13,317).

Table 1
Cost Effectiveness for the Portfolio⁵

Benefit / Cost Test	B/C Ratio with NEEA & NEIs	B/C Ratio without NEEA Inc. NEIs
PacifiCorp Total Resource Cost Test (PTRC) plus 10% ⁶	2.66	2.24
Total Resource Cost (TRC) Test ⁷	2.42	2.04
Utility Cost Test (UCT) ⁸	3.09	2.66
Participant Cost Test (PCT) ⁹	4.93	4.10
Ratepayer Impact Cost Test (RIM) ¹⁰	0.81	0.76

All cost effectiveness calculations assume a net-to-gross (NTG) of 1.0, consistent with the Northwest Power and Conservation Council's methodology. Portfolio level cost effectiveness includes portfolio costs such as the Process and Impact Evaluations, Class 2 demand-side management (DSM) Potentials Assessment, End Use Load Research and the DSM system database. Consistent with the Northwest Power and Conservation Council's methodology, the Company includes quantifiable non-energy benefits at the portfolio and program level. *Low Income Weatherization* is not included in the portfolio or sector-level cost effectiveness analysis per WAC 480-109-100(10)(b). Appendix 1 provides 2020 cost effectiveness performance.

⁵ Ratios include select quantifiable and directly attributable Non-Energy Impacts, but excludes costs as outlined in the Company's EM&V Framework (e.g. Class 1 & 3 of the potential study).

⁶ The PTRC includes the 10 percent conservation benefit and risk adder in addition to quantifiable and directly attributable non-energy benefits. PTRC is consistent with the Northwest Power Council's cost effectiveness methodology and complies with the cost effectiveness definition (RCW 80.52.030(7)).

⁷ The TRC compares the total cost of a supply side resource to the total cost of energy efficiency resources, including costs paid by the customer in excess of the program incentives. The test is used to determine if an energy efficiency program is cost effective from a total cost perspective.

⁸ The UCT compares the total cost incurred by the utility to the benefits associated with displacing or deferring supply side resources.

⁹ The PCT compares the portion of the resource paid directly by participants to the savings realized by the participants

¹⁰ The RIM examines the impact of energy efficiency expenditures on non-participating ratepayers overall. Unlike supply-side investments, energy efficiency programs reduce energy sales. Reduced energy sales can lower revenue requirements while putting upward pressure on rates as the remaining fixed costs are spread over fewer kilowatt-hours

Compliance

An external conservation advisory group of stakeholders is required to be maintained and used by the Company to advise it about conservation issues including program designs, incentive levels, third party evaluations, program marketing, and pilots. WAC 480-109-110 provides the scope of issues for the advisory group. The Company refers to its conservation advisory group as the Washington DSM Advisory Group. Meetings are typically held at the Commission offices in Lacey and include a call-in number so stakeholders can participate remotely. Due to the COVID-19 pandemic, 2020 advisory group meetings were virtual only starting with the meeting held May 15, 2020.

In compliance with I-937, the Company continuously reviews and updates, as appropriate, the conservation programs and portfolio to adapt to changing market conditions. Steps taken to adaptively manage the conservation programs during 2020 are included within program specific sections of this report. The online incentive application platform tied to the Company's Single Sign On (SSO) capability deployed for Home Energy Savings in 2019 was expanded to include Wattsmart Business in late 2020.

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

Regulatory Activities

During the 2020 reporting period, the Company filed a number of compliance and/or informational reports, updates, and requests with the Commission and Department of Commerce in support of Company DSM programs. The following is a list of those filings:

- April 15, 2020 - Petition to Retain the Commission Approved Biennial EIA Target, Penalty Threshold, Decoupling Commitment, and Ten-Year Potential. (Docket UE-190908).
- May 1, 2020 - exemption for PacifiCorp from the annual requirement to file a revision to its Schedule 191, System Benefits Charge Adjustment, under Washington Administrative Code (WAC) 480-109- 130(2) and Condition 11(d) in Order 01 in Docket UE-190908.
- June 1, 2020 – Washington Annual Report on Conservation Acquisition for 2019 (Docket UE 171092). The report provides details on program results and activities.
- June 1, 2020 – 2018-2019 Biennial Conservation Report (Docket UE 171092).
- June 1, 2020 – 2018-2019 Conservation Report to Department of Commerce (Docket UE-171092). The report detailed the Company’s progress in meeting the targets established in RCW 19.285.070 and WAC 194-37-060 (EIA requirements).
- November 13, 2020 – Pacific Power’s 2021 Annual Conservation Plan in Docket UE-190908.

Advisory Group Activities

At least four times per year, the Company seeks input regarding its energy efficiency programs from its Washington DSM Advisory Group. This group includes representatives from a variety of constituent organizations. The Company collaborated with its DSM Advisory Group throughout 2020 on the following matters:

May 15, 2020

- COVID 19 impacts, year-to-date results and revised 2020-2021 savings forecast
- Program changes preview
- Feedback on May 1 conservation report drafts
- Low income assessment in next Conservation Potential Assessment
- Heat pump water heaters

September 21, 2020

- COVID 19 impacts, year-to-date results and revised 2020-2021 savings forecast
- Program changes for January 2021
- 2021 Annual Conservation plan
- Non-energy impacts
- Collection rate review

November 30, 2020

- COVID 19 impacts, year-to-date results and revised 2020-2021 savings forecast
- VAR reduction study (CYME 4 circuits)
- Non-energy Impact (NEI) work plan & details

- Home Energy Reports expansion
- Petition for excess conservation - reconnect

December 21, 2020

- Year-to-date results and revised 2020-2021 savings forecast
- Review of 2020 and 2021 communications and outreach plan
- Costs and financial analysis for VOLT/VAR reduction
- Non-energy Impacts update

DSM Expenditures

System Benefits Charge Balancing Account Summary

DSM activities are funded through Schedule 191, the System Benefits Charge Adjustment collections. Expenditures are charged as incurred and collected through Schedule 191. The balancing account is the mechanism used for managing the revenue collected and expenses incurred in the provision of DSM resources. The balancing account activity for 2020 is outlined in Table 2. The end of year balance in the balancing account, on an accrual basis, was an over-collection of \$3,590,733.

Table 2
System Benefit Charge Balancing Account Summary

Month	Deferred Expenditures	Revenue Collected	Accumulative Balance	Monthly Net Accrued Costs	Accrual Basis Accumulative Balance
19-Dec			(\$5,504,013.96)	\$680,872.27	(\$3,719,062.88)
20-Jan	\$1,216,472.55	(\$1,041,396.54)	(\$5,328,937.95)	(\$204,029.92)	(\$3,748,016.79)
20-Feb	\$607,378.38	(\$938,799.86)	(\$5,660,359.43)	(\$814,343.38)	(\$4,893,781.65)
20-Mar	\$1,186,909.91	(\$847,432.90)	(\$5,320,882.42)	(\$139,506.58)	(\$4,693,811.22)
20-Apr	\$1,092,764.99	(\$776,448.65)	(\$5,004,566.08)	\$341,968.68	(\$4,035,526.20)
20-May	\$1,107,922.88	(\$693,316.78)	(\$4,589,959.98)	(\$199,845.68)	(\$3,820,765.78)
20-Jun	\$856,534.89	(\$756,245.99)	(\$4,489,671.08)	(\$38,025.33)	(\$3,758,502.21)
20-Jul	\$867,303.71	(\$864,390.97)	(\$4,486,758.34)	(\$53,554.76)	(\$3,809,144.23)
20-Aug	\$657,317.44	(\$972,679.59)	(\$4,802,120.49)	(\$31,862.79)	(\$4,156,369.17)
20-Sep	\$578,004.64	(\$917,569.58)	(\$5,141,685.43)	\$189,230.09	(\$4,306,704.02)
20-Oct	\$981,834.90	(\$810,361.76)	(\$4,970,212.29)	\$25,247.91	(\$4,109,982.97)
20-Nov	\$837,936.69	(\$890,410.15)	(\$5,022,685.75)	(\$46,671.92)	(\$4,209,128.35)
20-Dec	\$1,400,676.61	(\$1,049,603.83)	(\$4,671,612.97)	\$267,322.33	(\$3,590,733.24)
2020 Total	\$11,391,057.59	(\$10,558,656.60)		(\$23,199.08)	

Column Explanations:

Deferred Expenditures: Monthly expenditures for all program activities posted in 2020, including funding for the Northwest Energy Efficiency Alliance.

Revenue Collected: Revenue collected through Schedule 191, System Benefits Charge Adjustment.

Accumulative Balance: A running total of account activities on a “cash” basis. A negative accumulative balance means cumulative revenue exceeds cumulative expenditures; positive accumulative balance means cumulative expenditures exceed cumulative revenue.

Monthly Net Accrued Costs: Two accrual entries are made each month for expenditures of energy efficiency programs. One estimates the incurred cost not yet processed, and the other reverses the estimate from the previous month. The amount shown here is the net of the two entries.

Accrual Basis Accumulative Balance: Current balance of account including accrued costs.

Planning Process

Integrated Resource Plan

The Company develops a biennial integrated resource plan (IRP) as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals.¹¹ The plan presents a framework of future actions to ensure the Company continues to provide reliable, reasonably priced service to customers. Energy efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics and costs.

PacifiCorp divides energy efficiency and peak management resources into four general classes:

- **Class 1 DSM—Resources from fully dispatchable or scheduled firm capacity product offerings/programs**—Class 1 DSM programs are those for which capacity savings occur as a result of active Company control or advanced scheduling. Once customers agree to participate in a Class 1 DSM program, the timing and persistence of the load reduction is involuntary on their part within the agreed upon limits and parameters of the program. Program examples include residential and small commercial central air conditioner load control programs that are dispatchable, and irrigation load management and interruptible or curtailment programs (which may be dispatchable or scheduled firm, depending on the particular program design or event noticing requirements).
- **Class 2 DSM—Resources from non-dispatchable, firm energy and capacity product offerings/programs**—Class 2 DSM programs are those for which sustainable energy and related capacity savings are achieved through facilitation of technological advancements in equipment, appliances, lighting and structures, or repeatable and predictable voluntary actions on a customer's part to manage the energy use at their facility or home. Class 2 DSM programs generally provide financial or service incentives to customers to improve the efficiency of existing or new customer-owned facilities through: (1) the installation of more efficient equipment, such as lighting, motors, air conditioners, or appliances; (2) upgrading building efficiency through improved insulation levels, windows, etc.; or (3) behavioral modifications, such as strategic energy management efforts at business facilities and home energy reports for residential customers. The savings endure (are considered firm) over the life of the improvement or customer action. Program examples include comprehensive commercial and industrial new and retrofit energy efficiency programs, comprehensive home improvement retrofit programs, strategic energy management and home energy reports.

¹¹ Information on the Company's integrated resource planning process can be found at the following address:
<https://www.pacificorp.com/energy/integrated-resource-plan/support.html>

- **Class 3 DSM—Resources from price responsive energy and capacity product offerings/programs**—Class 3 DSM programs seek to achieve short-duration (hour by hour) energy and capacity savings from actions taken by customers voluntarily, based on a financial incentive or signal. Program examples include time-of-use pricing plans, critical peak pricing plans, and inverted block tariff designs. As a result of their voluntary nature, participation tends to be low and savings are less predictable, making Class 3 DSM resources less suitable to incorporate into resource planning, at least until their size and customer behavior profile provide sufficient information for a reliable diversity result (predictable impact) for modeling and planning purposes. Savings typically only endure for the duration of the incentive offering and, in many cases, loads tend to be shifted rather than being avoided. The impacts of Class 3 DSM resources may not be explicitly considered in the resource planning process; however, they are captured naturally in long-term load growth patterns and forecasts.
- **Class 4 DSM—Non-incented behavioral-based savings achieved through broad energy education and communication efforts**—Class 4 DSM programs promote reductions in energy or capacity usage through broad-based energy education and communication efforts. The program objectives are to help customers better understand how to manage their energy usage through no-cost actions such as conservative thermostat settings and turning off appliances, equipment and lights when not in use. The programs are also used to increase customer awareness of additional actions they might take to save energy and the service and financial tools available to assist them. Class 4 DSM programs help foster an understanding and appreciation of why utilities seek customer participation in Classes 1, 2 and 3 DSM programs. Similar to Class 3 DSM resources, the impacts of Class 4 DSM programs may not be explicitly considered in the resource planning process; however, they are captured naturally in long-term load growth patterns and forecasts. Program examples include Company brochures with energy savings tips, customer newsletters focusing on energy efficiency, case studies of customer energy efficiency projects, and public education and awareness programs.

Class 1 and 2 DSM resources are included as resource options in the resource planning process. Class 3 and 4 DSM actions are not considered explicitly in the resource planning process; however, the impacts are captured naturally in long-term load growth patterns and forecasts.

As technical support for the IRP, the Company engages a third-party consultant to conduct a DSM Potential Assessment (Potential Assessment).¹² The study primarily seeks to develop reliable estimates of the magnitude, timing and cost of DSM resources likely available to PacifiCorp over the 20-year planning horizon of the IRP. The main focus of the Potential Assessment is on resources with sufficient reliability characteristics that are anticipated to be technically feasible and considered achievable during the IRP's 20-year planning horizon. By definition, the estimated achievable technical potential is the energy efficiency potential that may be achievable to acquire during the 20-year planning horizon prior to cost effectiveness screening.

¹² PacifiCorp's Demand-side Resource Potential Assessments can be found at <https://www.pacifiCorp.com/energy/integrated-resource-plan/support.html>

The achievable technical potential of Class 2 (energy efficiency) resources for Washington by sector is shown in Table 3. The 2020 Potential Assessment indicates that approximately nine percent of the achievable technical potential for the Company, excluding Oregon¹³, is available within its Washington service area.¹⁴

Table 3
Washington Energy Efficiency Achievable Technical Potential by Sector¹⁵

Sector	Cumulative GWh in 2038	Percent of Baseline Sales for the Sector
Residential	456	22%
Commercial	482	26%
Industrial	150	13%
Irrigation	18	10%
Street Lighting	5	44%

Demand-side resources vary in their reliability, load reduction and persistence over time. Based on the significant number of measures and resource options reviewed and evaluated in the Potential Assessment, it is impractical to incorporate each as a stand-alone resource in the IRP. To address this issue, Class 2 DSM measures and Class 1 DSM programs are bundled by cost for modeling against competing supply-side resource options which reduces the number of discrete resource options the IRP must consider to a more manageable number.

Cost Effectiveness

The Company evaluates program implementation cost effectiveness (both prospectively and retrospectively) under a variety of tests to identify the relative impact and/or value (*e.g.*, near-term rate impact, program value to participants, etc.) to customers and the Company. Program cost effectiveness is performed using a Company specific modeling tool, created by a third-party consultant. The tool is designed to incorporate PacifiCorp data and values such as avoided costs, and assesses the costs and benefits of DSM resource programs from different stakeholder perspectives, including participants and non-participants, based on four tests described in the Standard Practice Manual (TRC, UCT, PCT and RIM) as well as an additional fifth test, PTRC. Washington utilizes the PTRC as the primary cost effectiveness test.

As specified in WAC 480-109-100 (8) “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).

¹³ Oregon energy efficiency potentials assessments are performed by the Energy Trust of Oregon.

¹⁴ <https://www.pacificorp.com/energy/integrated-resource-plan/support.html>

Volume 1, Table 2-1, PacifiCorp Demand-Side Resource Potential Assessment for 2017-2036.

¹⁵ Volume 2, Tables 4-4, 4-6, 4-8, 4-10, 4-11, PacifiCorp Demand-Side Resource Potential Assessment for 2017-2036.

The Northwest Power and Conservation Council's Seventh Power Plan provides information on cost effectiveness on page G-11 of Appendix 6. "The Council uses the total resource net levelized cost (TRC net levelized cost) for its analysis of the cost of the conservation measures, which is similar to the Societal Cost Test outlined in the National Action Plan for Energy Efficiency¹⁶ and the California Standard Practice Manual."

The National Energy Efficiency Screening project published the National Standard Practice Manual (NSPM)¹⁷ to provide a comprehensive framework for assessing the cost effectiveness of energy efficiency resources. The NSPM provides guidance that incorporates lessons learned over the past 20 years, responds to current needs, and addresses and considers the relevant policies and goals of each jurisdiction undertaking efficiency investments. The NSPM presents an objective and neutral Resource Value Framework that can be used to define a jurisdiction's *primary* cost effectiveness test, which is referred to as a Resource Value Test ("RVT").

The PacifiCorp Total Resource Cost (PTRC) test results in the AEG analysis include the 10 percent Conservation Adder and quantifiable non-energy benefits and is analogous to the Societal Cost Test (SCT) referenced by the Council.

In combination with WAC rules and in approving Pacific Power's 2020-2021 Biennial Conservation Plan,¹⁸ the WUTC has established cost effectiveness tests for Pacific Power to use in planning for and pursuing conservation resources. Per the definition above from the NSPM, the Total Resource Cost test, as modified by the Northwest Power and Conservation Council and referred to as the PTRC by Pacific Power, *is* the current RVT for Washington investor-owned utilities.

¹⁶ <https://www.epa.gov/sites/production/files/2015-08/documents/cost-effectiveness.pdf>

¹⁷ https://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM_May-2017_final.pdf

¹⁸ Docket UE-190908, Order 01 Attachment A (8) (December 18, 2019).

Energy Efficiency Programs

The Company offered energy efficiency programs to all major customer sectors: residential, commercial, industrial, and agricultural. The Company's energy efficiency portfolio included four programs: *Home Energy Savings*, Schedule 118; *Home Energy Reports*; *Low Income Weatherization*, Schedule 114; and *Non-Residential Energy Efficiency (Wattsmart Business)*, Schedule 140. The Company also helps fund NEEA. In addition to the energy efficiency programs, the Company, on behalf of customers, invested in outreach and education for the purpose of promoting the efficient use of electricity and improving program performance. Results for 2020 are provided in Table 4.

Table 4
Washington Results January 1, 2020 – December 31, 2020

Program	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	Systems Benefits Charge Expenditures
Low Income Weatherization	69,527	74,864	\$ 347,189
Home Energy Savings	4,720,378	5,082,714	\$ 2,672,704
Home Energy Reports	3,542,270	3,814,175	\$ 259,013
Total Residential Programs	8,332,175	8,971,752	\$ 3,278,905
Wattsmart Business	28,850,291	30,990,060	\$ 5,776,230
Northwest Energy Efficiency Alliance	5,569,225	5,993,649	\$ 1,002,231
Total	42,751,690	45,955,461	\$ 10,057,366
			Process & Impact Evaluation \$ 351,377
			Class 2 Potential Study \$ 107,628
			Portfolio Evaluation \$ 3,376
			Portfolio DSM Central \$ 39,977
			NEEA End Use Load Research \$ 31,057
			Outreach and Communication \$ 249,711
			Total Portfolio Level Expenditures \$ 783,125
			Total System Benefits Charge expenditures \$ 10,840,492

Program Administration

The Company has a representative on the NEEA board of directors as well as representatives on each of the sector advisory committees, residential, commercial, and industrial.

In 2020, the Company delivered preliminary results of 45,955 MWh in first year energy savings at generation against the 2020 Business Plan. Changes between forecasted and actuals are detailed below.

2020 results directly reflect COVID -19 challenges experienced by Pacific Power's customers. The year started very differently than it ended. The biennial forecast and targets going into 2020

were informed by incorporating the social cost of carbon in the selection of energy efficiency resources. Including the social cost of carbon resulted in the highest target for the Company since EIA began. Shortly after the target was approved, the impact of the COVID-19 pandemic materially affected all aspects of daily life, including the ability for Pacific Power customers to plan for and complete energy efficiency projects necessary to achieve these targets. Yakima County in particular was extremely hard hit by COVID-19 with high case counts and infection rates relative to other parts of Washington. Program activities and tactics were adapted whenever possible to continue work safely if customers were interested. COVID-19 impacts are primarily responsible for the 2020 results and variances when compared to the original 2020 forecasts.

- Low Income Weatherization: Savings were materially lower as COVID-19 protocols restricted agency and contractor access to eligible customer's homes.
- Home Energy Savings: Savings were materially lower, reflecting the impacts of COVID-19. Lower savings were partially mitigated by the 25% increase in incentives that took effect on August 1, 2020.
- Home Energy Reports: Savings were materially lower than the original estimates primarily as the result of lower open rates and fewer energy reductions taken by the group of customers receiving paper reports. As discussed in DSM Advisory Meetings, since the start of COVID-19, Bidgely observed lower savings impacts for paper customers in other utility programs they deliver.
- Wattsmart Business: Given factors such as projects that were delayed in closing at the end of 2019 that closed in 2020, projects approved and/or in progress prior to the pandemic that customers were able to complete in 2020, the completion of several large projects (over 1 million kWh each) and the incentive increase in August, savings were about the same as forecast.
- NEEA: revised savings from NEEA utilizes the same methodology and baselines used to establish the original forecast. NEEA savings is higher as the result of a) New Programs, specifically Manufactured Homes and Extended Motor Products (XMP) contributed in 2020, b) Desktop Power Supplies were more efficient than originally forecast and NEEA data shows most ENERGY STAR desktops meet the v7 specification, instead of the less efficient v6 used to set the forecast, and c) additional floor space was commissioned relative to the original forecast.
- While not a large factor in lower savings, it should be noted line losses from the 2018 PacifiCorp Electric Operations Loss Study are lower for all customer classes. Lower line losses do not affect site savings but do reduce the savings impacts at the generator.

Key Changes in the Expenditure Forecast

- Low Income Weatherization: costs were materially lower in alignment with lower agency activity and fewer completed homes as a direct result of COVID-19.
- Home Energy Savings: Costs are lower to align with reduced savings. Costs do not decline by the same percentage as savings which reflects increased incentive expenditures from the August 1, 2020 changes and the need to pursue more expensive measures to a) help achieve the target and b) compensate for the sunset of the energy savings kits in the second half of the biennial period.
- Wattsmart Business: expenditures overall were 90% of forecast for savings that was about the same as forecast. Incentives were 84% of forecast and program delivery expenses 95% of forecast.

Portfolio costs were lower than the original forecast. The Begin at Home energy education in schools' campaign was curtailed as the result of COVID-19. Funding for NEAE research projects follow NEEA's schedule including costs incurred and billed. Program evaluations incurred fewer costs in 2020 as result of new procurement procedures in which we pick the lowest-cost vendors.

Consistent with requirements under WAC 480-109-120 (3)(b)(ii) and (iii), Table 5 provides a comparison of the Company's 2020 Business Plan filed on November 1, 2019, to actual 2020 program performance.

Table 5
Washington 2020 Annual Conservation Plan compared to Actual

Program	2020 PacifiCorp Washington Annual Conservation Plan			2020 PacifiCorp Washington DSM Actual		
	kWh/Yr Savings (at site)	kWh/Yr Savings (at gen)	Estimated Systems Benefit Expenditures	kWh/Yr Savings (at site)	kWh/Yr Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization	145,860	159,965	\$ 750,000	69,527	74,864	\$ 347,189
Home Energy Savings	9,900,260	10,857,615	\$ 3,838,181	4,720,378	5,082,714	\$ 2,672,704
Home Energy Reports	4,230,000	4,639,041	\$ 287,500	3,542,270	3,814,175	\$ 259,013
Total Residential Programs	14,276,120	15,656,621	\$ 4,875,681	8,332,175	8,971,752	\$ 3,278,905
Wattsmart Business	28,422,079	31,021,674	\$ 6,385,122	28,850,291	30,990,060	\$ 5,776,230
Northwest Energy Efficiency Alliance	3,151,202	3,452,317	\$ 831,388	5,569,225	5,993,649	\$ 1,002,231
TOTAL	45,849,401	50,130,612	\$ 12,092,191	42,751,690	45,955,461	\$ 10,057,366
Be Wattsmart, Begin at Home Process & Impact Evaluation			\$ 64,523			\$ 351,377
Class 2 Potential Study			\$ 120,115			\$ 107,628
Portfolio Evaluation			\$ 549,524			\$ 3,376
Portfolio DSM Central			\$ 157,735			\$ 39,977
NEEA End Use Load Research			\$ 109,500			\$ 31,057
Outreach and Communication			\$ 250,000			\$ 249,711
Total System Benefits Charge Expenditures			\$ 13,343,588			\$ 10,840,492

Estimated Peak Contributions

The Company estimates its capacity reduction during PacifiCorp's system peak period from the 2020 energy efficiency portfolio. An energy-to-capacity conversion factor, developed from Class 2 DSM selections in the 2019 IRP, is used to translate 2020 energy savings to estimated demand reduction during the system peak as shown in Table 6. The use of this factor in the MW calculation assumes that the energy efficiency resources acquired through the Company's programs have the same average load profile as those energy efficiency resources selected in the 2019 IRP.

Table 6
Estimated Peak Contribution

Description	Value
First year Energy Efficiency program MWh savings acquired during 2020 (@ Generator)	45,955
Conversion factor: Coincident MW/MWh	0.000137873
Estimated coincident peak MW contribution of 2020 Energy Efficiency acquisitions	6.34

Direct Benefits to Customers

Estimates of direct benefits to customers delivered from 2020 expenditures are provided in Table 7. This additional metric to assess program impacts is consistent with conversations between Commission Staff and the Company that occurred during the preparation of prior conservation plan(s) and reports. Direct benefits are in addition to the benefits all customers receive through implementation of cost-effective energy efficiency resources, lower energy costs.

Table 7
2020 Direct Benefits to Customers

Program or Initiative	Expenditures	Direct Benefit to Customers	Direct Benefit to Customers
Low Income Weatherization	\$ 347,189	\$ 295,907	85%
Home Energy Savings	\$ 2,672,704	\$ 1,084,368	41%
Home Energy Reports	\$ 259,013	\$ -	0%
Total Residential Programs	\$ 3,278,905	\$ 1,380,275	42%
Wattsmart Business	\$ 5,776,230	\$ 2,918,154	51%
Northwest Energy Efficiency Alliance	\$ 1,002,231	\$ 679,821	68%
TOTAL	\$ 10,057,366	\$ 4,978,251	49%
Process & Impact Evaluation	\$ 351,377		
Class 2 Potential Study	\$ 107,628		
Portfolio Evaluation	\$ 3,376		
Portfolio DSM Central	\$ 39,977		
NEEA End Use Load Research	\$ 31,057		
Outreach and Communication	\$ 249,711		
Total Portfolio Level Expenditures	\$ 10,840,492	\$ 4,978,251	46%

Notes:

Low Income Weatherization: In 2020 payments to community action agencies for measure installation were classified as incentives. The value can be found in the cost effectiveness tables included in Appendix 1.

Home Energy Savings: Customer incentives, upstream, mid-stream and mail by request buy downs are included in the direct benefit to customer calculation. This information is provided in the incentive's column for the Home Energy Savings program in Appendix 1.

Wattsmart Business: Customer incentives (\$2,714,151) and expenditures for customer site specific energy engineering (\$204,004) are included in the direct benefit to customer calculation.

NEEA: Company subtracted \$31,056.98 for NEEA program administration for a direct benefit to customers of \$679,821. This calculation utilized the assumption provided by WUTC staff that 70% of the NEEA expenditures are a direct benefit to customers.

Pilot Projects

The Company offers pilot projects to residential and nonresidential sectors. This section briefly describes the pilots underway in the biennial period and key activities that occurred in 2020.

On-Bill Financing for owned manufactured homes located on rented space

- **Purpose:** Reduce upfront cost barrier to participation in residential energy efficiency programs by offering on-bill financing. This offer further complements the third-party financing in residential and business customers offered in prior biennial period.
- **Costs:** Up to \$20,000 in start-up costs. \$200 per funded loan application. \$300 per application underwriting fee (regardless of loan funding). Costs will be included as a

residential program expenses and recovered through the tariff rider. 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.
- **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.
- **2020 activity:** individual training conducted with trade allies and Craft3 through digital communications and phone outreach. There were 210 applications received; 145 approved, (funded and billing), 44 applications declined (all referred to regional community action agencies) and 21 applications withdrawn. Exploration of an offer for owned manufactured homes on rented space is on-going

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.
- **Implementation:** Program Administrator will use an RFP process to create a closed network of contractors who specialize in manufactured home measures. Build awareness and utilization of available customer incentives for manufactured home measures, including duct sealing, heat pumps, water heaters, 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. Trade Allies will be trained on available financing options from nonprofit lender Craft3, who offers loans with affordable rates and convenient repayment directly on the Pacific Power utility bill.
- **2020 activity:** There were ten responses to the RFP from contractors located in Yakima, Walla Walla, Richland and Kennewick, representing HVAC, new manufactured homes, and weatherization. The coronavirus pandemic suspended postcard campaigns and other activities related to the manufactured home contractor network. This work will be revisited in 2021 and will resume once it is safe to do so.

CTA-2045 enabled heat pumps (water and space heating)

- **Purpose:** Increase deployment of CTA-2045 enabled heat pumps (water and space heating) ahead of the code/standards start date provided in HB 1444 which are applicable to water heating equipment. CTA-2045 technology allows utilities to manage energy loads of heat pump water heaters and space heaters. This new approach to demand response greatly reduces the cost of controlling water heaters and 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 pump water heaters within Pacific Power's service area. Equipment eligibility aligns with Northwest Energy Efficiency Alliance's (NEEA's) Qualified Products List (QPL). In 2020-2021, the pilot will also focus on increasing sales of CTA-2045 equipped units ahead of the standards start date by providing an additional incentive of \$50 for each heat pump water heating and \$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:** Twenty to 45 units.
- **Implementation:** Home Energy Savings program team will leverage program administrator's existing relationships and Memorandum of Understandings (MOUs) with retailers in Pacific Power's service area. Program staff will build new relationships with heat pump water heater and 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 retailer and manufacturers with existing MOUs. Promote the additional incentive for CTA-2045 ready models through direct outreach email and phone communications. Create cobranded materials with retailers and manufacturers to increase visibility.
- **2020 activity:** In 2020, NEEA revised the Advanced Water Heating Specification with the requirement that all heat pump waters be CTA 2045 equipped. As part of the August 1, 2020 program changes, the \$50 incentive was removed from the program. There was no participation for these incentives in 2020.

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 during prior biennial period which, while successful, did not eliminate or defer the traditional construction solution. In 2020, in alignment with the conditions list, the Company will determine if there are specific areas to target and, if so, begin that targeting. Based on prior experience, the focus will be on areas with longer construction/investment lead times.
- **Costs:** Costs are included in the existing program delivery and incentive budgets for the biennial period.
- **Size:** to be determined.
- **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.

- **2020 activity:** In 2020, the primary focus was mitigating COVID impacts and safely continuing overall target acquisition in addition to identification of circuits that would benefit from volt/VAR optimization (presented to DSM AG in November and December). In addition, there was not a set of clearly identified circuits that would benefit from increased energy efficiency (beyond the overall system value). As a result, no geo-targeting activities were under-taken in 2020.

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.
- **Implementation:** Leverage the Northwest Energy Efficiency Alliance'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 (see Vendor Incentive pilot below).
- **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.
- **2020 activity:**
 - **Contractor/Vendor Training:**
 - Through extra promotion and outreach efforts, two additional vendors completed NXT Level training in 2020. MH Electric and Conserve Energy were certified NXT Level 1.
 - On March 11 and 12, 2020, Pacific Power hosted the annual vendor trainings in person in Walla Walla and Yakima. Because there was a hands-on lighting controls session in 2019, the content was less hands on and focused instead on selling controls through a thorough audit and proposal process and highlighted Non-Energy Benefits of adding controls. The Annual Training included seven lighting exhibitors including an Evergreen representative for the NEEA LLLC contract. Vendors were able to interact with the product on display.
 - An LDL hosted hands-on Advanced Network Lighting Controls course was being scheduled for September 2020 in Kennewick at Benton PUD. However, due to COVID-19, this event was canceled.
 - **Contractor Incentive:** In 2020, Pacific Power continued the \$/fixture Contractor Incentive for advanced networked lighting controls that was promoted and offered throughout 2019. Contractors face up-front costs of time and money to obtain manufacturer certification(s) to install advanced lighting controls products. A contractor incentive (focused on the vendor's first three projects only) along with the vendor support provided by the program could boost participation.

- **Savings results:** Approximately 27 completed lighting projects with savings from controls totaling approximately 1.6 million kWh/year. There were three projects including Advanced Exterior Dimming, but no projects with interior Advanced Networked Lighting Controls, and therefore no vendor incentives were paid out in 2020.

Business Vendor Incentives

- **Purpose:** Increase energy savings of certain Wattsmart Business measure categories, hard-to-reach customer segments and geo-targeted locations by providing limited time incentives to specifically qualified vendors/contractors in addition to customer incentives. Vendor incentives can help address market barriers in Washington such as cost of learning a new technology, and competition for limited resources for promoting efficiency upgrades due to labor shortages.
- **Costs:** Costs are included in the program delivery and incentive budgets for the biennial period and include up to \$150,000 for vendor incentives in 2020 and up to \$250,000 for 2021.
- **Size:** Dependent on which measure categories are incentivized.
 - **Examples:**
 - Advanced Networked Lighting Controls: 5-10 projects
 - Advanced Rooftop Unit Controls (ARC): 20-30 rooftop units
 - Ductless Heat Pumps (e.g. replacing electric resistance heating): 5-10 units
- **Implementation:** Vendor incentives for Wattsmart Business will be “turned on” for a limited period of time to encourage specific measure, sector, or location participation. For lighting, the incentives will be offered to Premium Vendors to encourage project completion. For HVAC, the incentives will initially focus on increasing participation of the existing and expanded ARC measures. The strategies and outcomes of the 2020 vendor incentives will be evaluated before 2021 and adjusted as needed.
- **Marketing:** Utilize E-blasts to highlight vendor incentive offerings for the vendor network. Outreach Coordinators will work with vendors one-on-one to support the pilot.
- **2020 activity:** Vendor incentives were available for interior Advanced Networked Lighting Controls and Advanced Rooftop Unit Controls (ARC)¹⁹. The offerings were promoted by program staff at the 2020 in person annual trainings and again through eblast and newsletter promotions. There were no projects with these two measures, and therefore no vendor incentives were paid out in 2020.

Manufactured Homes

¹⁹ \$100 Amazon gift card per ARC installed for first five units installed, limit of three gift cards per approved vendor.

To support regional efforts in providing information about underserved markets or hard-to-reach segments, the Company has included information about its manufactured homes participation. The information provided in Table 8 below and shows its historical manufactured home customers who have participated in the Company's *Low-Income Weatherization* and *Home Energy Savings* programs.

Table 8
Participation by Manufactured Home Residents

	2014	2015	2016	2017	2018	2019	2020
Low Income Weatherization homes	40	44	49	45	41	7	22
Home Energy Savings participants	256	1,028	403	954	872	648	169
Appliances	34	10	10	4	8	2	11
Duct Sealing	197	187	12	795	492	488	9
Heat Pump	24	26	18	79	90	67	99
Heat Pump Water Heater	4	-	1	3	-	-	-
Kits	-	817	362	73	282	42	-
Lighting	12	17	1	-	-	-	-
Lighting buy down	72,646	86,318	54,508	50,953	33,936	34,791	19,400
Weatherization [FK(3)]	30	8	3	1	4	2	1

Due to the coronavirus pandemic, the manufactured home duct sealing direct install offer was suspended for 2020 for the safety of Pacific Power customers and contractors. This offer typically reaches approximately 500. The direct install offer utilizes one contractor for the work one contractor for the work and pays them directly. Customers do not pay the contractor when receiving direct install services. There is also an offer within the program that provides an incentive for customers who hire a duct sealing contractor directly. In 2020, nine residents in manufactured homes arranged to have their ducts sealed using a contractor they selected and paid.

In 2020, 99 heat pump installations were completed in manufactured homes by nine contractors. The manufactured home installations include upgrades to more efficient equipment and converting electric furnaces to heat pumps.

Information on all participants except the lighting buy down was compiled by matching customer identifiers (concatenated service location and agreement numbers) of participants with the same information in residential customer accounts bearing the manufactured home dwelling code flag.

Information about the portion of lighting buy down participants who reside in manufactured homes follows the same calculation used in prior years and uses information from the general population survey from the latest evaluation.²⁰

²⁰ In 2020, manufactured home customers purchased approximately twelve percent of the units receiving incentives in the buy down channel. This is the same percentage as used in prior years. The methodology is included in this footnote. Lighting buy down information was compiled from survey information from the final 2017-2018 Home Energy Savings evaluation. Customer prior year purchases for both CFLs and LEDs were added to arrive at a per-home purchase of efficient lighting that was assumed to apply equally to all manufactured homes (approximately 15,300) and calculate an estimate of total purchases (of LED's) for manufactured homes.

The Company also analyzed manufactured home customers who are also participants in the *Home Energy Reports* program. Table 9 below provides information on current 2020 behavioral program (*Home Energy Reports*) participation by manufactured home residents.

Table 9
Home Energy Reports Participation by Manufactured Home Residents

	Treatment	Control	Total
Groups	4,630	2,151	6,781

Information on the behavioral program participation was compiled in 2020 in the same manner (matching customer account number information) as described above for energy efficiency program participation. Treatment group includes customers receiving email and paper reports.

In addition, the Advisory Group agreed that income data used to help categorize participants would also be useful for the regional efforts described above. Further, providing income information is not a program participation requirement and that available third-party data would be used. Accordingly, this information is included in Table 10. The information in Table 10 uses zip code information for all *Home Energy Savings* program participants and those participants residing in manufactured homes as well as income information from the US Census Bureau. This comparison does not illustrate a strong correlation between lower income levels and manufactured home participation. Alternately stated, it appears program participation by manufactured home residents is like overall program participation by zip code/income level. Similar information was included in last year's report and 2020 was added for this report.

Table 10
Manufactured Home Income Data

ZIP Code	Median Household Income - US Census Bureau American Community Survey	Project Count - All DSM Projects 2014 - 2020	% Total DSM Projects	Project Count - MANUFACTURED Projects 2014 - 2020	% Total Manufactured Projects
98948	\$52,701	367	1%	28	1%
98932	\$55,280	320	1%	19	0%
98944	\$46,393	1,323	5%	148	3%
98947	\$51,450	276	1%	44	1%
98901	\$42,151	2,375	8%	564	12%
98951	\$44,729	601	2%	64	1%
98930	\$46,188	1,101	4%	221	5%
98902	\$41,432	3,783	13%	323	7%
98603	\$67,772	2	0%	0	0%
98935	\$40,096	155	1%	19	0%
98952	\$45,139	35	0%	10	0%
98938	\$76,053	104	0%	15	0%
99347	\$54,688	251	1%	26	1%
99343	\$59,968	0	0%	0	0%
98933	\$51,442	58	0%	13	0%
99328	\$46,406	532	2%	52	1%

ZIP Code	Median Household Income - US Census Bureau American Community Survey	Project Count - All DSM Projects 2014 - 2020	% Total DSM Projects	Project Count - MANUFACTURED Projects 2014 - 2020	% Total Manufactured Projects
98953	\$64,958	584	2%	84	2%
98923	\$52,803	97	0%	14	0%
99350	\$56,713	12	0%	2	0%
98903	\$47,215	1,747	6%	709	15%
99348	\$54,722	172	1%	36	1%
98937	\$55,870	577	2%	72	1%
99301	\$6,1029	0	0%	0	0%
98936	\$56,769	543	2%	146	3%
98942	\$62,682	1,888	7%	271	6%
99324	\$42,708	1,190	4%	379	8%
99362	\$52,537	4,934	18%	553	11%
99361	\$60,588	303	1%	92	2%
98908	\$64,974	4,036	14%	574	12%
99360	\$82,344	144	1%	38	1%
99323	\$71,907	483	2%	320	7%
98921	\$28,594	41	0%	10	0%
99329	\$46,250	22	0%	10	0%
98950	\$88,036	3	0%	0	0%
98939	data not available	12	0%	1	0%
99363	data not available	25	0%	16	0%
98920	data not available	1	0%	1	0%

Residential Programs

The residential energy efficiency portfolio is comprised of three company programs: *Home Energy Savings*, *Home Energy Reports*, *Low Income Weatherization*, and *funding for NEEA*. As shown in Table 11, the residential portfolio was cost effective based on three of the five standard cost effectiveness tests for the reporting period. The RIM test was less than 1.0, indicating near-term upward pressure was placed on the price per kilowatt-hour (kWh) given a reduction in sales.

Table 11
Cost Effectiveness for Residential Portfolio²¹

Benefit / Cost Test	B/C Ratio with NEEA & NEIs	B/C Ratio without NEEA Inc. NEIs
PTRC	2.08	1.14
TRC	1.89	1.05
UCT	1.99	1.06
PCT	5.26	3.11
RIM	0.71	0.52

Individual program performance, program management and program infrastructure are provided on the following pages.

²¹ Excludes *Low Income Weatherization* and includes select quantifiable and directly attributable non-energy benefits.

Home Energy Savings

The *Home Energy Savings* program provides access to and incentives for more efficient products and services installed or received by customers residing in newly constructed homes, existing homes, multi-family housing units or manufactured homes. 2020 cost effectiveness results were impacted by the reduced savings and higher incentive costs. Administrative costs did not decline by the same percentage as savings as customer engagement efforts during COVID-19 were on-going. As a result, the UCT for the program was slightly less than 1.0.

Table 12
Cost Effectiveness for Home Energy Savings²²

Benefit / Cost Test	B/C Ratio
PTRC	1.07
TRC	0.98
UCT	0.99
PCT	2.70
RIM	0.52

Program participation by measure category is provided in Table 13.

Table 13
Eligible Program Measures (Units)

Measure Category	Total kWh/Yr Savings @ Site	Total Incentive	Total Quantity
Appliances	19,188	\$9,744	106
Building Shell	58,607	\$34,200	132,722 Sq ft
Energy Kits	504,352	\$38,366	5,795
HVAC	2,129,376	\$745,951	765
Lighting	1,912,119	\$194,531	155,002
Water Heating	17,706	\$6,300	13
Whole Home	79,029	\$55,275	24
Grand Total	4,720,378	\$1,084,368	

Program Administration

The *Home Energy Savings* program is administered by Nexant who is responsible for the following:

²² Includes quantifiable and directly attributable non-energy impacts.

- Retailer and trade ally engagement – Nexant identifies, recruits, supports, and assists retailers to increase the sale of energy efficient lighting, appliances, and electronics. Nexant enters into promotion agreements with each lighting manufacturer and retailer for the promotion of discounted lighting equipment. The agreements include specific retail locations, lighting products receiving incentives and not-to-exceed annual budgets. Weatherization and HVAC trade allies engaged with the program are provided with program materials, training, and regular updates.
- Inspections – Nexant recruits and hires inspectors to verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 2.
- Incentive processing and call-center operations – Nexant receives all requests for incentives, determines whether the applications are completed, works directly with customers when information is incorrect or missing from the application and processes the application for payment.
- Program specific customer communication and outreach – A summary of the communication and outreach is outlined in the Communication, Outreach and Education section.

Program Changes

Planned changes went into effect January 1, 2020 and August 1, 2020 as part of the adaptive management strategy for aligning the Home Energy Savings program during the 2020-2021 biennium with updated planning assumptions, market conditions and pilot expectations. Safely delivering mitigating COVID -19 impacts was the primary focus. Effective January 1, 2020, the following changes were made:

- Updated unit energy savings and equipment eligibility to align with Regional Technical Forum (RTF) information available as of September 1, 2019.
- Retire Deep Retrofit measure due to low participation.
- Revised the incentive offering for Electronic Line Voltage Thermostat to align with new incremental cost.
- Created a new measure offering for Advanced Power Strips, available through direct-install only. Program staff and approved contractors will install the equipment during direct customer touch points such as home inspections and promotional campaigns.
- Clarify that new homes must have electric water heating equipment to qualify for new homes performance path incentives.

- Added new incentives for space and water heat pumps installed with CTA-2045 demand response capability.

Effective August 1, 2020, the following changes were made:

- Increased incentives by 25% for most measures to encourage program participation in response to the coronavirus pandemic.
- Ended the Wattsmart Starter Kit – 2 Bathrooms offer in response to the evaluation feedback that the second showerhead is immediately installed by customers.

Adaptive Management

The Company made substantial changes through an adaptive management approach which included the following 2020 activities:

- Given the coronavirus pandemic, program forecasts indicated a shortfall in participation given potential program participants face a multitude of challenges implementing energy efficiency projects. Availability of funds for home energy upgrades is a particular challenge facing many. To address this, the program was adaptively managed and incentives for almost all measures were temporarily increased by approximately 25% effective August 1, 2020.
- The Program expanded an online incentive center where customers and approved trade allies can submit applications online to include a guest login feature. This new feature allows customers to apply for incentives without creating an account or using the Pacific Power My Account Single Sign-on. The online incentive center links to Pacific Power's energy efficiency database allowing for a more streamlined application and processing path. Either a customer or a contractor can apply, and the system is tailored to only show measures each customer and contractor is eligible for. Additionally, customers and contractors are now able to track their incentive application status online in real time.
- The online incentive center was further expanded with the addition of coupons for smart thermostats. Beginning in September 2020, customers shopping at The Home Depot in College Place, Washington were eligible to receive an instant \$62 rebate on qualifying smart thermostat models. In late December, the Yakima Home Depot location was added to the program, along with six new smart thermostat models, bringing the total to 22 qualified models for instant rebate. In total 17 customers took advantage of the \$62 instant coupon rebate on smart thermostats, while nine customers submitted post-purchase applications during the same timeframe. In 2021, Pacific Power plans to expand the instant coupon program beyond smart thermostats and into heat pump water heaters.

- To connect underserved communities with energy efficient products, the program worked with fifteen food banks in Pacific Power territory to distribute 4,000 Wattsmart Starter Kits that contained four LED bulbs as well as program education materials on saving energy at home and available incentives. To prevent free ridership, total savings per food bank location were claimed based on the Retail Store Allocation Tool (RSAT) score of the nearest RSAT location. If the RSAT score was 100%, then 100% of the savings of the kits delivered to that food bank were claimed and if the RSAT score was 95%, then only 95% of the savings of the total kits delivered to that food bank location were claimed.
- In May 2020, the Program conducted a limited time offer for qualifying smart thermostats from ecobee, Nest, and Emerson. From May 21 through May 31, eligible customers were able to receive the \$50 smart thermostat incentive instantly discounted at the time of purchase plus an additional up to a \$50 special manufacturer discount off of eligible models. This left some thermostats as low as \$49 final retail. Overall, 84 incentives were claimed and approved.
- Continued implementing New Home Whole Home Performance Path application submittals through the NEEA's AXIS platform. In 2020 12 new homes were certified through the Whole Home Performance Path program. New home construction was impacted by the Coronavirus pandemic which slowed construction and impacted available funding for affordable and other housing.
- In 2020, trade allies were engaged through virtual outreach including emails, calls, newsletters, and updates in the Trade Ally Connect portal. In March 2020, in-person field activity was suspended due to the Coronavirus pandemic.
- Program Administrator connected with participating retailers through three pop-up retail events in 2020 at Lowe's Yakima, with one in each of the first three months of the year. These three events netted 34 interactions with employees and customers. The coronavirus pandemic halted an in-store events for the remainder of 2020.
- The Program created a new measure for multifamily new construction to help builders exceed energy code for new buildings. The multifamily offer will be a new measure within the Home Energy Savings program. The Program Administrator met with many interested builders and organizations, including the Yakima Housing Authority, to build a pipeline of 2021 projects.

Infrastructure

Multiple retailers and trade allies help deliver energy efficient products on behalf of the Company. The list of participating and non-participating retailers and trade allies by delivery channel and measure is provided in Appendix

Home Energy Reports

The *Home Energy Reports* program is a behavioral program designed to decrease participant energy usage by providing comparative energy usage data for similar homes located in the same geographical area. Additionally, the report provides the participant with information on how to decrease their energy usage. Equipped with this information, participants can modify behavior or make structural equipment, lighting, or appliance modifications to reduce their overall electric energy consumption.

In 2018, the Company transitioned the Home Energy Report delivery contract from OPower/Oracle to Bidgely. During the last biennial period, customers in the same treatment groups received either paper or email reports that included a breakdown of electricity usage by appliance category and comparison of their energy use to other similar homes. Paper reports are mailed to customers on a bi-monthly schedule. Email reports are sent on a monthly basis. All participants may request an electronic version delivered via email and have access to a web portal containing the same information about their usage, usage by appliance category, and past usage provided in the report. The web portal also contains other functions such as the ability for customers to update their home profile (for more accurate comparisons) and suggestions on more ways to save energy around their home.

For 2020-2021 the program was “refreshed” with new treatment and control groups starting in January 2020. This approach was designed to address statistical significance issues identified in the last evaluation report. These changes are intended to maximize cost effective energy savings, expand reach of the program via digital channels and simplify execution by reducing number of treatment waves. With this approach, the email treatment group size is maximized and paper customers with >40th percentile of annual consumption also receive reports. Under the refreshed program, in the beginning of 2020, 24,000 customers with email started receiving digital reports and 23,000 customers started receiving paper reports²³.

Consistent with planning assumptions used to establish the conservation target and business plan a two-year measure life is used to assess costs effectiveness. The Home Energy Reports savings included in the table below are first year savings achieved. Savings for the second year, 2021 that will be reported against the target will be savings that exceed the savings from the first year, 2020. Home Energy Report Savings are expected to increase in 2021 (second year) compared to 2020 (first year).

²³ At the end of 2020, approximately 22,300 customers were receiving email reports and approximately 19,500 customers were receiving paper reports.

Results are shown in Table 14.

Table 14
Cost Effectiveness for *Home Energy Reports*

Benefit / Cost Test	Benefit/Cost Ratio
PTRC	1.98
TRC	1.80
UCT	1.80
PCT	n/a
RIM	0.56

Program savings by group is provided in Table 15.

Table 15
Program Savings

Home Energy Reports Group	Total kWh/Yr Savings @ Site
Grand Total	3,542,270

Program Administration

The *Home Energy Reports* program is administered by Bidgely. Bidgely's software creates individualized energy reports for utility customers that analyze their energy usage, disaggregates energy use into end uses and offers recommendations on how to save energy and money by making small changes to their energy consumption.

Low Income Weatherization

The *Low-Income Weatherization* program provides energy efficiency services through a partnership between the Company and local non-profit agencies to residential customers who meet income-eligible guidelines. Services are provided at no cost to the program participants. Cost effectiveness for the *Low-Income Weatherization* program was not included in the portfolio or sector-level analysis per WAC 480-109-100 (10)(b).

In 2020, 46 homes were treated, saving 69,527 kWh (at site). COVID-19 pandemic impacts sharply reduced the number of low-income households that received energy efficiency services. Total homes treated, as well as the type and frequency of specific energy efficiency measures installed in each home, is provided in Table 16.

Table 16
Eligible Program Measures (Units)

Participation – Total # of Completed/Treated Homes	46
Number of Homes Receiving Specific Measures	
Aerators	20
Attic Ventilation	34
Caulk/Weather-stripping	30
Ceiling Insulation	33
Ductless Heat Pump	10
Duct Insulation	19
Floor Insulation	40
LED Light Fixtures	6
LED Light Bulbs	36
Ground Cover	31
Infiltration	45
Repairs	23
Replacement Refrigerators	1
Showerheads	18
Thermal Doors	3
Timed Thermostat	1
Wall Insulation	6
Water Heater Blankets	0
Water Heater Replacement	10
Water Pipe Insulation and Sealing	42
Windows	7

Program Administration

The Company has long-term partnerships in place with three local non-profit agencies to provide weatherization services to income-qualifying households throughout its Washington service territory. These agencies include Blue Mountain Action Council located in Walla Walla, Northwest Community Action Center in Toppenish, and Opportunities Industrialization Center of Washington in Yakima. The Company entered into an agreement for these services with the Yakama Nation Housing Authority in July 2018.

The leveraging of Company funding along with Washington Match Maker Program funds allows the agencies to provide these energy efficiency services to more households at no cost to participating customers. The Company provides rebates to partnering agencies for 50 percent of the cost of services while Match Maker funds are available and will cover 100 percent of costs when these state funds are depleted. In 2020, 41 homes were funded at 50% and 5 at 100%. Match Maker program funding for 2019-2021 were released to agencies in 2019 third quarter and agencies except Blue Mountain Action Council remained at 50% of Pacific Power funds through the end of 2020. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes, or apartments. Over 7,800 homes have been completed with Pacific Power funding since the program's inception in the mid-1980s.

By contract with the Company, the agencies are responsible for the following:

- Income Verification – Agencies determine participant income eligibility based on Washington Department of Commerce guidelines. Households interested in obtaining weatherization services apply through the agencies. The income guidelines can be viewed on the Washington Department of Commerce website²⁴.
- Energy Audit – Agencies use a U.S. Department of Energy approved audit tool or priority list to determine the cost-effective measures to install in the participant's homes (audit results must indicate a savings to investment ratio of 1.0 or greater).
- Installation of Measures – Agencies install the energy efficiency measures.
- Post Inspections – Agencies inspect 100 percent of completed homes. A sample of 5 -10 percent are inspected by a Pacific Power inspector. See Appendix 2 for verification summary.
- Billing Notification – Agencies are required to submit a billing to Company within 90 days after job completion. A homeowner agreement and invoice form indicating the measures installed and associated cost is submitted on each completed home.

²⁴ <http://www.commerce.wa.gov/wp-content/uploads/2018/03/v.1.1-2018WALowIncomeEligibilityGuidelines.pdf>

Non-Residential Program

The Non-Residential Energy Efficiency program is promoted to the Company's commercial, industrial and irrigation customers as Wattsmart Business.

The Wattsmart Business program²⁵ is intended to maximize the efficient use of electricity for new and existing non-residential customers through the installation of energy efficiency measures and energy management protocols. Qualifying measures are any measures which, when implemented in an eligible facility, result in verifiable electric energy efficiency improvements.

The program was cost effective in 2020 based on four of the five cost-effectiveness tests as shown in Table 17. The RIM test was less than 1.0, indicating near-term upward pressure was placed on the price per kilowatt-hour (kWh) given a reduction in sales.

Table 17
Cost Effectiveness for Wattsmart Business

Benefit / Cost Test	B/C Ratio with NEEA & NEIs	B/C Ratio without NEEA inc NEIs
PTRC	3.14	2.87
TRC	2.85	2.61
UCT	4.07	3.83
PCT	4.84	4.36
RIM	0.86	0.83

Program performance by sector and measure category is provided in Table 18 and 19.

Table 18
Program Performance by Sector

Sector	Total kWh/Yr Savings @ Site	Total Incentive	Total kW Savings @ Site	Total Projects
Commercial	21,182,321	\$ 1,968,056	1,772	707
Industrial	6,864,628	\$ 624,345	584	69
Irrigation	803,342	\$ 121,300	31	38
Grand Total	28,850,291	\$ 2,714,151	2,386	814

²⁵ The current program brochure is available at https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/washington/WA_wattsmartBusiness_Brochure.pdf. Current program detail (in addition to the program tariff, Schedule 140) maintained on the Company website is available at https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/savings-energy-choices/wattsmart-business/washington/WA_wattsmartBusiness_Incentive_tables_information.pdf.

Table 19
Program Performance by Measure Category

Measure Category	Total kWh/Yr Savings @ Site	Total Incentive	Total kW Savings @ Site	Total Projects
Additional Measures	257,533	\$ 38,630	31	2
Appliances	143	\$ 50	0	1
Building Shell	20,111	\$ 8,311	0	12
Compressed Air	2,865,749	\$ 205,583	71	17
Energy Management	2,912,284	\$ 58,246	290	21
Food Service Equipment	48,529	\$ 2,400	9	5
HVAC	858,145	\$ 141,705	133	29
Irrigation	1,109,721	\$ 138,204	55	41
Lighting	12,915,186	\$ 1,333,501	1,442	639
Motors	296,265	\$ 43,948	36	8
Refrigeration	7,566,625	\$ 743,572	320	39
Grand Total	28,850,291	\$ 2,714,151	2,386	814

Services and incentives offered through the Wattsmart Business program include:

- Typical Upgrades included in Incentive Lists: Incentives for listed lighting, HVAC, irrigation, and other equipment upgrades that increase electrical energy efficiency and exceed energy code requirements.
- Custom analysis: Offers energy analysis studies, services, and incentives for more complex projects.
- Energy Management: Provides expert facility and process analysis and incentives to help lower energy costs by optimizing customer's energy use.
- Enhanced incentives for small businesses: Provide enhanced incentives for lighting upgrades installed by an approved Wattsmart Small Business Contractor at an eligible existing small business customer facility.
- Midstream/Lighting Instant Incentive: Provides instant, point-of-purchase incentive for qualifying LED lamps sold through participating distributors. Customers purchasing lamps from non-participating suppliers can apply for incentives after purchase.
- Energy Project Manager Co-funding: Available to customers who commit to an annual goal of completing energy projects resulting in at least 1,000,000 kWh/year in energy savings.
- Project Financing: Pacific Power teamed with National Energy Improvement Fund, an energy efficiency project financing firm, to provide customers with access to third party financing options for instances where funds for project implementation are not available from within the customer's organization.

Program Administration

The program includes several delivery channels, including Trade Ally, Small Business Enhanced Incentive Offer, Midstream/Lighting Instant Incentive, and Project Manager (managed account) delivery.

Trade Ally

In this channel, the program is primarily marketed through local trade allies who receive support from one of two program administrators. The Company contracts with Nexant, Inc. (Nexant) and Cascade Energy (Cascade) for trade ally coordination, training, application processing and project facilitation services for commercial measures and industrial/agricultural measures, respectively.

Nexant²⁶ and Cascade are responsible for the following:

- Trade ally engagement – identify, recruit, train, support and assist trade allies to increase sales and installation of energy efficient equipment at qualifying business customer facilities.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, develop and maintain simplified analysis tools and provide program design services, evaluation and regulatory support upon request.
- Direct customer outreach and project facilitation for smaller customer projects.
- Inspections – verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 2.

Small Business Enhanced Incentive Offer

In this channel, the program is primarily marketed through local contractors approved specifically for this offer who receive support from the program administrator, Nexant. Nexant is responsible for the following:

- Management of approved contractors – identify, recruit, contract with, train, support, and assist contractors to increase sales and installation of energy efficient lighting equipment at qualifying small business customer facilities.
- Direct customer outreach.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, develop and maintain simplified analysis tool and provide program design services, evaluation and regulatory support upon request.
- Inspections – verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 2 to this report.

Midstream/Lighting Instant Incentive Offer

²⁶ Nexant also delivers the *Home Energy Savings* program, allowing consolidation of some administrative functions and the residential and non-residential trade ally networks.

In this channel, the program is primarily marketed through distributors approved specifically for this offer who receive support from the program administrator, Nexant. The program is also marketed through installation contractors, who also receive support from Nexant. Nexant is responsible for the following:

- Management of approved distributors – identify, recruit, contract with, train, support, and assist distributors to increase sales of energy efficient lighting equipment at qualifying business customer facilities.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, and provide program design services, evaluation and regulatory support upon request.
- Inspections – verify on an on-going basis the installation of measures at eligible customer facilities. A summary of the inspection process is in Appendix 2 to this report.

Project Manager (managed account delivery)

In this channel, Cascade Energy, working with the Company's internal project manager, manages a subset of more complex projects. The team works directly with the customer or through the Company's regional business managers²⁷ to identify projects and provide program services and incentives or refer project leads to the appropriate channel identified above.

Infrastructure

To help increase and improve the supplier and installation contractor infrastructure for typical energy efficient equipment and services, the Company established and continues to develop and support trade ally networks for lighting, HVAC and motors/VFDs. This work includes identifying and recruiting trade allies, providing program and technical training, and providing sales support on an ongoing basis.

Participating vendors sign a Wattsmart Business participation agreement and are listed as Wattsmart Business Vendors in the Find a Vendor search on the Company's website. In addition to the formal Wattsmart Business vendor networks, other trade allies such as irrigation vendors are identified and supported on an ongoing basis.

The current searchable list of trade allies who have applied and been approved as participating Wattsmart Business vendors is available on the Company website²⁸ and included as Appendix 4 to this report. In most cases, customers are not required to select a vendor from these lists to receive an incentive.²⁹

The total number of participating trade allies is currently 46. The current count of participating trade allies by technology are in Table 20

²⁷ Regional business managers are responsible for directly working with Washington commercial and industrial/ag customers.

²⁸ Searchable participating vendor lists are available from the Company website. Direct link to the "Find a Vendor" search tool: <https://pacificpower.tradeally.com/>

²⁹ For the Wattsmart Small Business enhanced incentives, customers are required to choose one of the approved contractors for this offer.

Table 20
Participating Trade Allies³⁰

Lighting	HVAC	Motors and VFD	Irrigation	Small Business – approved contractors	LED Instant Incentive – approved distributors, e-commerce retailers
35	14	26	3	5	7 distributors, 15 branch locations

Program Changes

The Company made programmatic changes twice in 2020 in addition to announcing changes for 2021.

Effective January 1, 2020, changes were made to:

- a) Increase participation by
 - Adding incentives to Motors table.
 - Adding incentives to HVAC Equipment table.
 - Adding Direct Install offerings for select measures.
 - Restructuring the New Construction/Major Renovation lighting incentive table.
 - Expanding Advanced Rooftop Unit Control measures to allow the installation of control systems on new rooftop units and to include Demand-Controlled Ventilation (DCV) only applications.
 - Offering vendor incentives to encourage the uptake of certain energy savings measures.
- b) Update measures to align with Regional Technical Forum and Consortium for Energy Efficiency changes.
 - Revise Unit Energy Savings for Irrigation Hardware Measures.
- c) Modify incentives in Food Service Equipment table.
- d) Modify incentives in Office Energy Efficiency table.
- e) Add incentives to the Small Business Lighting table.
- f) Remove non-lighting incentive offerings for Small Businesses.
- g) Remove some incentives from Mid-Market Incentives table.
- h) Make other minor administrative changes and maintain measures.

Effective August 1, 2020, changes were made to:

- a) Adaptively manage the program and increase participation by temporarily increasing most incentives by approximately 25% (before project incentive caps) in response to the COVID-19 pandemic.
- b) Remove the maximum simple payback threshold to streamline administration and simplify messaging for participants and trade allies.
- c) Correct incentive table errors for ice machines, heat pump water heaters with CTA-2045 capability, and three irrigation water distribution measures.

³⁰ Some trade allies may participate in more than one technology, so the count of unique participating firms is less than the total count provided.

- d) Make other minor administrative changes.

Adaptive Management

The Company made substantial changes through an adaptive management approach. The following bullets summarize the changes.

- **Temporary Incentive Increase in Response to COVID-19 Pandemic** – Given the COVID-19 pandemic, program forecasts indicated a shortfall in participation given potential program participants face a multitude of challenges implementing energy efficiency projects. Availability of capital is a particular challenge facing many. To address this, the program was adaptively managed and incentives for almost all measures were temporarily increased by approximately 25% (before any project incentive caps are applied) effective August 1, 2020.
- **Virtual Inspections** – As a result of the COVID-19 pandemic, the program adaptively managed inspection protocols in 2020. In March, the program made a policy decision to allow virtual inspections where possible in place of in-person on-site inspections. This allowed the team to keep the program open for business while complying with local/state/national health authority guidelines and mandates. The policy was further adaptively managed to provide the option to waive the requirement for inspection for Premium Vendors for low risk projects up to a specific threshold. This inspection policy update was effective October 1, 2020 after consulting with the DSM Advisory Group.
- **Strategic Energy Management Cohorts**
In May 2018, Pacific Power partnered with the Bonneville Power Administration (BPA) to jointly provide a water conservation coaching cohort for water supply entities in the Yakima and Tri-Cities areas of Washington. Implementation over a two-year period ending in June 2021. Pacific Power reported energy savings for the first year of engagement in June 2020 and will report energy savings for the second year of the engagement in June 2021.

Many of the City entities participating in the water SEM were interested in doing a similar engagement for the wastewater portion of their business. Pacific Power enrolled four more customers for a separate SEM engagement for wastewater entities with collaboration with BPA utilities. The structure of the wastewater SEM is very similar to that described for the water SEM with workshops and targeted site work for customers, however due to COVID-related restrictions, these workshops – and some of the onsite “treasure hunts” – were conducted via video conferencing. This engagement started in June 2020³¹ and is expected to last two years.

³¹ Note these plans were made before the COVID-19 pandemic.

- **New Online Application Portal** - At the end of 2020, the online application platform using the iEnergy public user experience (PUX) technology in place for Home Energy Savings was expanded to include Wattsmart Business. Washington business customers and vendors can now view and apply for eligible incentives online. This online incentive center works directly with Pacific Power's database system allowing for a more streamlined application and processing path. Either a customer/participant or a Wattsmart Business vendor can apply, and the system is tailored to only show measures each customer and vendor is eligible for. Additionally, customers and vendors are now able to track their incentive application status online in real time.
- **LED Street Light Upgrades for Small Communities** – All 18 small communities served by Pacific Power and eligible for the Washington Transportation Improvement Board's Relight Washington funding received LED upgrades for their company owned streetlights between late 2018 and early 2020. Installation of 646 LED streetlight upgrades was complete for one community in late 2018. In 2019, 3,432 streetlights in 14 communities were upgraded to LED. Installations for the remaining 397 lights in three communities were complete in 2020, resulting in a total of 4,475 lights upgraded. The total annual energy savings for all eighteen communities is 2.7 million kWh and total Wattsmart Business incentives is \$143,669. Feedback from the communities has been very positive.
- **Targeted Small Business Campaign** – This ongoing campaign provides approved Wattsmart Small Business Vendors who signed a Non-Disclosure agreement (in addition to the vendor participation agreement already on file) with refined customer lists (containing business name, address, phone number only) to more effectively connect with customers eligible for the small business enhanced lighting incentives. Prior to providing the specially developed customer lists, postcards are mailed to each customer on the list to introduce them to the program and let them know a Vendor will be contacting them. The intent of this initiative is to improve the efficiency of approved vendor's sales processes and boost small business participation. In 2020, postcards were sent to 134 small businesses³² and lists were provided to vendors for follow-up. This resulted in 45 projects with total annual savings of 896,164 kWh completed in 2020. In addition, Pacific Power Wattsmart Business Vendor co-branded shirts are made available to vendors. These shirts provided significant help in promoting vendor credibility with small business customers.
- **eLearning Platform** - In addition to the 16 existing courses, two new courses were added to the eLearning platform for Wattsmart Business vendors in 2020:

1. Program Updates in a Virtual Environment

³² The postcards were mailed in three separate waves in 2020 with each wave going to a small number of eligible customers (about 30 customers per contractor). Once the contractor follow-up contacts were complete and the contractor was able to do more follow-ups, another wave was mailed to the next small group of eligible customers.

2. Advantages of Networked Lighting Controls over Building Management System Vendors can take advantage of the eLearning Platform anywhere they have a connected device. Program outreach staff will continue to work with vendors to engage them with the platform and obtain ideas for relevant and timely new courses. In Washington, there are 35 registered users on the platform with 33 course completions in 2020.
- **Premium Tier** – In 2020, Conserve Energy and MH Electric were both recognized as Pacific Power’s Wattsmart Business Premium Vendors. Vendor performance is assessed on a quarterly basis in the Vendor Snapshot which also informs the trade ally if they qualified for Premium status. To be considered for Premium status, an approved Wattsmart Business Vendor has to complete a minimum number of projects in the past twelve months and hold a lighting credential such as the NEEA’s NXT Level 1 Designation for both the company and an employee. Pacific Power established performance categories that align with program objectives to assess and rank lighting trade ally performance. In addition to project count and credentials, lighting vendors are also selected based on customer satisfaction, program satisfaction and project submission quality. The Premium Vendors come up first in the online Find-A-Vendor search results and their listing is highlighted so they stand out when someone searches for a lighting vendor. They are also given the opportunity to provide expanded information about their company in their online listing and are offered co-branded polo shirts like the shirts for small business lighting contractors.
 - **Formal feedback** - Scorecards were provided to approved lighting vendors biannually in 2020 and program coordinators followed up to review the snapshots with each vendor. The main purpose is to provide vendors with a summary of their performance, help them with continuous improvement and inform them of positive customer comments received from customer surveys. Program coordinators work with individual vendors to address any negative comments. The Vendor Snapshot includes total number of projects, savings, incentives, and the vendor’s standing in comparison to other vendors.

Northwest Energy Efficiency Alliance

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

Program performance for 2020 is being reported based on NEEA's results for Pacific Power of 5,569 MWh (at site). Consistent with the reporting convention approved in Docket UE-132047 the savings represent Pacific Power's portion of Total Regional Savings less the Company's local program savings

Program Administration

The Company has a representative on the NEEA board of directors as well as representatives on each of the sector advisory committees, residential, commercial, and industrial.

Communications, Outreach and Education

The Company uses earned media, customer communications, paid media, and program specific media to communicate the value of energy efficiency and provide information regarding low-cost and no-cost energy efficiency measures. The Company endeavors to educate customers on the availability of technical assistance, services, and incentives with the overall goal to engage customers in reducing their energy usage.

Earned Media

Earned media is managed by the Company's external communications department in cooperation with the regional business managers located in Washington. "Earned media" generally refers to favorable television, radio, newspaper, or internet news coverage gained through press releases, media events, opinion pieces, story pitches, or other communication with news editors and reporters.

Customer Communications

As part of the Company's regular communications to its customers, newsletters and bill statement communications promote energy efficiency initiatives. The Company uses its website and social media, such as Twitter and Facebook, to communicate and engage customers on DSM offers and incentives.

Paid Media/Wattsmart campaign

In 2020, the Company deployed a Wattsmart advertising campaign in English and Spanish to inform and educate residential customers about the benefits energy efficiency contributes to the greater good in addition to saving money. The overall paid media objective is to effectively reach our customers through a multi-faceted campaign with programs aimed at specific customer groups and the unifying theme "Being Wattsmart saves me money, and it's good for Washington." This communication campaign aims to create awareness of the importance and benefits of being energy efficient, and to help increase participation in the Company's DSM programs.

Key strategies include:

- Implement an advertising campaign that features Wattsmart energy efficiency messaging and connect it to benefits for Washington.
- Promote customer conservation (behavioral changes) and increase participation and savings through the Company's Wattsmart DSM programs.
- Motivate customers in Washington to reduce consumption independently or to do so by participating in the Company's Wattsmart DSM programs.

- Educate customers on how these programs can help them save money on their utility bills, reduce energy consumption and to help Washington thrive

- Demonstrate by example how business customers are saving energy and enjoying the benefits of being Wattsmart.

General Key Messages:

- Using energy wisely at home and in your business saves you money, and it's good for Washington.
- Surprising as it sounds, Pacific Power wants to help you use less energy.
- Pacific Power is your energy partner
 - We want to help you keep your costs down.
 - We offer Wattsmart programs and cash incentives to help you save money and energy in your home or business.
 - Being Wattsmart is good for your wallet, and for Washington, now and into the future.

To reach residential customers, the Company used TV, radio, social, print, digital video (OTT) and digital. Large-scale typography along with beautiful scenic images of Washington was combined with footage of people taking small steps (changing lighting to LED lamps, adjusting smart thermostat setting) to save energy and money and to make a big difference for Washington and the environment, now and into the future.

To reach business customers a multi-media mix of TV, radio, social and digital, digital video (OTT) were used to reach as many customers as possible with the greatest frequency. Table 21 outlines the Washington media channels used, the value of each channel, and the impressions achieved.

Table 21
2020 Media Channels

Communication Channel	Value to Communication Portfolio	2020 Placements
Television	Television has the broadest reach and works as the most effective media channel	971,646 residential and business impressions
Radio	Given the cost relative to television, radio builds on communications delivered via television while providing for increased frequency of messages	4,843,959 residential and business impressions
Newspaper/Magazine	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast	367,956 residential impressions
Online advertising	Digital display, Google Search, and OTT (digital video)	2,992,631 residential and business impressions
Social Advertising	Advertising on Facebook, Instagram	2,779,118 residential and business impressions
Twitter @PacificPower_WA	Awareness for early adopters regarding energy efficiency tips Tweets posted on a weekly basis	1,126 followers through December 2020
Facebook www.facebook.com/pacificpower	Awareness for early adopters regarding energy efficiency tips and a location to share information	24,636 fans through December 2020 (for all Pacific Power states)

The total number of impressions for the campaign in 2020 was 11,981,072.

Links to the Company's current portfolio of advertisements are included in Appendix 5.

Program Specific

All energy efficiency program communications are branded under the Wattsmart umbrella to reinforce the campaign and to link changes in behavior to actions customers can take by participating in specific programs. Separate marketing activities administered by and specific to the programs ran in conjunction with the Wattsmart campaign in 2020.

Home Energy Savings

Information on the *Home Energy Savings* program is communicated to customers, retailers, and trade allies through a variety of channels including social media, direct mail, email, newsletters and website.

Promotional efforts in Washington focused primarily on Wattsmart Starter Kits and smart thermostats through a series of targeted customer emails and social media ads. To reach a wider audience, the Wattsmart Starter Kit emails sent in November and December included English and Spanish versions. Many of these promotions were intended to increase savings in response to COVID-19 impacts.

A summary of outreach is displayed in Table 22

Table 22
Home Energy Savings Communication Impressions

Communications Channel	2020
Wattsmart Starter Kits Emails - May	28,054
Smart Thermostat Emails - May	40,960
Smart Thermostat Facebook Ads	426,244
Wattsmart Starter Kit Emails – September & October	25,993
Wattsmart Starter Kit Emails – November & December	16,923
Total	538,174

Home Energy Reports

Thousands of print and email Home Energy Reports were delivered to Washington customers in 2020. Pacific Power's website provides a streamlined path for customers to access the Bidgely web platform for energy usage insights.

Wattsmart Business

In 2020, customer communications and outreach supported Wattsmart Business using radio, print, paid digital display and search advertising, direct mail, email, and social media. This was in

addition to customer direct contact by Company project managers and regional business managers, as well as trade ally partners and content on the Company’s website.

During 2020, the Company used radio and print advertising to encourage customers to inquire about incentives for lighting and lighting controls, Eblasts and digital search ads directed viewers to the Company’s website³³. Targeted direct mail was also sent to irrigation customers in the spring and fall to encourage energy-saving retrofits. Emails encouraged customers to reach out for free energy assessments for lighting. Email communications also focused on the benefits and incentives for irrigation upgrades. Targeted direct mail was aimed at small business customers to generate interest in lighting upgrades and incentives.

In 2020, the program garnered 9,891,727 impressions. A breakdown of impressions by media type is shown in Table 23.

Table 23
Wattsmart Business

Communications Channel	2020 Impressions
Radio	3,773,855
Newspaper	472,556
Magazine	13,800
Digital Display	4,386,104
Social Media (Facebook, Instagram)	1,237,035
Eblasts	3,235
Irrigation Direct Mail	4,938
Small Business Direct Mail	204

Energy Education in Schools

The Company offers a Wattsmart Schools education program through the National Energy Foundation (NEF). The program is designed to develop a culture of energy efficiency among teachers, students, and families. The centerpiece is a series of one-hour presentations with educational and entertaining video components as well as hands-on, large group activities for 4th and 5th grade students. Teachers are provided instructional materials for use in their classrooms, and students are sent home with a Home Energy Worksheet to explore energy use in their homes and to encourage efficient behaviors.

In 2020, in response to COVID-19, presentations were conducted by NEF online with a digital presentation and interactive web components. Presentations were made available to Washington schools from October 1 to December 1, 2020. The program met its outreach goals of reaching 3,399 students and 144 teachers with 47 school presentations and 20 percent of “Home Energy Worksheets”, which are used as part of a home energy audit activity, completed, and returned. The NEF 2020 Report can be found in Appendix 5.

³³ www.pacificpower.net/wasave

Evaluations

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

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

Verification of the potential to achieve savings involves regular inspection and commissioning of equipment. The Company engages in programmatic verification activities, including inspections, quality assurance reviews, and tracking checks and balances as part of routine program implementation and may rely upon these practices in the verification of installation information for the purposes of savings verifications in advance of more formal impact evaluation results. A summary of the inspection process is included in Appendix 2.

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

Information on evaluation activities completed or in progress during 2020 is summarized in the chart below. Summary of the recommendations are provided in Appendix 6. The evaluation reports are available at <https://www.pacificorp.com/environment/demand-side-management.html>

Table 24
2020 Evaluation Activities

Program / Activities	Years Evaluated	Evaluator	Progress Status
Home Energy Savings	2019-2020	ADM	In-process
WA Verification of Savings	2018-2019	AEG	Complete
Wattsmart Business	2018-2021	Cadmus	In-process
Home Energy Reports	2018-2019	Cadmus	Complete
Low Income Weatherization	2016-2017	ADM	Complete

Cost Effectiveness – Appendix 1
Measure Verification – Appendix 2
Home Energy Savings Retailers – Appendix 3
Wattsmart Business Vendor Network – Appendix 4
Program Evaluations – Appendix 5