Exh. ASR-7
Docket UE-220376
Witness: Andrew Rector

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PACIFICORP, d/b/a PACIFIC POWER & LIGHT COMPANY,** **Respondent.**	**DOCKET UE-220376**

EXHIBIT TO
TESTIMONY OF

ANDREW RECTOR

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

PacifiCorp Draft Clean Energy Implementation Plan, Nov. 1, 2021

October 21, 2022

DRAFT
Clean Energy Implementation Plan

November 1, 2021

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EXECUTIVE SUMMARY

PacifiCorp's Vision

PacifiCorp's first Clean Energy Implementation Plan (CEIP) fulfills key provisions of Washington State's Clean Energy Transformation Act (CETA),[1] passed into law in May of 2019 by the Washington State Legislature and signed into law by Governor Jay Inslee. The legislation combines directives for utilities to pursue a clean energy future with assurances that benefits from a transformation to clean power are equitably distributed among all Washingtonians, all at a reasonable cost.

For many years, PacifiCorp has been on an independent trajectory to develop clean energy, powering jobs and innovation. This trajectory is manifest in the company's 2021 Integrated Resource Plan (IRP), which serves as the basis for this CEIP and plans for the bulk of renewable and non-emitting resource acquisitions that will be necessary to comply with CETA directives.

This CEIP details the specific actions PacifiCorp will take over the next four years (2022-2025) to move toward CETA's clean energy goals. Specifically, utilities must show that by December 31, 2025, all coal-fired generation has been removed from Washington's allocation of electricity. By January 1, 2030, utilities must be greenhouse gas (GHG) neutral, and by 2045, 100 percent of Washington's electricity supply must come from non-emitting and renewable resources.

This first CEIP draws new and vital voices into the process of achieving Washington's clean energy future and outlines an expectation that this future can be achieved safely, securely and reliably, and in a way that reduces burdens on our most vulnerable communities.

Meeting CETA directives can be achieved at moderate cost to Washington customers, largely because PacifiCorp's 2021 IRP advances the company's ongoing commitment to clean energy with significant investments in energy efficiency, renewable resources and transmission laid out in the 2017 IRP and 2019 IRPs. Based on the 2021 preferred portfolio,[2] including incremental actions specifically intended to meet CETA's requirements. PacifiCorp currently forecasts that it is on track to meet each CETA objective.

Setting Targets

The CEIP is filed on a four-year cycle and sets interim targets for non-emitting and renewable energy contributions to meet retail electricity sales,[3] and also sets specific targets for energy efficiency, demand response, and renewable energy.

The interim target is the percentage of forecast retail energy sales that PacifiCorp can meet with

[1] RCW 19.405.
[2] PacifiCorp's 2021 IRP is publicly available at https://www.pacificorp.com/energy/integrated-resource-plan.html.
[3] Calculated as retail load to Washington customers net of distributed generation, private generation and DSM.

renewable and non-emitting generation. As PacifiCorp continues to expand its non-emitting and renewable resources on its system this target is expected to trend upward until achieving GHG neutrality by 2030 and 100 percent renewable energy for Washington customers by 2045.

In 2020, the ratio of Washington retail sales served by renewable and non-emitting energy resources was 21.9 percent. Based on the 2021 IRP preferred portfolio, the interim target for this CEIP is 50 percent, to be achieved by 2025, increasing to 81 percent by 2030 and 94 percent by 2040, which is the last year of the 2021 IRP's 20-year planning horizon. Beyond 2040, the company will continue its trajectory to 100 percent clean energy for Washington customers by 2045.

Providing Benefits

Aligned with CETA objectives, Chapter 2 – Development of Customer Benefit Indicators, describes how PacifiCorp has worked in partnership with stakeholders and advisory groups to identify the highest priority benefits for customers, and to identify potential barriers and burdens that may prevent some customers from gaining those benefits.

These efforts have resulted in nine customer benefit indicators (CBIs and associated weighting factors to evaluate the equitable distribution of these benefits, allowing the company to assess and monitor the impacts of each specific proposed program, action, and investment. The CBIs are attributable to and inform utility actions and tactics described in Chapter 3 – Specific Actions.

In addition, CETA requires that certain benefits target communities facing particularly challenging circumstances. These communities are referred to as highly impacted communities and vulnerable populations, which are collectively referred to as named communities.

Taking Action

PacifiCorp is taking action to meet CETA targets identified in Chapter 1 – Interim and Specific Targets. In this CEIP, specific actions to achieve targets in the years 2022 through 2025 are grouped into four key areas:

1. Supply-Side Resources
2. Energy Efficiency
3. Demand Response
4. Community Outreach and Engagement

In the longer term, company actions are forecast to be consistent with the 2021 IRP, and include the addition of renewable and non-emitting resources, retirement of RECs associated with renewable generation, and the ongoing pursuit of both energy efficiency and demand response.

Assessing Costs

The incremental cost of the CETA-compliant resource portfolio was assessed in the company's 2021 IRP and refined for the CEIP covering the years 2022 through 2025, resulting in an incremental cost of approximately $3.2 million annually on a present-value revenue requirement (PVRR) basis. In addition to the IRP-modeled resource portfolio cost, there are non-modeled

costs including increased energy efficiency implementation costs and Equity Advisory Group (EAG) and public engagement costs amounting to approximately $2.4 million annually. Together, costs in the years 2022-2025 amount to about $5.6 million annually.

These values are calculated by comparing the system-wide CETA-compliant resource portfolio costs plus the additional non-modeled costs to the costs of a hypothetical future in which CETA legislation did not exist, using an alternative portfolio developed in the 2021 IRP.

Engaging the Public

PacifiCorp is grateful to participants in its advisory groups and the EAG, technical workshops and public meetings, each of which serves to illuminate equity challenges and public interest as well as ground the CEIP in the pressing concerns of Washington named communities. Their engagement was essential to the development of this CEIP.

CHAPTER 1 – INTERIM AND SPECIFIC TARGETS

Introduction

CETA was passed by the Washington State Legislature and signed into law by Governor Jay Inslee in May 2019. The legislation combines directives for utilities to pursue a clean energy future with assurances that benefits from a transformation to clean power are equitably distributed among all Washingtonians, at a reasonable cost.

The Washington Utilities and Transportation Commission (Commission) began rulemakings to implement CETA in June 2019, and the first phase concluded in December 2020. As directed by the legislation and the new CETA rules, Washington electric utilities must file the following long-term planning documents:

> **Clean Energy Action Plan:** The Clean Energy Action Plan (CEAP) is a ten-year planning document that is derived from the IRP and included as an appendix to the IRP. The CEAP provides a Washington-specific view of how PacifiCorp is planning for a clean and equitable energy future that complies with CETA.
>
> **Integrated Resource Plan:** The IRP is a comprehensive decision support tool and roadmap for meeting the company's objective of providing reliable and least-cost electric service to its customers. The plan is developed through open, transparent and extensive public involvement from state utility commission staff, state agencies, customer and industry advocacy groups, project developers, and other stakeholders.
>
> The key elements of the IRP include: an assessment of resource need, focusing on the first 10 years of a 20-year planning period; the preferred portfolio of supply-side and demand- side resources to meet this need; and an action plan that identifies the steps that will be taken over the next two-to-four years to implement the plan.
>
> **Clean Energy Implementation Plan:** This document, the CEIP, is a plan that lists the specific actions PacifiCorp will take over the next four years to move toward the 2030 and 2045 clean energy directives.

The CEAP included in the 2021 IRP (Appendix O – Washington Clean Energy Action Plan) provides a Washington-specific roadmap of how PacifiCorp is planning for a clean and equitable energy future relative to the requirements of CETA.

Overview of PacifiCorp d/b/a Pacific Power & Light Company (PacifiCorp)

PacifiCorp is a multi-jurisdictional, vertically integrated utility that serves nearly two million customers in six western states: California, Idaho, Oregon, Utah, Washington, and Wyoming. In Washington, PacifiCorp serves approximately 137,000 customers throughout Yakima, Walla Walla, Columbia, Benton, Cowlitz, and Garfield Counties. The company’s generation and transmission systems span the west and connect customers to safe, reliable, affordable, and increasingly renewable electricity. PacifiCorp’s integrated transmission system connects thermal, hydroelectric, wind, solar, and geothermal generating facilities with markets and loads. The

diversity of this integrated system benefits all of PacifiCorp's customers in all six states. PacifiCorp owns approximately 11,500 megawatts (MW) of generating capacity and about 16,500 miles of transmission lines.

PacifiCorp's large regional footprint enables delivery of low-cost generation from some of the best wind and solar sites in the country. PacifiCorp is proud to operate one of the lowest-cost systems in the country, and we remain actively engaged in finding ways to leverage the benefits of geographic diversity for its customers as it develops and implements plans to deliver the targets set forth in CETA.

Over the past 13 years, PacifiCorp has successfully reduced its greenhouse gas emissions and improved reliability while simultaneously delivering energy cost savings to our customers. The company has achieved these results by collaborating with others, and through the visionary and collaborative efforts of our own generation, transmission, information technology and energy supply management teams, PacifiCorp has been a key player in the creation of an open and connected Western grid. All of these factors have brought PacifiCorp into a very favorable position to achieve CETA objectives in the years to come.

Interim Targets

Overview

The first three directives of CETA's clean energy transformation standards[4] are as follows:

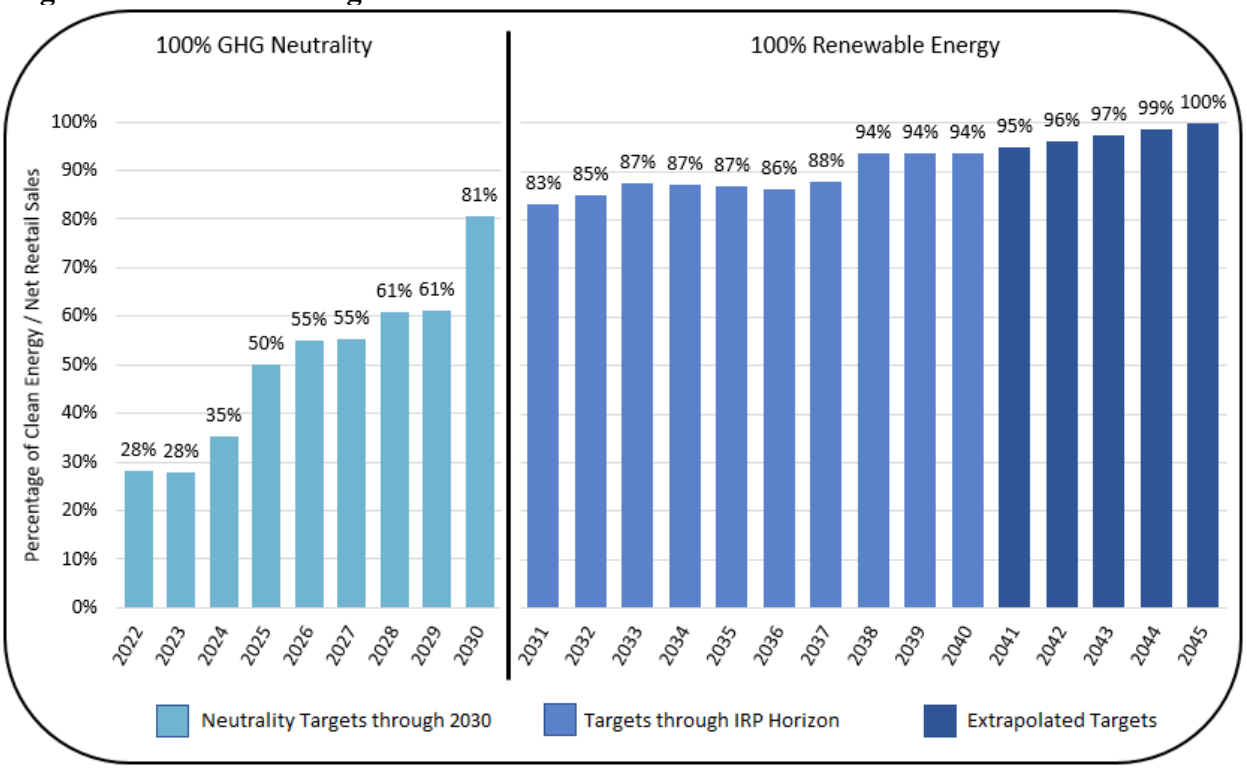
(1) On or before December 31, 2025, each utility must eliminate coal-fired resources from its allocation of electricity to Washington retail electric customers;
(2) By January 1, 2030, each utility must ensure all retail sales of electricity to Washington electric customers are greenhouse gas neutral;
(3) By January 1, 2045, each utility must ensure that non-emitting electric generation and electricity from renewable resources supply one hundred percent of all retail sales of electricity to Washington electric customers;

Furthermore, "each utility must demonstrate that it has made progress toward and has met the standards in this section at the lowest reasonable cost".[5] Consistent with WAC 480-100-640, the company proposes interim targets to demonstrate its trajectory toward meeting (2) and (3), above. Interim targets for this CEIP are based on PacifiCorp's 2021 IRP preferred portfolio, a least-cost, least-risk portfolio of resources optimized to meet all system-wide requirements including CETA objectives. The selection of the 2021 IRP preferred portfolio of resources is supported by comprehensive data analysis and an extensive public-input process[6].

Figure 1.1 reports PacifiCorp's interim targets derived from its 2021 IRP preferred portfolio, consistent with the requirements of clean energy transformation standards (2) and (3), above. The figure divides interim targets into two forecast ranges aligned with the objectives for year 2030 (100 percent GHG neutrality) and year 2045 (100 percent non-emitting and renewable energy). In the post-2030 period, the last five years to reach the 2045 objective are beyond the 2021 IRP's 20-year study period and are therefore based on extrapolation.

[4] WAC 480-100-610(1-3).
[5] WAC 480-100-610(5).
[6] PacifiCorp's 2021 IRP is publicly available at: https://www.pacificorp.com/energy/integrated-resource-plan.html

Figure 1.1 – Interim Targets



Up to 2045, clean energy can come from a combination of renewable and non-emitting generation. During this period, CETA allows for up to 20 percent of the greenhouse gas neutral standard to be met with alternative compliance in the form of alternative compliance payments, unbundled renewable energy credits (RECs), energy transformation projects, or energy recovery from a municipal solid waste facility.[7] To achieve the 2045 target, the clean energy standard must be met with 100 percent non-emitting generation or electricity from renewable energy resources.

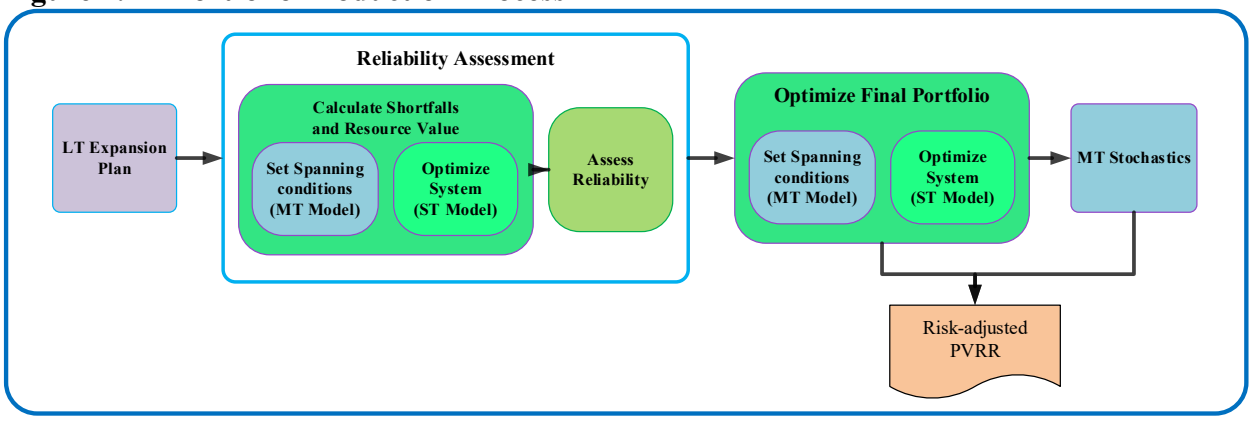
The interim targets are informed by the company's historical performance under median water conditions, which is a factor in developing expected resource behaviors and Washington retail sales.

Modeling

In developing a preferred portfolio that also demonstrates progress toward achieving the CETA requirements, and specifically the interim targets, PacifiCorp employs Energy Exemplar's proprietary Plexos optimization software. The IRP modeling approach is used to assess the comparative cost, risk, and reliability attributes of resource portfolios. Figure 1.2 provides a high-level overview of the portfolio production process used in the 2021 IRP followed by a description of each production step and of each model's function in that process.

[7] RCW 19.405.040 (1)(b).

Figure 1.2 – Portfolio Production Process



Production Process Steps

Resource Portfolio Development

All IRP models are configured and loaded with the best available information at the time a model run is produced. This information is fed into the LT model, which is used to produce resource portfolios with sufficient capacity to be reliable on a 20-year aggregated granularity basis.

Reliability Assessment

Resource portfolios developed by the LT model are simulated in the ST model to quantify reliability shortfalls at an hourly level. The ST model also supports the assessment of each resource's net system value, inclusive of resources that are not part of the specific portfolio being examined. This allows for the refinement of each portfolio according to a highly granular view of its needs and at the same time provides the data necessary to optimally select additional resources when needed to resolve shortfalls. The reliability-adjusted portfolio is then rerun through the ST model to create an optimal dispatch which considers all resource availability and system requirements at an hourly level, inclusive of individual resource operations and market purchases.

Cost and Risk Analysis

Resource portfolios developed by the LT model and adjusted for reliability by the ST model are simulated in the MT model to produce metrics that support comparative cost and risk analysis among the different resource portfolio alternatives. Stochastic risk modeling of resource portfolio alternatives is performed using Monte Carlo sampling of stochastic variables across the 20-year study horizon, which include load, natural gas and wholesale electricity prices, hydro generation, and unplanned thermal outages. The MT results are used to calculate a risk adjustment which is combined with ST model system costs to achieve a risk-adjusted PVRR to guide portfolio selection.

Portfolio Selection

The portfolio selection process is based on modeling results from the resource portfolio development and cost and risk analysis steps. The screening criteria are based on the PVRR of system costs, assessed across a range of price-policy scenarios on a deterministic basis and on an upper-tail stochastic risk basis. Portfolios are ranked using a risk-adjusted PVRR metric, a metric that combines the deterministic PVRR with upper-tail stochastic risk PVRR. The final selection process considers cost-risk rankings, robustness of performance across pricing scenarios and other supplemental modeling results, including reliability and carbon dioxide (CO_2) emissions data as an indicator of risks associated with greenhouse gas emissions.

Model Functions

Long-term planning model (LT)
PacifiCorp used the Plexos Long-Term planning model (LT model) to produce unique resource portfolios across a range of different planning cases. Informed by the public-input process, PacifiCorp identified case assumptions that were used to produce optimized resource portfolios, each one unique regarding the type, timing, location, and amount of new resources that could be pursued to serve customers over the next 20 years.

Medium-Term schedule (MT model)
PacifiCorp used the Plexos Medium-Term schedule (MT model) to perform stochastic risk analysis of the portfolios. Each portfolio was evaluated for cost and risk among three natural gas price scenarios (low, medium, and high) and three CO_2 price scenarios (zero, medium, high). An additional CO_2 policy scenario was developed to evaluate performance assuming a price signal that aligns with the social cost of greenhouse gas (SCGHG). Taken together, there are five distinct price-policy scenarios (medium gas/medium CO_2, medium gas/zero CO_2, high gas/high CO_2, low gas/zero CO_2, and SCGHG).

A primary function of the MT model is to calculate an optimized risk-adjustment, representing the relative risk of a portfolio under unfavorable stochastic conditions for that portfolio.

Short-Term model (ST model)
Each portfolio was evaluated in the Short-Term model (ST model) to establish system costs for each portfolio over the entire 20-year planning period. The ST model accounts for resource availability and system requirements at an hourly level, producing reliability and resource value outcomes as well as a PVRR, which serves as the basis for selecting least-cost least-risk portfolios.

The MT model risk-adjustment was added to the system cost determined by the ST model to calculate a final "risk-adjusted" PVRR measure of system cost.

A selection of portfolios were analyzed using the other four price-policy scenarios in the ST and MT models to evaluate how each portfolio performs under differing market/policy conditions.

Taking into consideration stakeholder comments and regulatory requirements, PacifiCorp produced additional studies that examine the potential impact of portfolio options on the system.

Final Preferred Portfolio Selection

The preferred portfolio determined in the 2021 IRP is identified as "P02-MM-CETA", and represents the least-cost, least-risk portfolio meeting all requirements, inclusive of achieving the requirements of CETA.

Target Development

To develop interim targets in accordance with the 2030 and 2045 clean energy targets[8] the Washington allocation of the preferred portfolio of resources was determined and analyzed based on forecasted retail electric sales to Washington.

[8] WAC 480-100-610(2)(3)

To estimate the amount and mix of energy forecasted to serve Washington customers for the 2022- 2045 period, PacifiCorp summed annual generation from its qualifying resources, allocated to Washington customers under the Washington Inter-Jurisdictional Allocation Methodology (WIJAM) for existing resources, and under a proposed future allocation methodology for resources added in 2024 and beyond.[9]

To calculate the energy and the total amount of renewable and carbon non-emitting energy allocated to Washington customers, the company made the following assumptions. Generally, where a resource is assumed to generate RECs, where one REC is generated for one megawatt-hour of renewable energy, the resource was assumed to generate CETA-compliant energy. In addition to REC-generating resources, it was assumed that all Washington-allocated energy from non-emitting resources was also CETA-compliant, namely hydroelectric, nuclear and hydrogen non-emitting peaking plants.[10] In summary, the resource allocation assumptions are:

1. For REC-generating resources, generation of CETA-compliant energy is consistent with the company's REC entitlement start and end date.
2. Allocation of energy for new proxy resources added before the end of 2023 was allocated as defined by the 2020 Protocol and WIJAM, using system generation factors.
3. Allocation of energy for new proxy resources added in 2024 and beyond was assumed to be allocated according to proposed assigned production (AP) factors that represent Washington's share of system need.[11]
4. Customer preference and voluntary renewable resources were not assumed to generate RECs for the system or the state of Washington and thus are not included in the allocation of clean energy.
5. All renewable and non-emitting resources were assumed to be CETA compliant, including wind, solar, geothermal, hydro, nuclear and hydrogen non-emitting peaking plants. For renewable resources co-located with battery storage, RECs were assumed to be generated pre-storage; no RECs are generated at battery discharge.
6. Thermal resources were assumed to not be CETA compliant and did not count towards the clean energy total. Coal resources were removed from Washington rate base in 2024 and beyond.

Washington retail electric sales were defined as total energy served to customers annually, net of distributed generation, existing and optimized energy efficiency and demand-side management (DSM) resources. CETA compliance targets were calculated annually as a percentage of Washington retail electric sales. The clean energy transformation standards WAC 480-100-

[9] The WIJAM and the 2020 PacifiCorp Inter-Jurisdictional Allocation Protocol (2020 Protocol) define how resources and costs are allocated to Washington customers through December 21, 2023. The Washington Utilities and Transportation Commission approved the WIJAM and 2020 Protocol in its Final Order 09/07/12 in docket UE-191024 et. Al., effective January 1, 2021. The company is in the process of negotiating its Multi-State Process (MSP) cost allocation methodology with the commissions and stakeholders in the six states it serves.

[10] WAC 480-100-610(3) states that by January 1, 2045, each utility must ensure that "non-emitting electric generation and electricity from renewable resources supply one hundred percent of all retail sales of electricity to Washington electric customers".

[11] The allocation methodology that may be used in 2024 is currently being negotiated through the Multi-State Process (MSP). In the absence of an agreed-upon formulaic methodology to calculate annual assigned production (AP) factors, assumptions about the future of cost allocation were made. The AP factors are assumed to be assigned to new proxy resources the year a resource is added and is assumed fixed over the life of the resource. AP factors are calculated based on relative state positions within the system.

610(2) specify that for each year 2030 and beyond, each utility must ensure all retail sales of electricity to Washington are greenhouse gas neutral. By 2045 each utility must ensure that non-emitting electric generation and electricity from renewable resources supply one hundred percent of all retail sales of electricity to Washington customers. Annual targets were calculated as a percentage of Washington retail electric sales to be the total energy of renewable and carbon non-emitting energy the utility must provide to Washington customers to meet the clean energy transformation standards.

For purposes of this CEIP, PacifiCorp relies on the use of unbundled RECs to satisfy the alternative compliance component of the 2030 greenhouse gas neutral standard. PacifiCorp may meet up to 20 percent of its aggregate retail electric sales over the four-year compliance period with alternative compliance from January 1, 2030, through December 31, 2044.

PacifiCorp does not contemplate the use of energy transformation projects as a compliance mechanism in this CEIP due to uncertainty regarding their application to the clean energy requirements. The company will continue to monitor stakeholder and agency developments at the Department of Ecology and leverage opportunities for energy transformation projects that may provide verifiable and sustained benefits to Washington customers and will include its analysis of potential projects in future CEIPs.

System-wide Contributions to Targets

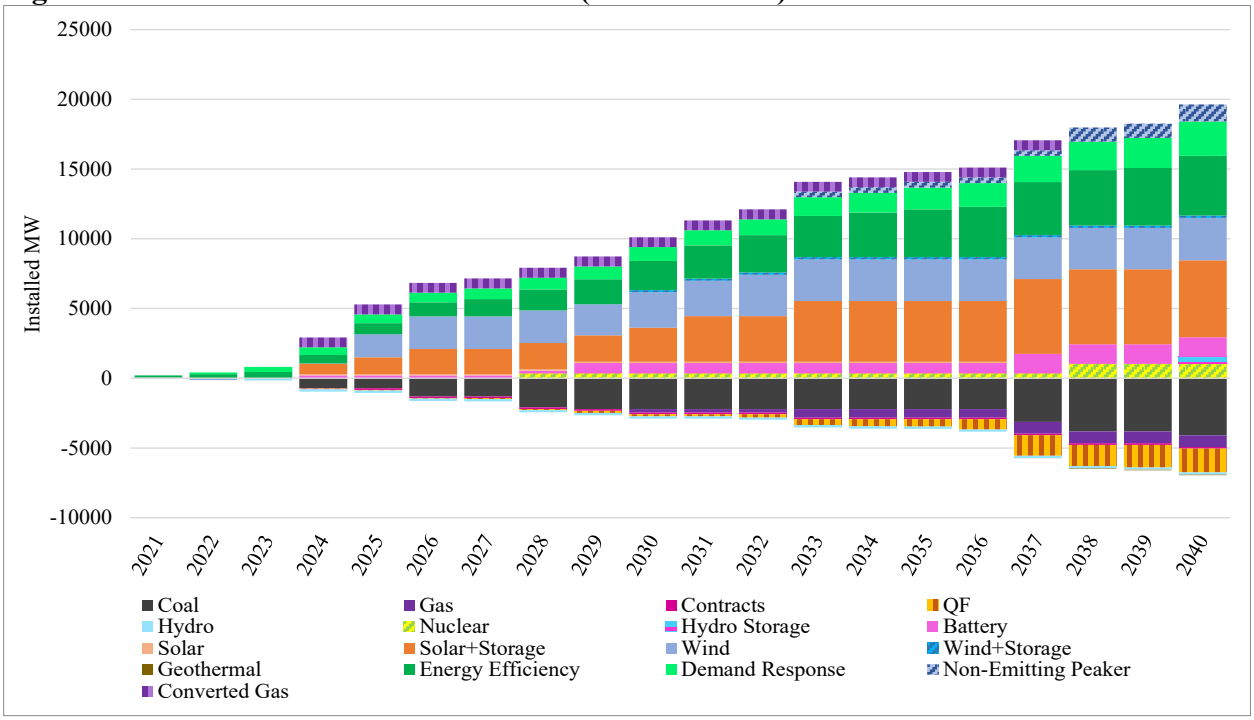
The upward trajectory of interim targets flows from PacifiCorp's ongoing investment in its non-emitting and renewable fleet. In 2020, the ratio of Washington retail load served by renewable and non-emitting energy resources was 21.9 percent. Based on the 2021 IRP preferred portfolio, the interim target for this CEIP is 50 percent, to be achieved by 2025, increasing to 81 percent by 2030 and 94 percent by 2040, which is the last year of the 2021 IRP 20-year planning horizon. Beyond 2040 the company extrapolates its trajectory to complete the transformation to 100 percent clean energy by 2045.

The Preferred Portfolio

CETA rules direct utilities to make CEIP actions consistent with their most recent IRP and CEAP, included as Appendix O of the 2021 IRP.[12] Figure 1.3 illustrates that PacifiCorp's 2021 preferred portfolio includes substantial new renewables, building upon the company's trajectory established over past IRPs. Increased renewable supply-side resources are facilitated by incremental transmission projects, DSM resources, significant storage resources, and for the first time, advanced non-emitting nuclear energy.

[12] WAC 480-100-640(6)(b)(ii).

Figure 1.3 – 2021 IRP Preferred Portfolio (All Resources)



Supply-side resources

Over the 20-year planning horizon, the 2021 IRP preferred portfolio includes 3,628 MW of new wind and 5,628 MW of new solar co-located with storage.

PacifiCorp's resources serving Washington currently includes generation from 35 hydroelectric facilities throughout the region. The 2021 IRP preferred portfolio adds to the fleet of non-emitting resources with the 500 MW advanced nuclear Natrium™ demonstration project, assumed to come online by summer 2028. Through 2040, the 2021 IRP preferred portfolio includes 1,000 MW of additional advanced nuclear resources and 1,226 MW of non-emitting peaking resources.

These renewable and non-emitting resources form the foundation of the calculation of interim targets in the CEIP, calculated based on Washington's energy allocations to meet retail sales.

Transmission

To facilitate the delivery of new renewable energy resources to PacifiCorp customers across the West, the preferred portfolio includes additional transmission investment. Specifically, the 2021 IRP preferred portfolio includes the Energy Gateway South transmission line—a new 416-mile high-voltage 500-kilovolt transmission line and associated infrastructure running from the new Aeolus substation near Medicine Bow, Wyoming, to the Clover substation near Mona, Utah. The 2021 preferred portfolio also includes the Energy Gateway West Subsegment D.1 project—a new 59-mile, high-voltage (230-kilovolt) transmission line from the Shirley Basin substation in southeastern Wyoming to the Windstar substation near Glenrock, Wyoming. Both transmission lines will come online by the end of 2024.

The 2021 IRP preferred portfolio also includes a 290-mile high-voltage 500-kilovolt transmission line known as Boardman-to-Hemingway, which connects those respective substations in Oregon and Idaho, which will come online in 2026. Further, the 2021 IRP preferred portfolio also includes near-term and long-term transmission upgrades across the system that will facilitate continued and long-term growth in new resources needed to serve our customers. Table 1.1 summarizes the incremental transmission projects in the 2021 IRP preferred portfolio.

Table 1.1 – Transmission Projects Included in the 2021 IRP Preferred Portfolio[1,2,*]

Year	Resource(s)	From	To	Description
2025	1,641 MW RFP Wind (2025)	Aeolus WY	Clover	Enables 1,930 MW of interconnection with 1700 MW of TTC: Energy Gateway South
2026	615 MW Wind (2026)	Within Willamette Valley OR Transmission Area		Enables 615 MW of interconnection: Albany OR area reinforcement
2026	130 MW Wind (2026) 450 MW Wind (2032) 650 MW Battery (2037)	Portland North Coast	Willamette Valley	Enables 2080 MW of interconnection with 1950 MW TTC; Portland Coast area reinforcement, Willamette Valley and Southerm Oregon
			Southern Oregon	
2026	600 MW Solar+Storage (2026)	Borah-Populous	Hemingway	Enables 600 MW of interconnection with 600 MW of TTC: B2H Boardman-Hemingway
2028	41 MW Solar+Storage (2028) 377 MW Solar+Storage (2030)	Within Southern OR Transmission Area		Enables 460 MW of interconnection: Medford area reinforcement
2030	160 MW Solar+Wind+Storage (2030) 20 MW Solar+Storage (2030)	Yakima WA Transmission Area		Enables 180 MW of interconnection: Yakima local area reinforcement
2031	820 MW Solar+Storage (2031) 206 MW Non-Emitting Peaker (2033)	Northern UT Transmission Area		Enables 1040 MW of interconnection: Northern UT 345 kV reinforcement
2033	400 MW Non-Emitting Peaker (2033) 1100 MW Solar+Storage (2033)	Southern UT	Northern UT	Enables 1500 MW of interconnection with 800 MW TTC: Spanish Fork - Mercer 345 kV; New Emery – Clover 345 kV
2040	156 MW Solar+Storage (2040) 500 MW Pumped Storage (2040)	Central OR	Willamette Valley	Enables 980 MW of interconnection with 1500 MW of TTC
2028*	500 MW Adv Nuclear (2028)	Southwest Wyoming Transmission Area		Reclaimed transmission upon retirement of Naughton 1 & 2
2029*	549 MW Battery (2029)	Eastern Wyoming Transmission Area		Reclaimed transmission upon retirement of Dave Johnston Plant
2037	909 MW Solar+Storage (2037)	Southern Utah Transmission Area		Reclaimed transmission upon retirement of Huntington 1 & 2
2038	412 MW Non-Emitting Peaker (2038) 1000 MW Adv Nuclear (2038)	Bridger WY Transmission Area		Reclaimed transmission upon retirement of Jim Bridger Plant
2040	206 MW Non-Emitting Peaker (2040) 60 MW Wind (2040)	Eastern Wyoming Transmission Area		Reclaimed transmission upon retirement of Wyodak

1 - TTC = total transfer capability. The scope and cost of transmission upgrades are planning estimates. Actual scope and costs will vary depending upon the interconnection queue, the transmission service queue, the specific location of any given generating resource and the type of equipment proposed for any given generating resource.
2 - Energy Gateway South is modeled in the 2021 IRP as a contingent option with bids in the 2020 All-Source Request for Proposals. Other transmission options prior to 2026 are not modeled as transmission requirements and costs are accounted for in the 2020 All-Source Request for Proposals transmission cluster study for all other resource bids.
* - Reclaimed transmission is committed with resources with a commercial operation date later than the date of retirement.

These transmission investments have allowed PacifiCorp to economically incorporate a portion of renewable resources. In the 2021 IRP there is one transmission investment in Washington

projected by the 2021 IRP. The transmission project is located in the Yakima, Washington transmission area in 2030, which supports incremental renewable resources.

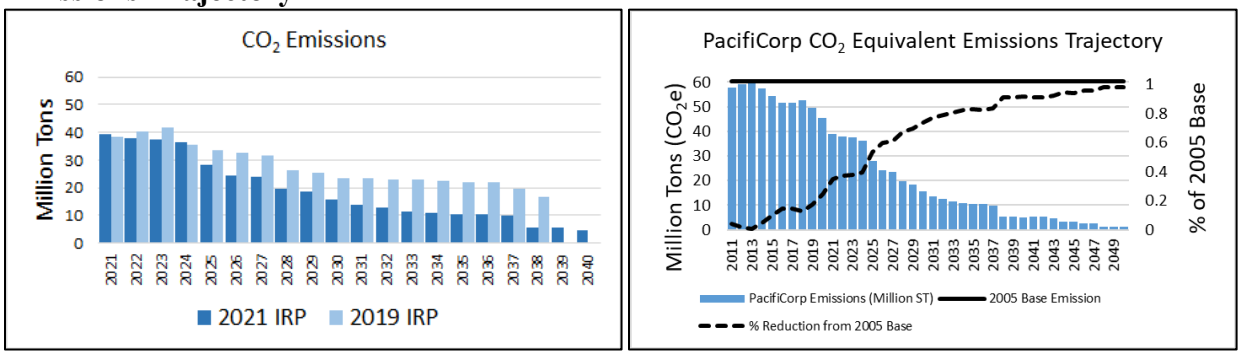
Carbon Dioxide Emissions

The 2021 IRP preferred portfolio reflects PacifiCorp's on-going efforts to provide cost-effective clean-energy solutions for our customers and accordingly reflects a continued trajectory of declining CO_2 emissions. PacifiCorp's emissions have been declining and continue to decline related to several factors including PacifiCorp's participation in the EIM, which reduces customer costs and maximizes use of clean energy; PacifiCorp's on-going transition to clean-energy resources including new renewable resources, new advanced nuclear resources, new non-emitting resources, storage, transmission, and Regional Haze compliance that capitalizes on flexibility.

The chart on the left in Figure 1.4 compares projected annual CO_2 emissions between the 2021 IRP and 2019 IRP preferred portfolios. In this graph, emissions are not assigned to market purchases or sales, and in 2026, annual CO_2 emissions are down 26 percent relative to the 2019 IRP preferred portfolio. By 2030, average annual CO_2 emissions are down 34 percent relative to the 2019 IRP preferred portfolio, and down 52 percent in 2035. By the end of the planning horizon, system CO_2 emissions are projected to fall from 39.1 million tons in 2021 to 4.8 million tons in 2040—a reduction of 88 percent.

The chart on the right in Figure 1.4 includes historical data, assigns emissions at a rate of 0.4708 tons CO_2 equivalent per MWh to market purchases (with no credit to market sales), includes emissions associated with specified purchases, and extrapolates projections out through 2050. This graph demonstrates that relative to a 2005 baseline, system CO_2 equivalent emissions are down 53 percent in 2025, 74 percent in 2030, 83 percent in 2035, 92 percent in 2040, 94 percent in 2045, and 98 percent in 2050.

Figure 1.4 – 2021 IRP Preferred Portfolio CO_2 Emissions and PacifiCorp CO_2 Equivalent Emissions Trajectory*



*Note: PacifiCorp CO_2 equivalent emissions trajectory reflects actual emissions through 2020 from owned facilities, specified sources and unspecified sources. From 2021 through the end of the twenty-year planning period in 2040, emissions reflect those from the 2021 IRP preferred portfolio with emissions from specified sources reported in CO_2 equivalent. Market purchases are assigned a default emission factor (0.4708 short tons CO_2e/MWh) – emissions from sales are not removed. Beyond 2040, emissions reflect the rolling average emissions of each resource from the 2021 IRP preferred portfolio through the life of the resource. The emissions trajectory does not incorporate clean energy targets set forth in Oregon House Bill 2021 or any other state-specific emissions trajectories. PacifiCorp expects these targets, and an Oregon-specific emissions trajectory, to be incorporated following the 2023 integrated resource plan when PacifiCorp is required under the bill to file a Clean Energy Plan.

Coal and Gas Retirements/Gas Conversions

Washington is currently served by two coal-fired facilities within PacifiCorp's resource portfolio: Colstrip Unit 4 in Colstrip, Montana, and Jim Bridger Units 1-4 in Point of Rocks, Wyoming. The allocation of resources to Washington, in accordance with WAC 480-100-610(1), will no longer include both resources by December 31, 2023.

Following the removal of these resources from Washington's allocation of energy, PacifiCorp will pursue the retirement or divestiture of Colstrip from the company's portfolio by the end of 2025. The company will begin steps to convert Jim Bridger Units 1 and 2 from coal-fireed to natural gas-fireded; PacifiCorp does not anticipate allocating any of the converted Jim Bridger units to Washington.

Although the removal of coal from Washington rates is a significant milestone in fulfilling a vital CETA objective, the future disposition of coal retirements will remain an important factor in meeting 2030 and 2045 objectives. This is because coal retirements occurring after 2023 in the preferred portfolio are inextricably linked to the company's ability to economically site new renewable and non-emitting resources that benefit Washington customers and contribute to meeting interim targets through 2040 and beyond.

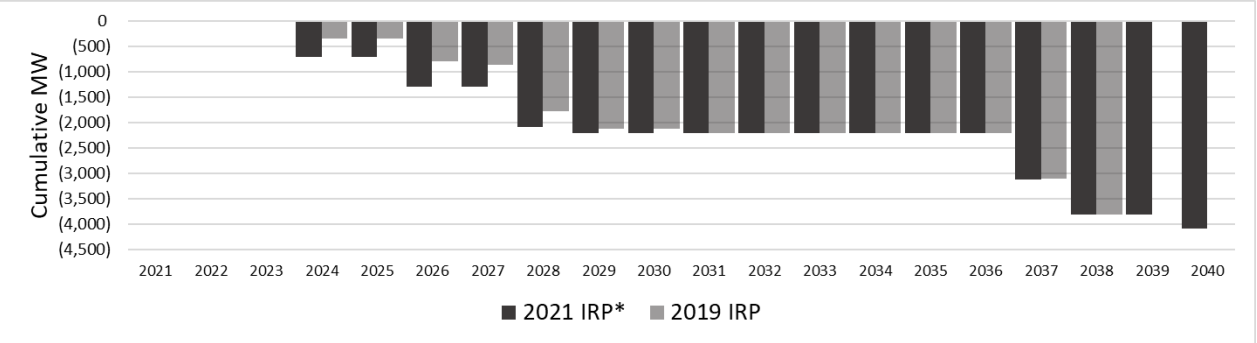
Driven in part by ongoing cost pressures on existing coal-fired facilities and dropping costs for new resource alternatives, of the 22 coal units currently serving PacifiCorp customers, the preferred portfolio includes retirement of 14 of the units by 2030 and 19 of the units by the end of the planning period in 2040.

As shown in Figure 1.5, coal unit retirements/gas peaker conversions in the 2021 IRP preferred portfolio will reduce coal-fired generation capacity by 1,300 MW by the end of 2025, over 2,200 MW by 2030, and over 4,000 MW by 2040.

Coal unit retirements scheduled under the preferred portfolio include:

- 2023 = Jim Bridger Units 1-2, converted to natural gas peakers in 2024 (same retirement year for Jim Bridger 1 in 2019 IRP and instead of 2028 for Jim Bridger 2 in the 2019 IRP).
- 2025 = Naughton Units 1-2 (same as 2019 IRP)
- 2025 = Craig Unit 1 (same as 2019 IRP)
- 2025 = Colstrip Units 3-4 (instead of 2027 in the 2019 IRP)
- 2027 = Dave Johnston Units 1-4 (same as 2019 IRP)
- 2027 = Hayden Unit 2 (instead of 2030 in the 2019 IRP)
- 2028 = Craig Unit 2 (instead of 2026 in the 2019 IRP)
- 2028 = Hayden Unit 1 (instead of 2030 in the 2019 IRP)
- 2036 = Huntington Units 1-2 (same as 2019 IRP)
- 2037 = Jim Bridger Units 3-4 (same as 2019 IRP)
- 2039 = Wyodak (same as 2019 IRP but outside of 2019 IRP planning horizon)

Figure 1.5 – 2021 IRP Preferred Portfolio Coal Retirements/Gas Conversions*



* Note: Coal retirements are assumed to occur by the end of the year before the year shown in the graph. The graph shows the year in which the capacity will not be available for meeting summer peak load. All figures represent PacifiCorp's ownership share of jointly owned facilities.

In addition to the coal unit retirements outlined above, the preferred portfolio reflects 1,554 MW natural gas retirements through 2040. This includes Naughton Unit 3 at the end of 2029, Gadsby at the end of 2032, Hermiston at the end of 2036, and Jim Bridger Units 1 and 2 at the end of 2037.

Other thermal resources

PacifiCorp's Washington allocation of energy currently includes generation from the Chehalis Generating Station (Chehalis)—a natural-gas fired resource in Chehalis, Washington—and from the Hermiston Generating Station (Hermiston)—a natural-gas fired resource in Hermiston, Oregon. On an energy basis, Hermiston currently serves approximately one third of the gas-fired power serving Washington. Hermiston is anticipated to be removed from Washington's allocation of electricity by the end of 2023.

Chehalis is currently forecast to serve Washington customers through the end of the IRP study period and will be retired at the technical end-of-life in 2043. Following the removal of coal-fired resources from Washington's allocation of electricity at the end of 2023, Chehalis will be the only thermal unit serving Washington customers until its retirement.

Specific Targets

Consistent with CETA legislation, PacifiCorp proposes specific targets for renewable energy, energy efficiency, and demand response. Similar to the interim targets, specific targets are informed by the 2021 IRP preferred portfolio, which provides an optimal assessment of resources required to meet system requirements over a 20-year planning period. The specific targets from the 2021 IRP were in turn informed by interrelated analysis and public processes including the 2020 all source request for proposal (2020AS RFP), the 2021 demand response RFP and the 2021 CPA. The results of these focused efforts were incorporated into the 2021 IRP as a part of the process for determining the optimal preferred portfolio.

Renewable Energy Targets

By the end of 2024 (and within the CEIP period covering 2022-2025), the 2021 IRP preferred portfolio includes the 2020 all-source RFP final shortlist resources. These projects include 1,792 MW of wind, 1,302 MW of solar additions, and 697 MW of battery storage capacity—497 MW paired with solar and a 200 MW standalone battery.[13]

During this time, the preferred portfolio also includes the acquisition and repowering of Rock River I (49 MW) and Foote Creek II-IV (43 MW) wind projects located in Wyoming. Through the end of 2026, the 2021 IRP preferred portfolio includes an additional 745 MW of wind and an additional 600 MW solar co-located with storage.

The CEIP renewable energy targets are directly represented by the IRP outcomes stated above, resulting from the modeling strategies described earlier in this chapter. Additional detail regarding these individual projects is given in Chapter 2 – Specific Actions.

To facilitate the delivery of new renewable energy resources to PacifiCorp customers across the West, the preferred portfolio includes significant transmission investments. Specifically, the 2021 IRP preferred portfolio includes the Energy Gateway South transmission line—a new 416-mile, high-voltage 500-kilovolt transmission line and associated infrastructure running from the new Aeolus substation near Medicine Bow, Wyoming, to the Clover substation near Mona, Utah. The 2021 preferred portfolio also includes the Energy Gateway West Subsegment D.1 project (D.1)—a new 59-mile high-voltage 230-kilovolt transmission line from the Shirley Basin substation in southeastern Wyoming to the Windstar substation near Glenrock, Wyoming. Both transmission lines come online by the end of 2024.

Energy Efficiency and Demand Response Targets

CETA requires a four-year conservation target (2022-2025) and an intermediate target (2022-2023). The IRP preferred portfolio with adjustments identified cost-effective, reliable, and feasible conservation from 2022 through 2031 for the EIA target. PacifiCorp proposes to use the same forecast to draft specific targets for the CEIP, as follows:

- 2022-2023 Draft Target will be provided with Biennial Conservation Plan on November 1, 2021.
- 2024-2025, use additional two years of conservation pro-rata share, plus adders for decoupling. Update through 2023 Biennial Conservation Plan process.

The conservation forecast for end-use efficiency, behavioral programs and market transformation (collectively referred to in this document as energy efficiency) is developed using the following data sources, assumptions and methodology;

- Completion of the 2021 CPA.
- Economic screening/selection of resources through the 2021 IRP development process.
- Addition of projected savings from the existing Home Energy Reports (behavioral) program.

[13] The reported capacity for RFP solar resources reflects their expected maximum output after degradation in their first full year of operation. The maximum solar capacity prior to degradation is 1,306 MW.

- Identification of adjustments to the 2021 IRP preferred portfolio conservation resource selections based on updates from RTF UES values.
- Comparison of the annual conservation forecast with the pro-rata share of the ten-year forecast. The target is the larger of the two consistent with the methodology used in the Energy Independence Act process.

Table 1.2 – Energy Efficiency Targets (2022-2025)

MWh at Generation	2022	2023	2024	2025
Washington - first year Energy Efficiency from the 2021 IRP Preferred Portfolio	34,003	37,231	39,530	45,254
Behavioral Programs (HER)	4,414	(182)	4,414	(182)
RTF adjustments (total)	335	407	486	558
Adjusted Energy Efficiency Forecast - annual	38,752	37,456	44,431	45,631
Adjusted Energy Efficiency Forecast - pro-rata	50,579	50,579	50,579	50,579
Decoupling commitment - five percent	2,529	2,529	2,529	2,529
Annual Target - pro-rata basis	**53,108**	**53,108**	**53,108**	**53,108**
2022-2025 target				**212,431**

Demand Response Targets and Calculations

The company identified demand response (DR) resources from two sources—the 2021 CPA and bids solicited through the 2021 demand response RFP. The 2021 IRP included approximately 26 different resource options for selection compared to only 13 resources available for selection in the 2019 IRP. The majority of demand resources included in the near term 2021 modeling were derived from competitive bids in the 2021 demand response RFP. The company plans to use those competitive RFP bids as the basis for targets during the implementation period. PacifiCorp's demand response target for the 2022 through 2025 CETA implementation period is 37.4 MW of demand response through 2025. Total demand response volume is subject to change based on timing of programs and contract negotiations.

When reviewing demand response resources in the 2021 IRP preferred for target setting, several important considerations were taken into account. Those considerations include:

1. The 2021 IRP tested the upper limit of possibility with respect to demand response resources, exploring cost-effectiveness thresholds of the resource by modeling numerous program designs and accelerated acquisition in the near term. As a result, the company is taking steps to procure initial demand response resources from competitive 2021 RFP bids. Moving forward, the company will continue to explore that upper limit and maximize potential volume from vendors.

2. Demand response offerings, characterized by sector, rely on a subset of electrical end uses that are understood to have the potential to provide demand response services. While program design offerings for demand response differ in IRP modeling, the capacity derived from a given end use in the RFP has some interaction with other resources and programs characterized in the CPA. For example, a smart thermostat demand response program and a residential HVAC direct load control (DLC) program are different programs with different pricing and performance characteristics, however, both rely on similar electric end-uses for demand response services.
3. The IRP examined two separate RFP vendors with different program design characteristics that had a portion of overlapping commercial and industrial customer segments, to compete within the model. The company anticipates contracting with one vendor for demand response targeting the commercial and industrial customer base.
4. Initiation, facilitation, and expansion of demand response programs requires on-going evaluation of program design and strategies to deliver and maintain positive customer experience and minimize program attrition over time. IRP modeling may not fully account for how programs may evolve over time and how customers interact with different programs or offerings. PacifiCorp plans to be deliberative and meticulous in launching and growing demand response programs to prevent customer fatigue and to maintain and grow participation in programs over time.
5. IRP modeling examines capacity impacts from both a summer and winter standpoint. IRP results reflect the summation of seasons, it's possible that there will be divergences in how capacity impacts are reported from demand response programs (average annual impacts) and how they are modeled (sum of seasonal impacts).

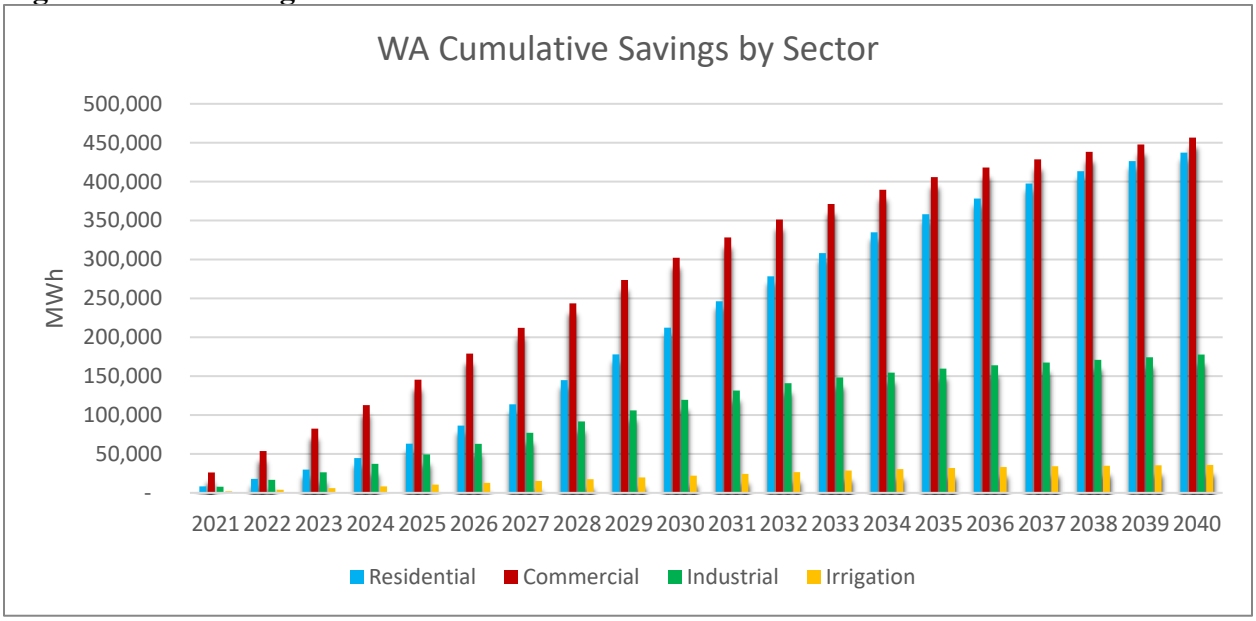
Accounting for these considerations PacifiCorp developed an actionable target of 37.4 MW for demand response programs during the implementation period.

Conservation Potential

New cost-effective energy efficiency measures and programs are among the new resource selections that are present in every portfolio described in the process above. These resources are first identified through the development of a CPA, which identifies the magnitude and cost of all technically achievable energy savings opportunities in PacifiCorp's service territory over the next 20 years. Several measures include quantified non energy impacts netted against measure cost. Examples include health benefits from avoided woodsmoke with installation of ductless heat pumps, operations and maintenance cost savings with new lighting, and water savings for measures which conserve water use as well as electricity use. For the past several IRP cycles, PacifiCorp has contracted with Applied Energy Group (AEG) to conduct this assessment. A comprehensive description of the study methodology, underlying assumptions, and results can be found on PacifiCorp's website.[14] Figure 1.6 shows cumulative technical achievable potential results from the CPA for the Washington service territory.

[14] Available online at https://www.pacificorp.com/energy/integrated-resource-plan/support.html

Figure 1.6 – Washington CPA Technical Achievable Potential



The study results in over 3,000 individual efficiency measures which are then bundled into 27 groups for each of PacifiCorp's six states. The output from the CPA serves as an input to the Plexos model which selects the optimal mix of resources from the defined bundles to provide system adequacy in a least cost least risk manner. The conservation resources which are selected in the preferred portfolio become the cost-effective conservation potential, informing acquisition of energy efficiency.

Demand Response and Load Management Programs

Cost-effective demand response and load management resources are identified with resources from the CPA as well as the 2021 demand response RFP and are selected in a manner similar to conservation resources. The scope of the CPA includes identification of the technical potential for DLC demand response opportunities and for potential new pricing programs. The methodology and all underlying assumptions and results for CPA resources can also be found on PacifiCorp's website.

DLC resources are differentiated by customer, technology, and duration. Sustained duration resources are available for more than 20 minutes while short duration reflects load which can be curtailed in greater quantity but for shorter duration such as for frequency response over 5-minute increments where the customer is less likely to be impacted by the disruption.

The amount and cost of load curtailment or shift is characterized by customer type and type of end use that is being controlled. The technical achievable potential is input to the IRP model as a resource option to be selected to meet system adequacy. The demand response selections in the preferred portfolio become the cost-effective demand response potential informing future acquisition.

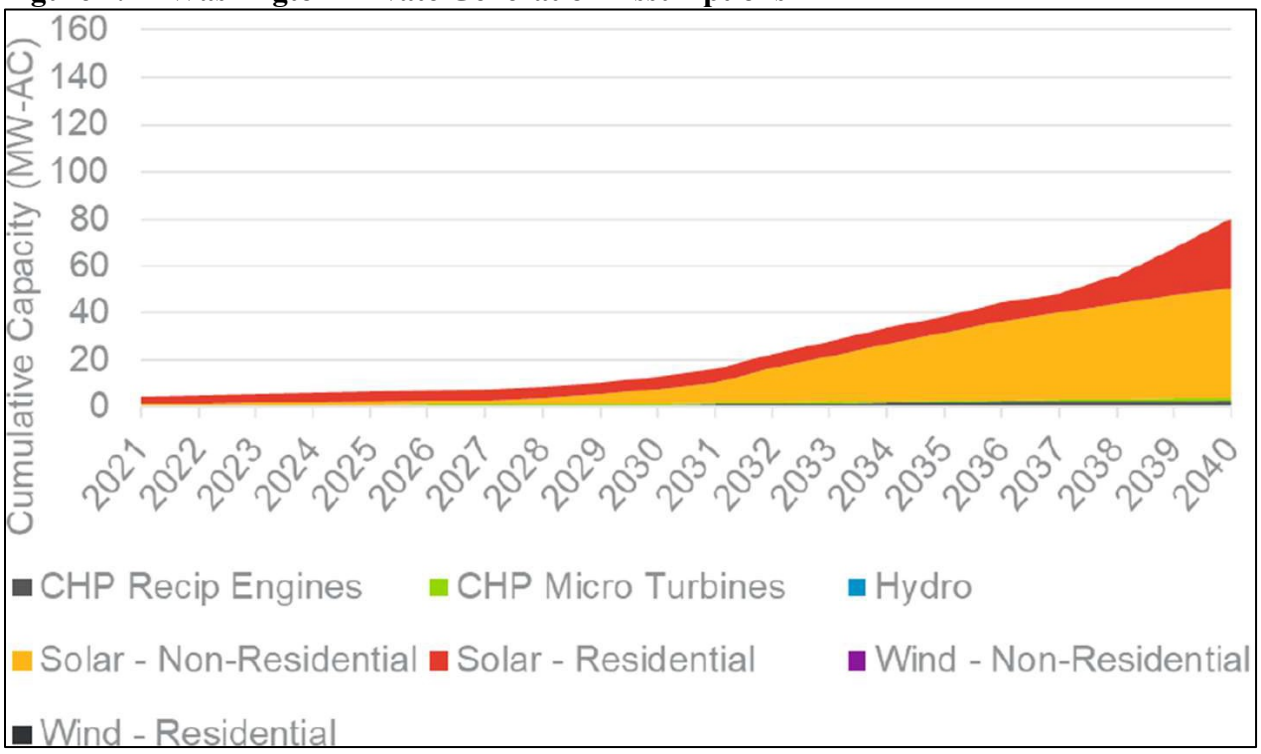
Pricing programs include time-of-use rates, critical-peak pricing and other behavioral pricing tools. The third focus of the CPA is to quantify the technical potential and magnitude of demand impacts possible through these pricing designs. The results are used to inform future rate design

concepts that are proposed with rate cases, but the IRP model is not used to determine the type and amount of pricing programs as a part of the preferred portfolio. This is because all pricing programs are designed to be cost effective to the system but may not be cost effective for the individual customer to select. Therefore, setting targets for programs that only benefit the utility system but not customers is not appropriate for the IRP but is analyzed and designed through other stakeholder and regulatory processes.

Distributed Energy Resources

Distributed energy resources include energy conservation, demand response and load management, and distributed generation. Energy conservation and demand response and load management are characterized in the CPA and 2021 demand response RFP as described above. New customer-sited generation is forecasted within the Private Generation Long Term Resource Assessment, included as an appendix to the 2021 IRP. This assessment was conducted by Guidehouse Consulting for all states and for each distributed generation resource type including solar PV, small scale wind, small scale hydro, reciprocating engines and micro-turbines. The resource costs and state specific policies and incentives are integrated in the forecast of customer adoption of these resources across low, base, and high case scenarios. The base case results are netted against each state's load forecast. Washington private generation assumptions are shown in Figure 1.7.

Figure 1.7 - Washington Private Generation Assumptions



CHAPTER 2 – DEVELOPMENT OF CUSTOMER BENEFIT INDICATORS

Introduction

One goal of CETA is to ensure that all Washingtonians benefit from clean energy transformation. To achieve this, PacifiCorp, in partnership with stakeholders and advisory groups, identified the highest priority benefits for customers. These teams also identified possible barriers and burdens that may prevent some customers from gaining those benefits.

PacifiCorp developed nine CBIs to evaluate the equitable distribution of these benefits. CBIs are designed to demonstrate the impact of proposed programs, actions, and investments. Each CBI has associated benefits it aims to achieve and CBI metrics that PacifiCorp will monitor. The indicators are attributable to and inform the utility actions and tactics described in Chapter 3. For example, decisions on supply-side resources will seek to improve the CBIs and attain the 2030 and 2045 clean energy targets.

In addition, CETA requires that certain benefits target communities facing particularly challenging circumstances. These communities are referred to as highly impacted communities and vulnerable populations, which are collectively called named communities.

A summary of CETA's benefit categories and associated community target are given in Table 2.1.

Table 2.1 – CETA Benefit Categories and Communities

Benefiting Communities	Benefit Category	Description
Named Communities	Reduction of Burdens	Benefits from customer programs that result in lower energy prices
Named Communities	Non-Energy Benefits	Benefits that are not related to energy or cost, but are still otherwise attributable to utility actions
Named Communities	Energy Benefits	Benefits related to having a higher amount of renewable energy that combats climate change
All Communities	Environment	Benefits that result in a sustainable environment
All Communities	Cost Reduction	Benefits related to reducing customer energy bills
All Communities	Public Health	Benefits that result in healthier communities
All Communities	Energy Security	Benefits related to having uninterrupted access to energy
All Communities	Resiliency	Benefits that reduce the frequency and duration of outages

Regulatory Compliance

As identified in 480-100-640(4) each utility's CEIP must include proposed or updated CBIs and associated weighting factors related to WAC 480-100-610(4)(c) including at a minimum, one or more CBIs associated with energy benefits, nonenergy benefits, reduction of burdens, public health, environment, reduction in cost, energy security, and resiliency. CBIs and weighting factors must be developed consistent with the advisory group process and public participation

plan described in WAC 480-100-655. The utility should describe and explain any changes in CBIs or weighting factors from its most recently approved CEIP.

Named Communities

PacifiCorp conducted a multi-step stakeholder engagement process with public participation and community input to define named communities. This included surveys, the establishment of an EAG, and comparison of available data with perspectives on lived experiences in PacifiCorp's service territory.

Highly Impacted Communities

At year-end 2020, PacifiCorp's service territory included 112,000 residential customers and 22,317 non-residential customers. PacifiCorp's service area in Washington has two primary regions: Yakima County and Walla Walla County. In total, PacifiCorp's Washington service area covers or partially covers sixty-one census tracts. Yakima and the surrounding area cover or partially cover 47 separate census tracts, while Walla Walla and the surrounding area cover or partially cover 14 census tracts.

The Washington Department of Health (DOH) defines a highly impacted community as a census tract that meets at least one of the following criteria:

- The census tract is covered or partially covered by "Indian Country" as defined and designated by statue (RCW 19.405.020), or
- The census tract ranks a nine or ten on the Washington Tracking Network (WTN) Environmental Health Disparities Map, as designated by the Washington DOH.

Through a collaborative effort, the DOH developed a ranking of environmental, health, and socioeconomic themes and measures for each census tract throughout the state using deciles (1 decile = 10%). Each decile represents 10 percent of the values in the data set. As an example of how to interpret the rankings, a census tract with a rank of nine for poverty would mean that 10 percent of other census tracts throughout the state have a higher proportion of their population living below the poverty level, while 80 percent of census tracts throughout the state have a lower proportion of their population living below the poverty level.

Figure 2.1 – Calculation Methodology of Washington's Environmental Health Disparities Index[15]

Environmental exposures	Environmental effects	Sensitive populations	Socioeconomic factors
• Diesel emissions • Ozone • Particulate matter 2.5 • Toxic releases from facilities • Traffic density	• Lead risk and exposure • Wastewater discharge Proximity to • Hazardous waste generators and facilities • Superfund sites • Facilities with highly toxic substances	• Cardiovascular disease • Low birth weight infants	• Poor educational attainment • Housing burden • Linguistic isolation • Poverty • Race (people of color) • Transportation expense • Unemployment
Pollution burden (Average environmental exposures + (Average environmental effects/2))/2		**Population characteristics** (Average sensitive populations + Average socioeconomic factors)/2	
Final composite score Pollution burden score x Population characteristics score			

To determine the presence of highly impacted communities, PacifiCorp relied on analysis of data for tribal lands, environmental health disparities (EHD), environmental exposures, environmental effects, socioeconomic factors and sensitive populations. Additional detail on these themes and measures are provided below.

- **Indian country:**[16] Except as otherwise provided in sections 1154 and 1156 of 18 US Code, the term "Indian country", as used in 18 US Code Section 1151 and RCW 19.405.020, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.
- **Environmental health disparities (EHD):** The DOH uses the EHD data to designate highly impacted communities under the CETA-Cumulative Impact Analysis (CIA). It is the overall ranking of each of the nineteen WTN measures within the EHD, which are grouped into four categories:
    - **Environmental exposures** includes Nitrous-Oxide diesel emissions (annual tons/Km^2), ozone concentration, PM 2.5 concentration, populations near heavy-traffic roadways, and toxic releases from facilities.
    - **Environmental effects** includes lead risk from housing, proximity to hazardous waste treatment and disposal facilities, proximity to national priorities list facilities (superfund sites), proximity to risk management plan facilities, and wastewater discharge.

[15] Adapted from University of Washington Department of Environmental & Occupational Health Sciences. Washington Environmental Health Disparities Map: technical report. Seattle; 2019.
[16] For this document, PacifiCorp will use the term Tribal Lands.

- **Socioeconomic factors** includes limited English, no high school diploma, race/ethnicity, population living in poverty, transportation expense, unaffordable housing, and unemployed.
- **Sensitive populations** includes deaths from cardiovascular disease and low birthweight.

PacifiCorp Service Area Specific Mapping of Washington Department of Health Data by Census Tract

This section shows maps of PacifiCorp's Washington service area with DOH rankings for communities. Overall, there are an estimated 30,365 PacifiCorp customers within highly impacted communities in the Washington service area, which is 27.1 percent of the total customer base.

As shown in Figure 2.2, for the Overall EHD ranking of 9 or 10, the Yakima area has 19 census tracts and the Walla Walla area has none.

Figure 2.2 – Overall Environmental Health Disparities in PacifiCorp Service Area

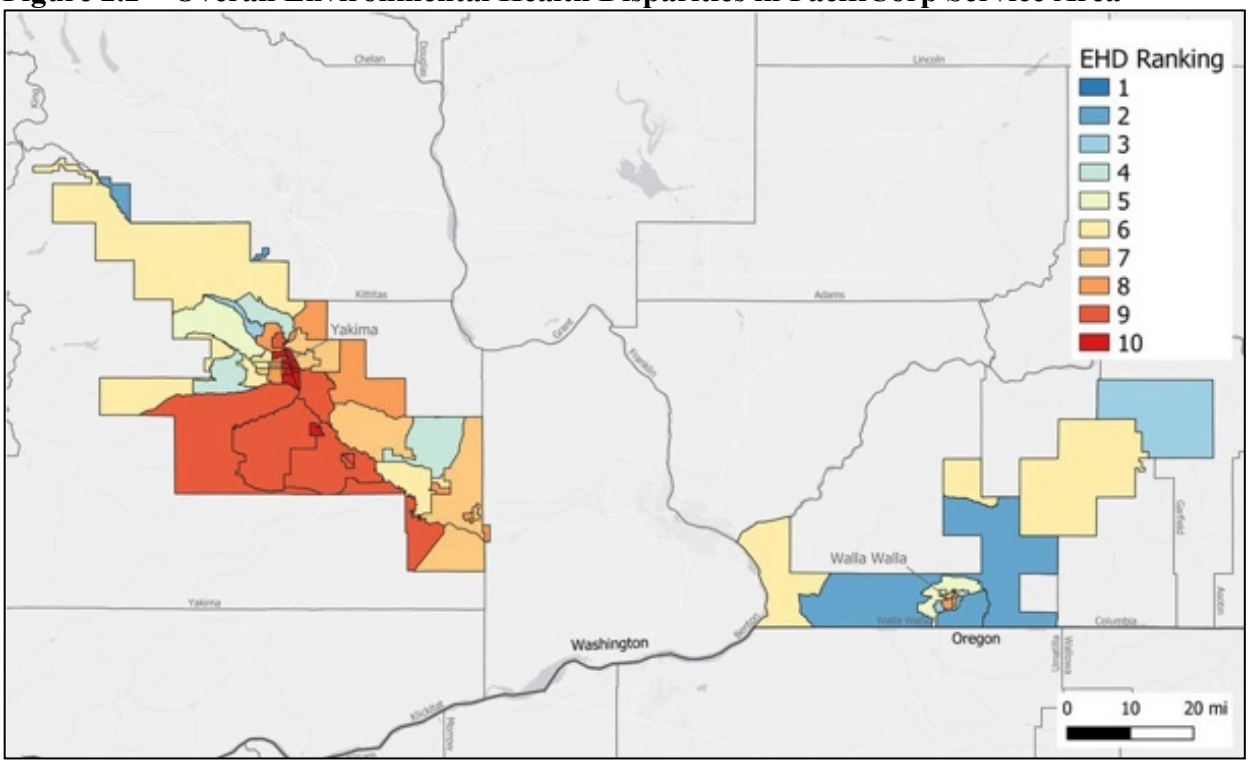
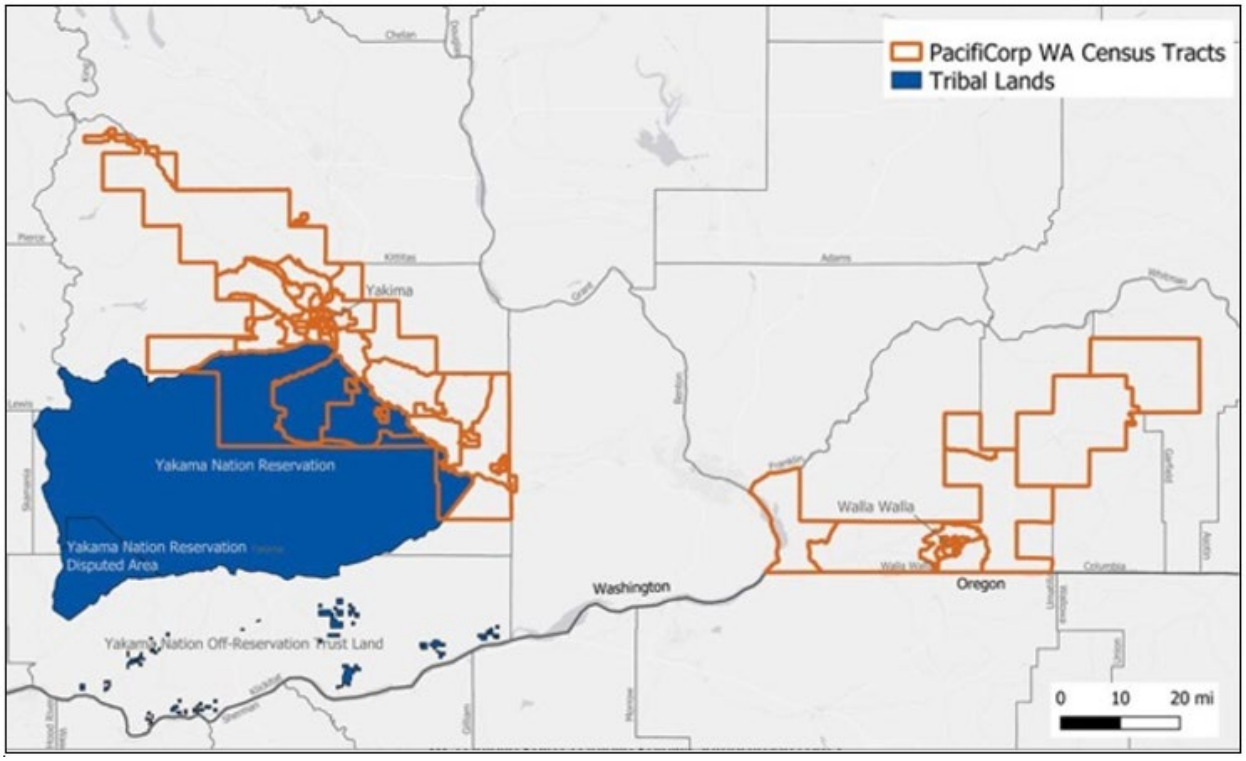


Figure 2.3 shows the census tracts that are located on Tribal Lands: the Yakima area has six (Yakama Nation Reservation) and the Walla Walla area has none.

Figure 2.3 – Tribal Land and PacifiCorp Service Area



Vulnerable Populations

PacifiCorp sought input from its stakeholders—primarily the EAG—for the designation of vulnerable populations. The list of 22 vulnerable populations includes:

1. People with lower education attainment
2. Adults 65 years old and above
3. Young children
4. People with a hearing impairment
5. People with a disability
6. People with medical equipment at home
7. Diverse supplier business owners
8. Energy burdened
9. Asset Limited, Income Constrained, Employed (ALICE)
10. Low-income migrants
11. Low income
12. Immigration status (outside of US citizen)
13. People who speak limited English
14. Renters
15. Multi-generational households
16. Multi-family households
17. People experiencing homelessness
18. People living in rural areas
19. People living in different land statuses (such as land trust vs. fee patent that have different regulatory requirements)
20. Agricultural and/or farm workers
21. Gas-heated homes
22. Single parents

The EAG also shared perspectives on the challenges and barriers that these vulnerable populations face. From the input, it was evident that many communities deal with the same or similar challenges, although some are unique to certain groups. PacifiCorp and RMI categorized the challenges into nine primary categories: technology, employment, finances, transportation, education, health, housing, language, and discrimination. The full list of challenges identified by the EAG is below:

- Access to broadband
- Access to education
- Access to information
- Access to transportation
- Affordable housing
- Cost of living
- Discrimination
- Employment
- Federal versus state standards
- Financial barriers
- Housing
- Immigration status
- Information on energy use
- Lack of education
- Land management
- Language barriers
- Limited income
- Low barrier access
- Mental health needs
- Mental health stigmas
- Monetary resources
- Multi-family housing
- Rural challenges
- Seasonal work
- Technology barriers
- Trust building
- Utility consistency
- Zoning

PacifiCorp then used available data at the appropriate granularity to determine the number of or percentage of the service area that might be considered part of a vulnerable population. This analysis was compared to statewide numbers or percentages of these populations. The results of this analysis are in Table 2.2.

In some cases, it was not possible to find an appropriate dataset for vulnerable populations at the needed level of granularity. Vulnerable populations for which PacifiCorp was unable to locate adequate data include people with a hearing impairment (#4), low-income migrants (#10), people experiencing homelessness (#17), and people living in different land statuses (#19).

Table 2.2 – Proportion or Count of Vulnerable Populations within PacifiCorp Service Area Compared to Statewide

#	Vulnerable Population	PacifiCorp Service Area Proportions	Washington Statewide Proportions
1	Educational Attainment: Population 25 years and over with high school diploma (or equivalent) or below[a]	51.1%	30.3%
2	Total population 65 years and over[b]	14.6%	15.1%
3	Total population under 5 years[b]	7.6%	6.1%
4	People with a hearing impairment	No data	No data
5	Total civilian noninstitutionalized population with a disability[a]	13.7%	12.7%
6	Households that use in-home medical equipment at least 3 hours per week[c]	9.3%	No data
7	Minority & Women's Business Enterprises[d] (*total* certified)	26	2,363
8	Energy Burdened Households[e]	24.4%	15.1%
9	Asset Limited, Income Constrained, Employed[f]	30.8%	24.7%
10	Low-income migrants	No data	No data
11	Percentage of families and people whose income in the past 12 months is below the poverty level[g]	12.1%	7.2%
12	Total population foreign born[a]	16.9%	14.3%
13	Language spoken at home by population 5 years and over: Language other than English[a]	32.8%	19.1%

14	Occupied housing units that are renter-occupied[h]	36.1%	37.0%
15	Number of grandparents living with own grandchildren under 18 years[a]	2.8%	1.8%
16	Population in households living with other nonrelatives[a]	2.9%	4.8%
17	People experiencing homelessness	No data	No data
18	Households located in rural areas[i]	3.3%	5.2%
19	People living in different land statuses	No data	No data
20	Civilian employed population 16 years and over: Agriculture, forestry, fishing and hunting, and mining[g]	15.1%	2.9%
21	Occupied housing units using utility gas for house heating fuel[j]	25.5%	34.5%
22	Total households: male or female householder, no spouse/partner present, living alone with own children[a]	8.0%	1.6%

[a] US Census Bureau, ACS, 2019, Table DP02
[b] US Census Bureau, ACS, 2019, Table DP05
[c] PacifiCorp Residential Customer Survey, 2019
[d] Washington Office of Minority & Women's Business Enterprises, Directory of Certified Firms. Note: this figure represents the *total* counts of certified MWBEs, as opposed to *percentages*.
[e] Washington Department of Commerce, Utility Energy Program Assistance Survey Tool
[f] United Way Washington: ALICE Project
[g] US Census Bureau, ACS, 2019, Table DP03
[h] US Census Bureau, ACS, 2019, Table DP04
[i] US Department of Agriculture, 2010, Rural-Urban Commuting Areas
[j] US Census Bureau, ACS, 2019, Table S2504

Summary of Customer Benefit Indicators

For this CEIP, PacifiCorp developed CBIs to evaluate the equitable distribution of benefits in partnership with stakeholders and the EAG. Table 2.3 summarizes these nine CBIs, their associated CETA benefit categories, and the metrics that will be used to measure and track them.

Table 2.3 – CBI, Benefit Categories, and Metrics

CBI	Benefit Categories	Metric(s)
Culturally and linguistically responsive outreach and program communication	• Reduction of burdens • Non-energy benefit	• Outreach in non-English languages • Percentage of responses to surveys in Spanish
Community-focused efforts and investments	• Non-energy benefit • Reduction of burden	• Workshops on energy related programs • Headcount of staff supporting program delivery in Washington who are woman, minority, or can show disadvantage for energy efficiency programs with exception to low income
Participation in company energy and efficiency programs and billing assistance programs	• Cost reduction • Reduction of burden • Non-energy benefit • Energy benefit	• Number of households/businesses, including named communities, who participate in company energy/efficiency programs • Percentage of households that participate in

		billing assistance programs • Number of households/businesses who participate/enroll in demand response, load management, and behavioral programs
Efficiency of housing stock and small businesses, including low-income housing	• Energy benefit	• Number of households and small businesses that participate in company energy/efficiency programs • Energy efficiency expenditures[17] • Gas to electric conversions for Low-Income Weatherization program
Renewable energy resources and emissions	• Environmental	• Amount of renewables/non-emitting resources serving Washington • Washington allocated greenhouse gas emission from Washington allocated resources • Number of public charging stations in named communities
Households experiencing high energy burden	• Cost Reduction • Reduction of burden	• Number of customers suffering from high energy burden by: highly impacted communities, vulnerable populations, low-income bill assistance (LIBA) and Low-Income Weatherization participants, and other residential customers
Indoor air quality	• Public health • Non-energy benefit	• Number of households using wood as primary or secondary heating
Frequency and duration of energy outages	• Energy resiliency • Risk reduction • Energy benefit	• SAIDI, SAIFI, and CAIDI* at area level including and excluding major events
Residential customer disconnections	• Energy security	• Number of residential customer disconnections including disconnections within named communities

*System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), Customer Average Interruption Duration Index (CAIDI)

Customer Benefit Indicator Development for the CEIP

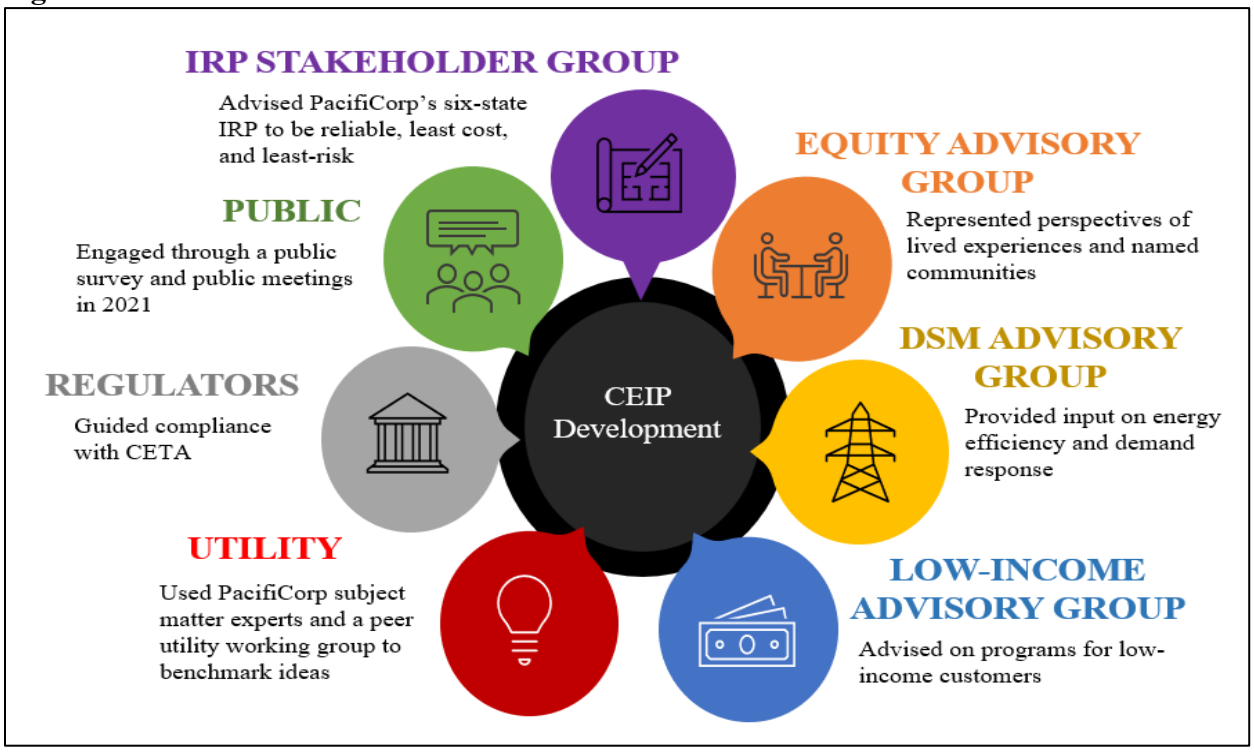
PacifiCorp developed and refined the list of CBIs through an iterative process leveraging the voices, perspectives, expertise, and creativity of internal subject matter experts and external stakeholders, including:

- Equity Advisory Group
- Low-Income Advisory Group
- Demand-Side Management Advisory Group
- IRP Stakeholders Group

17 Energy efficiency expenditures include customer, partner, and direct install incentive payments and exclude all other administrative or program costs.

- Washington Utilities and Transportation Commission Staff
- Washington Attorney General's Office of Public Counsel
- Public stakeholders
- Public surveys

Figure 2.4 – Stakeholder Involvement



To create CBIs, PacifiCorp used an outcome-oriented approach, and designed actions to mitigate the challenges that Washington customers face. This section describes the steps of this process.

1. **Identify named communities and the challenges they face:** To monitor the equitable distribution of benefits, PacifiCorp took input from stakeholders and the EAG using an iterative process to identify named communities and consider the challenges that they face.
2. **Match challenges to corresponding benefit categories:** CETA specified benefit categories for customers in named communities and for all customers including named communities. PacifiCorp reviewed these categories and matched them to the challenges that named communities face. This effort was shared with the EAG and compared with peer utility methodologies for validation.
3. **Determine the challenges that PacifiCorp can influence:** PacifiCorp then focused on the challenges that utility actions could impact. These challenges were assigned to benefit categories and PacifiCorp proposed draft CBIs that could address these challenges. The EAG and stakeholders provided feedback on the draft CBIs through an iterative process, which helped develop the CBIs in this document.
4. **Align CBIs with regulation:** CETA and Commission Staff guidance provided a framework for utilities to consider, create, and refine CBIs. PacifiCorp presented draft CBIs to Commission Staff for regulatory review and feedback.

5. **Weigh CBIs to understand the significance and prioritization of each:** PacifiCorp used data from an EAG activity and the public survey to weigh each benefit category based on priority. The results of this work are in Table 2.4. The EAG was also asked to individually prioritize the draft CBIs during the same activity. The results of this exercise are in Table 2.5. Based on the prioritization exercise, the highest-scored CBIs in each benefit category were selected as the initial set of CBIs for the 2022 CEIP. Stakeholders and the EAG reviewed the revised list of CBIs during public meetings.

PacifiCorp conducted a series of surveys from July 1, 2021, through August 10, 2021. The objective of the survey effort was to gather public feedback on PacifiCorp's CBIs, soliciting customers' thoughts, preferences, and input, to better inform PacifiCorp's planning efforts.

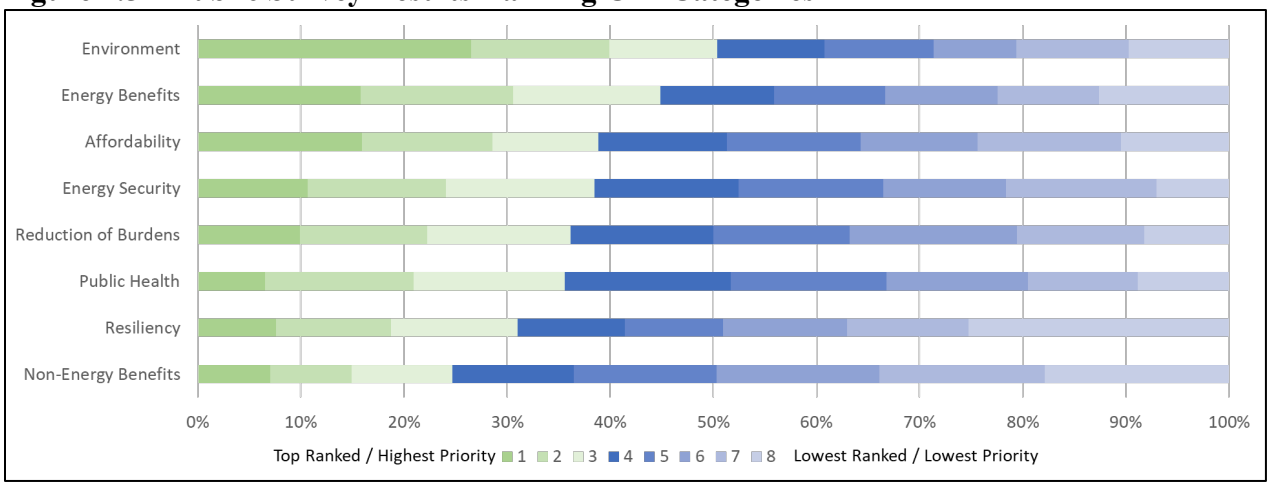
PacifiCorp distributed surveys to residential and non-residential customers by:

- Publicly posting the survey links to PacifiCorp CEIP web page.
- Emailing the survey link to all customers with an email address (48,124 residential and 2,861 non-residential customers).
- Providing the survey in both Spanish and English.
- Distributing bill inserts to approximately 132,380 customers directing them to the CEIP web page to take survey.

Some EAG members distributed paper copies for hard-to-reach customers. Surveys were also distributed to the DSM Advisory Group, Low-Income Advisory Group, and Washington IRP stakeholders. PacifiCorp sent reminder emails to all groups.

The primary research goals of the survey included understanding customers' preferences and priorities for the CBIs and determining the main concerns and challenges faced by customers in the clean energy transition. As provided in Figure 2.5 below, respondents ranked CBI categories in order of highest to lowest priority, from 1 to 8. The benefit categories of environment, energy benefit and affordability were ranked highest by the public.

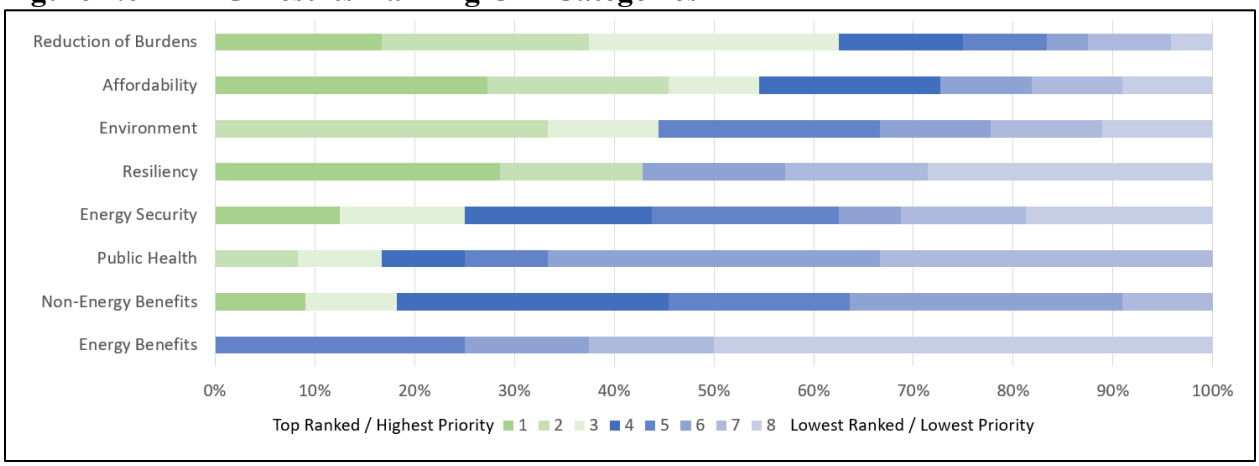
Figure 2.5 – Public Survey Results Ranking CBI Categories



In addition to soliciting the preferences and priorities for CBIs from the public, PacifiCorp also asked the EAG to provide a ranking of their benefit priorities. As provided in Figure 2.6 below,

the benefit categories of reduction of burdens, affordability and environment were ranked highest by the EAG.

Figure 2.6 -- EAG Results Ranking CBI Categories



PacifiCorp then averaged the public and EAG rankings to produce a "Combined" ranking, assigning a 50 percent weight to each stakeholder group. See Table 2.4.

Table 2.4 – Ranked CBI Categories

EAG	Rank/ Weight	Public	Rank/ Weight	Combined	Rank/ Weight
Reduction of Burdens	8.0	**Environment**	8.0	**Environment**	**7.0**
Affordability	7.0	**Energy Benefits**	7.0	**Affordability**	**6.5**
Environment	6.0	**Affordability**	6.0	**Reduction of Burdens**	**6.0**
Resiliency	5.0	**Energy Security**	5.0	**Energy Security**	**4.0**
Energy Security	3.0	**Reduction of Burdens**	4.0	**Energy Benefits**	**4.0**
Public Health	3.0	**Public Health**	3.0	**Resiliency**	**3.5**
Non-Energy Benefits	3.0	**Resiliency**	2.0	**Public Health**	**3.0**
Energy Benefits	1.0	**Non-Energy Benefits**	1.0	**Non-Energy Benefits**	**2.0**

As described in PacifiCorp's 2022 Public Participation Plan, PacifiCorp developed the weighting factors provided in Table 2.4 above based on feedback and input from its EAG, its other advisory groups and the public, and feedback from its customer base through the Clean Energy Benefit survey.

Given the CBI category rankings, provided in Table 2.4 above, the EAG subsequently scored each of PacifiCorp's specific draft CBIs in terms of criticality and impact potential. The prioritizations from the 12 EAG members were combined into a "weighted score" prioritization. The draft CBIs bolded within Table 2.5 received the highest weighted scores within each primary benefit category and were selected as the move-forward CBIs. The only exception to this was the CBI of reduced number of households experiencing high energy burden, which received the second highest score within the primary benefit category. This CBI was also moved forward given the significance of this outcome within the CEIP. Table 2.5 reports the weighted draft CBIs.

Table 2.5 – EAG Draft CBI Prioritization

Primary Benefit Category	Outcome	Draft CBI	Weighted Score
Reduction of Burdens	Improved education and awareness	Increase efforts to support clean energy education	10.2
		Improve culturally and linguistically responsive outreach and marketing to increase awareness of energy and conservation programs	**10.3**
	Reduced barriers for program participation	Increase participation in bill assistance, weatherization and energy efficiency programs and grant opportunities	8.8
		Expand in-language services across written, spoken and visual services	9.2
Non-Energy Benefit	Increased economic / community engagement	**Increase participation in community-focused efforts and investments**	**9.3**
		Provide support for job training programs	6.8
		Track and support increased diversity in local program delivery	7.8
Energy Benefit	Increased amount of clean energy	Expand electrification opportunities	7.8
		Increase participation in company energy and efficiency programs*	**9.3**
Environmental	Reduced greenhouse gas emissions	**Increase in renewable energy resources**	**9.8**
		Lower Greenhouse Gas emissions	9.5
Cost Reduction	Minimize the cost of clean energy transition	**Reduce number of households experiencing high energy burden**	**8.8**
		Increase participation in company energy and efficiency programs	**9.3**
		Increase awareness of and participation in billing assistance programs	8.3
		Reduce number of customers in arrearages	8.0
Public Health	Improved health and well-being	**Decrease wood use for home heating***	**9.3**
		Improve home comfort	7.0
Energy Resiliency / Risk Reduction	Low frequency and duration of outages	**Reduce frequency and duration of energy outages**	**8.0**
		Optimize grid investments	7.7
		Support customer programs related to community resiliency	7.8
Energy Security	Improved local energy systems	Develop local/regional infrastructure to promote long-term reliable service	9.0
	Reduced residential disconnections	**Reduce number of residential customer disconnections**	**9.5**

*CBIs listed were further refined based on input received from the Joint Advocates.
Bolded CBIs were carried forward as PacifiCorp's final CBIs within the CEIP.

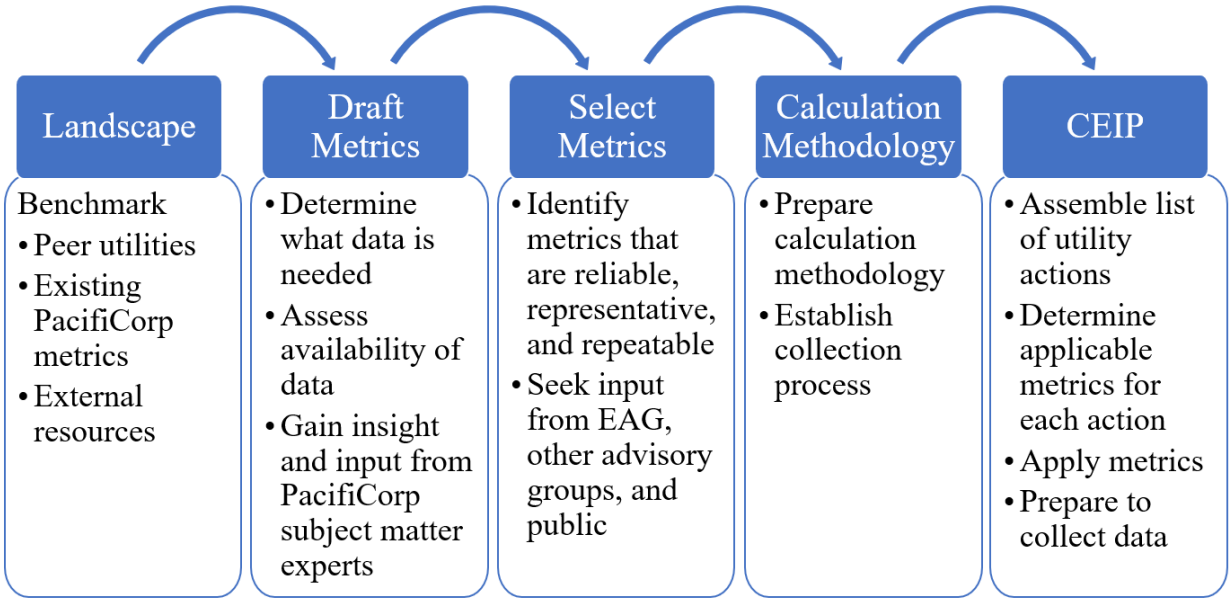
6. **Incorporate stakeholder input on CBIs:** PacifiCorp completed a comprehensive review of the July 30, 2021 Joint Comments on CBIs on behalf of The Energy Project, Front and Centered, NW Energy Coalition, and the Washington State Office of the Attorney General, Public Counsel Unit (Joint Advocates). PacifiCorp compared the Joint

Advocate CBIs and metrics to those being considered by PacifiCorp. This mapping exercise resulted in refinements to several of PacifiCorp's CBIs and the adoption of additional metrics as reflected in Table 2.3 above. The comparative analysis was transmitted to the Joint Advocates on October 25, 2021, and is found in Appendix A.

Additionally, PacifiCorp reviewed CEIP documents produced by other peer utilities in Washington: Avista and PSE. One update PacifiCorp adopted as a result was to change from a one CBI for one benefit category mapping, as shown in Table 2.5, to a one-to-many CBI benefit category mapping, as shown in the final version in Table 2.3. This means that each CBI can be associated with one *or more* benefit categories, which more comprehensively reflects the interweaving impacts that CBIs can have. Another update PacifiCorp adopted after reviewing peer utilities' draft CEIPs was to remove directionality from the move-forward CBIs and metrics, to allow tracking and measurement to be more objective and easier to interpret.

7. **Define metrics to monitor and track CBIs:** PacifiCorp created 17 quantifiable metrics to measure the CBIs, at least one metric per CBI. PacifiCorp used internal and external data sources, stakeholders, peer utilities, advocates, and the EAG to refine and validate the proposed metrics. PacifiCorp prioritized metrics that were reliable, repeatable, and representative of the communities and objectives of the CBIs. Figure 2.7 illustrates the steps in this process.

Figure 2.7 – Metric Creation Process



Baseline Analysis of Customer Benefit Indicators

To assess the progress on CBIs, PacifiCorp developed a baseline to understand the current state of these measurements. Future measurements will be compared to the baseline to track the change over time. Generally, baseline CBI metric data is provided for 2020, with exception to disconnections, which is attributable to PacifiCorp's disconnection policy during 2020. Therefore, it was determined that 2019 to be a more representative disconnection baseline.

Culturally and Linguistically Responsive Outreach and Program Communication
Stakeholders and the EAG shared that the lack of awareness and accessibility of information are challenges for named communities. The purpose of this CBI is to more appropriately engage with customers to reduce burdens and increase non-energy benefits for Washington customers. PacifiCorp will track communications to customers in named communities and look for opportunities to expand outreach, using different media, different methods, and different languages.

Table 2.6 – Washington Outreach in Languages Other than English, 2020

Description	Timing (2020)	Language(s)
Paid ad (TV/Video Ads): Energy efficiency messaging	April	Spanish
Paid ad (Radio): LIBA program information	August - October	Spanish
Paid ad (Print): Energy efficiency messaging	April, June, August, November	Spanish
Paid ad (Print): LIBA program information	August - October	Spanish
Paid ad (Digital display): LIBA program information	August - October	Spanish
Email: Energy efficiency email linked to Spanish translation	December	Spanish
Direct mail: Spanish translation of welcome letter sent to new residential customers	January - December	Spanish
Collateral: LIBA program flyers and posters for agency partners	As needed, sent upon request	Spanish
Collateral: Energy education program parent letter and home energy worksheet in Spanish	Fall	Spanish
Bill message: COVID-19 related service updates	March - December	Spanish
Email: Helping customers with payment arrangements and assistance	April-May	Spanish
Direct mail: Helping customers with payment arrangements and assistance	June	Spanish
Bill message: Wildfire safety messaging	May - November	Spanish, Mixteco, Nheo, Chinese Simplified, Chinese Traditional, German, Hmong, Tagalog, Vietnamese
Bill insert & email: Energy assistance messaging	October - November	Spanish
Email: Helping customers with payment arrangements and assistance	Ongoing starting July	Spanish
Web: Update of Spanish webpage and materials on Pacific Power website	Ongoing	Spanish
Social media: Reminders about utility payment scams linked to information in Spanish	Ongoing starting in March	Spanish

Table 2.7 –Program Communications Impressions, 2020

Channel	Wattsmart	Wattsmart Business	Home Energy Savings
Social media (Facebook, Instagram, and/or Twitter)	2,779,118	1,237,035	426,244
Online advertising or digital display	2,992,631	4,386, 104	N/A
Television	971,646	N/A	N/A
Radio	4,843,959	3,773,855	N/A
Newspaper/Magazine	367,956	486,356	N/A
Email	N/A	3,235	111,930
Direct mail	N/A	5,142	N/A
TOTAL	**11,955,310**	**9,891,727**	**538,174**

In addition to tracking communications and outreach, PacifiCorp is committed to track engagement with Spanish language communities by tracking responses to Spanish versions of company surveys.[18] Specifically, PacifiCorp will report responses to on-going residential surveys as well as CETA Public Participation meetings.

Table 2.8 – Percentage of Spanish Version Respondents to PacifiCorp Surveys

	HIC		All Customers	
	Count	Percent	Count	Percent
Spanish Version of the 2019 Residential Survey	18	2.9%	42	1.2%
Spanish Version of the 2021 CETA Public Survey	Unknown	Unknown	133	6.4%

Community-Focused Efforts and Investment

The purpose of this CBI is to focus investments so that communities more equitably receive benefits. Impacts from these investments will have positive implications on non-energy benefits and will also reduce burdens for Washington customers. One metric for this CBI will focus on tracking workshops on energy-related programs.

Table 2.9 – Workshops on Energy Related Programs in Washington, 2020

Workshop	HIC	Non-HIC
Wattsmart Business vendor program training March 11, 2020 in Walla Walla	No	Yes
Wattsmart Business vendor program training March 12, 2020 in Yakima	Yes	No

In addition to tracking workshops, PacifiCorp will track the number of staff supporting program delivery for Home Energy Savings and Wattsmart Business energy efficiency programs in Washington. PacifiCorp obtained this information as of October 2021 from its program delivery vendors. The headcounts include third party program delivery staff who are customer and or

[18] Based on the American Community Survey, 30.8% of PacifiCorp's Washington service territory primarily speaks Spanish at home, whereas within highly impacted communities 48.2% of customers speak Spanish at home.

vendor/trade ally facing (either in person, via email/mail, web meeting or phone). The total headcount for program delivery is 32.

Table 2.10 – Headcount of Staff Supporting Program Delivery in Washington

	All Employees/Staff
Women	17
Minority	3
Can show disadvantage in some other way	1
Total	**21**

Participation in Company Energy and Efficiency Programs and Billing Assistance Programs
PacifiCorp has existing programs designed to lower customer energy costs and reduce energy burden, and they also provide energy and non-energy benefits (see Chapter 3, Demand-Side Actions). Through CETA and this CEIP, PacifiCorp commits to increasing funding or expanding programs to address issues raised by the EAG, such as the availability of repair funding under the Low-Income Weatherization Program.

The success of these programs relies on customer participation. PacifiCorp will track the number of participants and participation rates of these programs. Program participation rates and energy efficiency expenditures from 2020 are included in Table 2.11 and Table 2.12. Where possible, these metrics are split out for customers in highly impacted communities.

Table 2.11 – Number of Households and Businesses Who Participate in Energy / Efficiency Programs & Energy Efficiency Expenditures, 2020

Energy / Efficiency Program	HIC		All Customers	
	Count[c]	Expenditures[d]	Count[c]	Expenditures[d]
Low-income Weatherization	11	$78,756	40	$295,907
Home Energy Savings[a]	103	$83,968	976	$855,941
Wattsmart Business[b]	61	$892,458	221	$2,485,993
Small Business Lighting	22	$105,182	43	$228,158
"Very small": <30,000 kWh annual usage	10	--	19	--
"Small": 30,000+ kWh annual usage	12	--	24	--

[a] Includes all installed measure categories except for energy kits and the lighting buy-down.
[b] The Wattsmart Business program listed includes midstream lighting (Lighting Instant Incentive).
[c] This number represents the count of unique participants at the site-level.
[d] Energy efficiency expenditures include the sum of customer and partner incentives.

Table 2.12 – Number of Households and Businesses Who Participate in Demand Response, Load Management, and Behavioral Programs, 2020

Program	HIC		All Customers	
	Count	Expenditures	Count	Expenditures
Behavioral (Home Energy Reports)[a]	In progress	n/a	53,102	n/a
Demand Response / Load Management[b]	0	$0	0	$0

[a] The Home Energy Reports program does not offer direct customer incentives.
[b] Note that as of 2020, PacifiCorp was not offering Demand Response or Load Management programs within Washington.

Table 2.13 – Percentage of Households that Participate in Low-Income Bill Assistance Programs, 2020

	HIC		All Customers	
	Count	Percent	Count	Percent
Total Active Participating Households	In progress	In progress	5,948	In progress

Efficiency of Housing Stock and Small Businesses, including Low-income Housing
Energy efficiency is an important non-emitting resource available to PacifiCorp, allowing customers to lower bills and gain non-energy benefits, such as a more comfortable home environment. In addition to increased participation rates, PacifiCorp will track total expenditures on energy efficiency programs for qualified candidates in the programs listed in the "Participation in company energy and efficiency programs and billing assistance programs" CBI.

In addition to tracking program participation, PacifiCorp will track non-electric (including natural gas, propane, oil and solid fuels) to electric heating conversions in our Washington service area. At this time, customers with non-electric heating do not qualify for a heating system conversion under Schedule 114 and modification to the Schedule would be necessary.

Table 2.14 – Gas to Electric Heating Conversion for Low-income Weatherization Program, 2020

	HIC		All Customers	
	Count	Percent	Count	Percent
Households Converted	0	0%	0	0%

Renewable Energy Resources and Emissions
To achieve the renewable and non-emitting resource goals of CETA, PacifiCorp's IRP adds approximately 3,294 MW of renewable and energy storage resources to the existing system over the next four years. These supply-side energy resources meet customer demand and offset fossil fuel resources that currently power Washington's grid, leading to environmental benefits.

Figure 2.8 – Washington Percentage of Retail Sales served by Renewable and Non-emitting Energy Resources, 2020

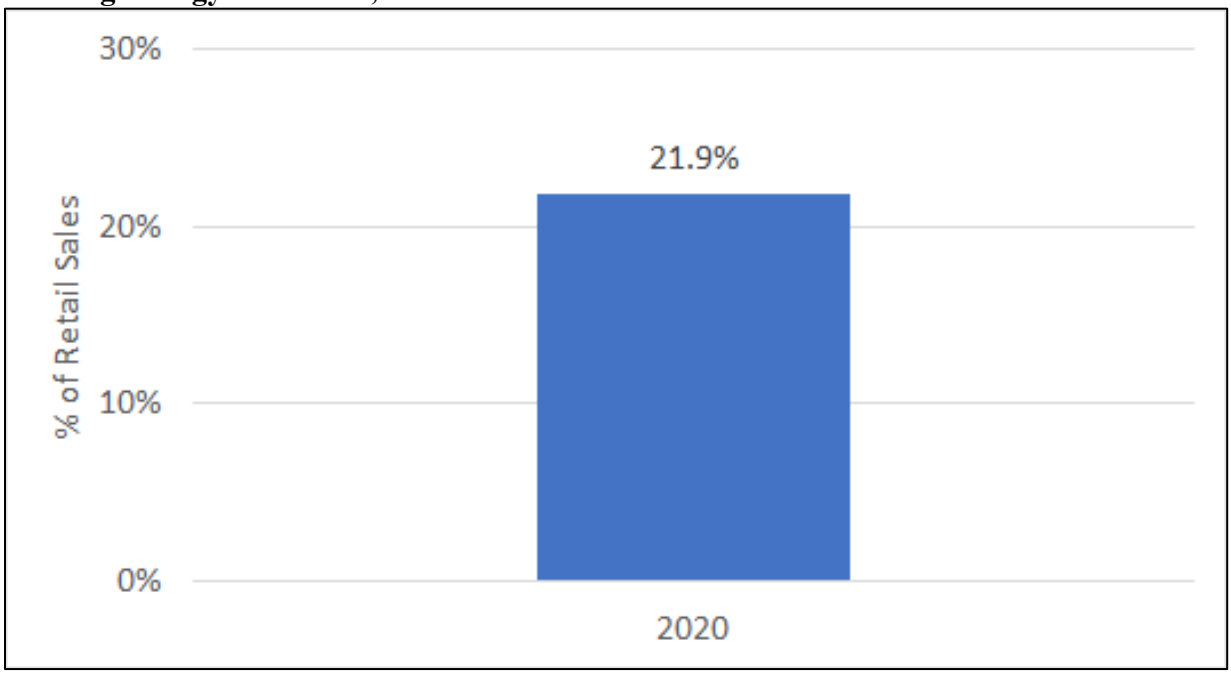
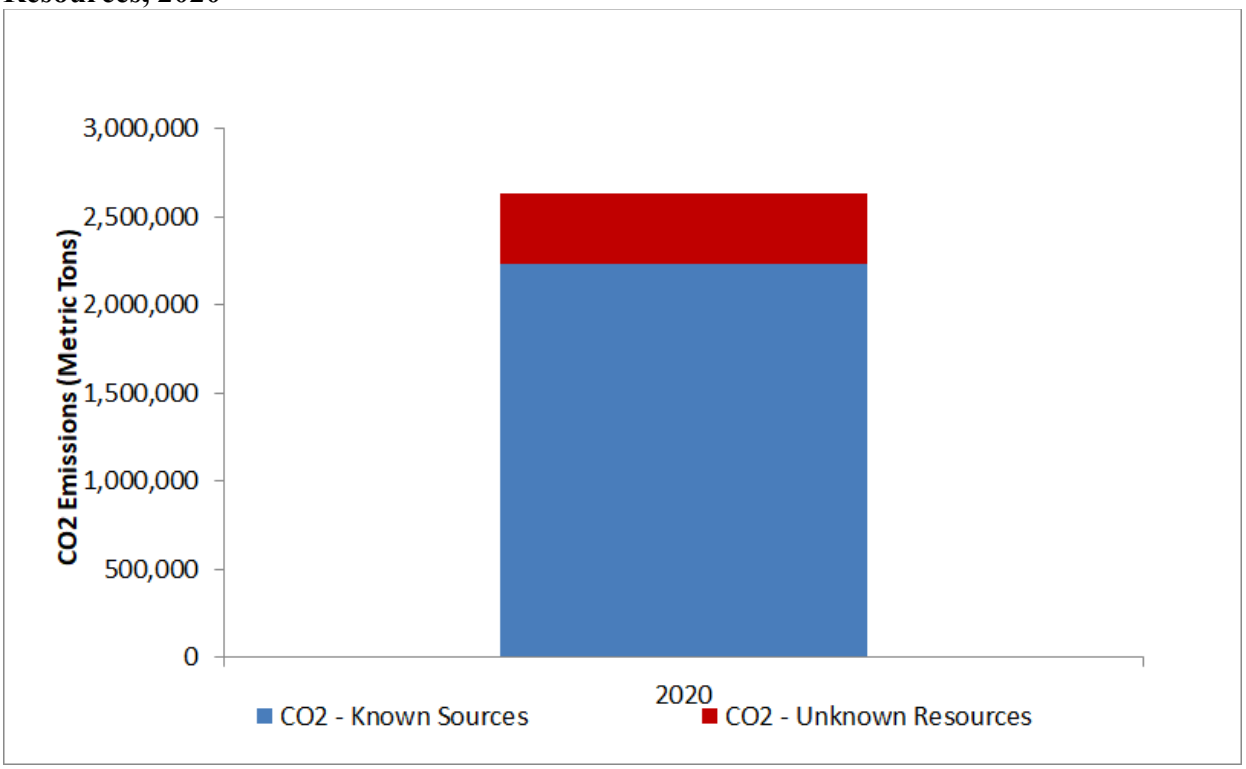


Figure 2.9 – Washington Allocated Greenhouse Gas Emission from Washington Allocated Resources, 2020



In addition to tracking the supply-side resources serving Washington, PacifiCorp will support the installation of public electric vehicle (EV) charging stations in the service area, with a focus on highly impacted communities. The installation of EV charging stations will promote less emissions from fossil fuel transportation alternatives.

Table 2.15 – Public Charging Stations in Washington Service Area

	Highly Impacted Communities	All Customers
	Count	Count
Public Charging Stations	5	41

Source: US. Department of Energy, Alternative Fuels Data Center, https://afdc.energy.gov/fuels/electricity_locations.html#/analyze?fuel=ELEC

Households Experiencing High Energy Burden

Energy burden is the average annual housing energy costs divided by the average annual household income.[19] Energy burdened households spend a disproportionate amount of their income on home energy costs. PacifiCorp will aim to mitigate and not disproportionately allocate costs to highly impacted communities and vulnerable populations.

PacifiCorp defines a customer as experiencing high energy burden when they spend 6% or more of their income on home energy costs. This threshold is based on the definition of "high" energy burden used by the American Council for an Energy-Efficient Economy (ACEEE)[20] and also matches the Washington Department of Commerce's Utility Energy Program Assistance Survey Tool.[21] PacifiCorp used survey data, census data, and other data tools, such as the Department of Energy's Low-Income Energy Affordability Data (LEAD) tool to estimate customers' energy burden.

The LEAD tool provides estimated low-income household energy data based on income, energy expenditures, fuel type, and housing type. The Washington Department of Commerce's Utility Energy Program Assistance Survey Tool uses counts of households by Census tract that are 80% or below area median income (AMI) or 200% federal poverty level (FPL) thresholds to estimate the proportion of homes with high energy burden. In aggregating these results and aligning them with our service area, PacifiCorp excluded homes heated with natural gas, when possible. Results are shown in Table 2.16.

Table 2.16 – Energy Burden for Washington Service Area

Population	Mean Energy Burden[a] (%)	Number of Customers Suffering from Energy Burden[b]	Percent of Customers Suffering from Energy Burden[b]
Highly Impacted Communities	3.6%	9,838	32.4%
Low Income Bill Assistance	In progress	In progress	In progress
Low-income Weatherization	In progress	In progress	In progress
All Customers	2.8%	27,328	24.4%

[a] US Department of Energy, Low-Income Energy Affordability Data Tool

[19] Adapted from the LEAD Tool Methodology developed by the National Renewable Energy Lab.
[20] Drenhobl, Ariel, Ross, Lauren, and Ayala, Roxana. How High Are Household Energy Burdens?: An Assessment of National and Metropolitan Energy Burden across the United States. ACEEE: September 2020. Available online: https://www.aceee.org/sites/default/files/pdfs/u2006.pdf
[21] Washington Department of Commerce, Utility Energy Program Assistance Survey Tool. Available online: https://www.commerce.wa.gov/growing-the-economy/energy/ceta-energy-assistance/

[b] Washington Department of Commerce, Utility Energy Program Assistance Survey Tool, AMI method. Available online: https://www.commerce.wa.gov/growing-the-economy/energy/ceta-energy-assistance/

In Table 2.17, the percent of customers within the vulnerable population suffering from energy burden provided in the final column is expressed as the proportion of customers suffering from energy burden within each respective vulnerable population.

Table 2.17 – Energy Burden for Washington Service Area: Vulnerable Populations

Vulnerable Population		Mean Energy Burden (%) within the Vulnerable Population	Number of Customers within the Vulnerable Population Suffering from Energy Burden	Percent of Customers within the Vulnerable Population Suffering from Energy Burden
1	Households with high school diploma or lower educational attainment	7.3%	25,601	44.7%
2	Older Adults (65+ yrs)	4.1%	6,146	37.6%
3	Young Children (5 yrs or under)	6.4%	3,010	35.4%
4	People who have a hearing impairment	No data*	--	--
5	People with a disability	No data*	--	--
6	People with medical equipment at home	6.8%	4,632	44.5%
7	Diverse supplier business owners	No data*	--	--
8	Energy burdened	See table 2.16 above	See table 2.16 above	See table 2.16 above
9	Asset Limited, Income Constrained, Employed (ALICE)	8.4%	17,396	50.4%
10	Low-income migrants	No data*	--	--
11	Low income	13.4%	10,901	80.4%
12	Immigration status (outside of US citizen)	No data*	--	--
13	People who speak limited English	5.7%	14,731	40.1%
14	Renters	7.2%	17,086	42.3%
15	Multi-generational households	4.3%	1,237	39.4%
16	Multi-family households	No data*	--	--
17	People experiencing homelessness	No data*	--	--
18	People living in rural areas	8.0%	1,463	39.5%
19	People living in different land statuses (such as land trust vs. fee patent that have different regulatory requirements)	No data*		
20	Agricultural and/or farm workers	No data*		
21	Gas-heated homes	2.7%	8,304	29.1%
22	Single parents	No data*	--	--

Source: PacifiCorp 2019 Residential Customer Survey
*The 2021 version of the Residential Customer Survey will allow PacifiCorp to assess these vulnerable populations for which we do not currently have energy burden data. This survey is slated to launch in Q4 2021.

Indoor Air Quality

With input from the EAG, PacifiCorp identified wood heating, and its associated indoor air quality impacts, as a public health threat for vulnerable populations in the Washington service area. Table 2.18 illustrates that approximately 3.9% of households in PacifiCorp's Washington service area use wood as a primary heating source and 19.5% use it as a secondary source. In

highly impacted communities specifically, primary wood use is higher (4.9%) and secondary wood us is lower (9.6%). PacifiCorp will track these values within the Washington service area over time.

Table 2.18 – Number of Households Using Wood as Primary or Secondary Heating Source

	HIC	All Customers
Primary Heating Systems[a]	1,487 (4.9%)	4,368 (3.9%)
Secondary Heating Systems[b]	2,913 (9.6%)	21,795 (19.5%)

[a] US Census Bureau, ACS, 2019, Table S2504
[b] PacifiCorp 2019 Residential Survey

Frequency and Duration of Energy Outages

The frequency and duration of energy outages can signify the resilience and quality of the electricity system. To measure this, PacifiCorp will use existing industry measurements:

- **System Average Interruption Duration Index (SAIDI)**: The average outage duration for each customer served
- **System Average Interruption Frequency Index (SAIFI)**: The average number of interruptions a customer may experience
- **Customer Average Interruption Duration Index (CAIDI)**: The average outage duration any given customer would experience

By tracking these metrics for this CBI, PacifiCorp will monitor the frequency and duration of energy outages, including and excluding major events.

Table 2.19 – SAIDI, SAIFI and CAIDI Scores Excluding Major Events for Washington Distribution Planning Areas

	SAIDI	SAIFI	CAIDI
Washington	106	0.79	133
HIC	99	0.91	109
Non-HIC	108	0.75	145

Table 2.20 – SAIDI, SAIFI and CAIDI Scores Including Major Events for Washington Distribution Planning Areas

	SAIDI	SAIFI	CAIDI
Washington	286	1.70	168
HIC	435	2.07	210
Non-HIC	227	1.56	146

Residential Customer Disconnections

To understand the energy security of customers, especially within named communities, PacifiCorp will track the number of residential disconnections over time. A program could be established to decrease residential customer disconnections, especially to assist highly impacted communities. Baseline disconnection data has been provided for 2019, which is attributable to PacifiCorp's disconnection policy during 2020.

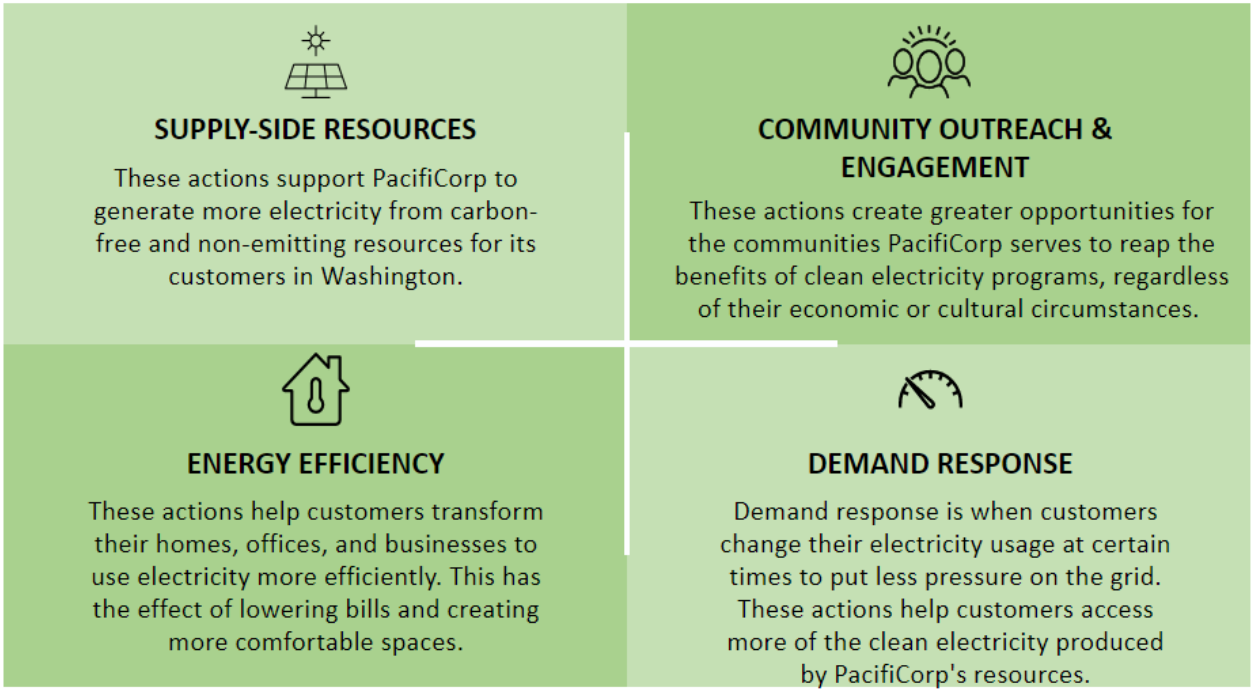
Table 2.21 – Washington Residential Customers Experiencing a Disconnection, 2019

	Highly Impacted Communities		All Customers	
	Count	Percent	Count	Percent
Number of Residential Disconnections	In progress	In progress	1,394	1.3%

CHAPTER 3 – SPECIFIC ACTIONS

Overview of Specific Actions

The company is proposing actions that fall into four categories: supply-side resources, energy efficiency, demand response and community outreach and engagement.



All actions adhere to CEIP standards[22] to:

(a) Pursue all cost-effective, reliable, and feasible conservation and efficiency resources, and demand response;
(b) Maintain and protect the safety, reliable operation, and balancing of the electric system; and
(c) Ensure that all customers are benefiting from the transition to clean energy through:
    (i) The equitable distribution of energy and nonenergy benefits and reduction of burdens to vulnerable populations and highly impacted communities;
    (ii) Long-term and short-term public health and environmental benefits and reduction of costs and risks; and
    (iii) Energy security and resiliency.

Specific actions through the end of 2025 were determined by the 2021 IRP consistent with the interim clean energy targets and comprise the renewable energy specific targets. As a multi-state utility serving six states, PacifiCorp engages in a biannual public participation process to develop an IRP and identify the optimal least-cost, least-risk portfolio of resources to serve its customers as system resources.

[22] WAC 480-100-610 (2) and WAC 480-100-610 (3)

The 2020AS RFP and 2021 demand response RFP identified specific resources for procurement ("final shortlist") that were confirmed in the 2021 IRP process as specific actions to pursue through the end of 2024. The 2021 IRP also identified additional potential to acquire additional proxy resources as specific actions through the end of 2026, and those resources able to come online prior to the end of 2025 are identified as specific actions. Inasmuch as the IRP preferred portfolio resources are comprised of well-researched and vetted assumptions ("proxy" resources), any resources identified in an RFP must be confirmed via a competitive market solicitation process. For that reason, consistent with WAC 480-107, a 2022 all source request for proposal (2022AS RFP) and concurrent targeted demand side RFP are planned as specific actions to solicit and evaluate specific energy supply resources through the end of 2026.

Washington customers account for approximately eight percent of PacifiCorp's load. Each of the resources selected for the final shortlist in the 2020AS RFP and each of the resources to be selected in subsequent RFPs will be allocated according to MSP. All resources designated to be allocated to, and therefore, serve Washington customers will be evaluated against the community benefit indicators (CBIs) proposed in this CEIP as relevant.

The 2020AS RFP and 2021 IRP proxy resources included in the specific actions are renewable resources and therefore contribute to PacifiCorp's interim and target goals and meet PacifiCorp's CBIs related to Environmental Benefit.[23] Ongoing and future contract negotiations comply with Washington Electric Utilities – Procurement of Resources rules,[24] which require the firm awarded the contract to track and report to the utility its use of diverse businesses including, but not limited to, women, minority, disabled, and veteran-owned businesses, and to track and report to the utility the firm's application of certain labor standards.[25] As listed below, the 2020AS RFP resources are primarily located outside of Washington, and therefore, the other CBIs related to highly impacted communities and vulnerable populations are not applicable. The 2022AS RFP described below will be used to select specific resources in lieu of the generic proxy resources. Consistent with WAC 480-107-025 (2), the RFP will request information related to community benefit indicators approved as part of this CEIP.[26]

The 2021 demand response resources included as a specific action will be procured using third party vendors that submitted competitive bids in the 2021 demand response RFP. Further description of the 2021 demand response RFP is provided below.

[23] "Amount of renewables / non-emitting resources serving Washington" and "Washington allocated greenhouse gas emission from Washington allocated resources"
[24] WAC 480-107-075
[25] RCW 82.08.962 and 82.12.962
[26] (2) The RFP must request information identifying energy and nonenergy benefits or burdens to highly impacted communities and vulnerable populations, short-term and long-term public health impacts, environmental impacts, resiliency and energy security impacts, or other information that may be relevant to identifying the costs and benefits of each bid, such as a bidder's past performance utilizing diverse businesses and a bidder's intent to comply with the labor standards in RCW 82.08.962 and 82.12.962. After the commission has approved the utility's first clean energy implementation plan (CEIP), requested information must contain, at a minimum, information related to indicators approved in the utility's most recent CEIP, including customer benefit indicators, as well as descriptions of all indicators.

All future supply-side and demand-side solicitations, such as the 2022AS RFP will include informational requirements related to equity and the environment with which to evaluate and track the CBIs proposed in this CEIP.

The company's proposed specific utility actions are summarized in Appendix C.

Supply-side Resources

Table 3.1 and Table 3.2 comprise a matrix of proposed specific actions, listing the specific actions for renewable energy resulting from the 2020AS RFP and 2021 IRP proxy resources to be confirmed by the 2022AS RFP.

Table 3.1 – 2020AS RFP Specific Action Resources

Project Name	Bidder/Owner	Type	Location	Resource Size (MW)	Battery Size	Expected Online
Anticline	NextEra	Wind	Wyoming East	100.5	n/a	2024
Cedar Springs IV	NextEra	Wind	Wyoming East	350.4	n/a	2024
Rock Creek I*	Invenergy	Wind	Wyoming East	190	n/a	2024
Rock Creek II*	Invenergy	Wind	Wyoming East	400	n/a	2024
Boswell Springs	Innergex	Wind	Wyoming East	320	n/a	2024
Two Rivers	Blue Earth & Clearway	Wind	Wyoming East	280	n/a	2024
Cedar Creek	rPlus Energies	Wind	Goshen ID	151	n/a	2023
Fremont	Longroad Energy	Solar with Battery	Utah South	99	49.5	2023
Rush Lake	Longroad Energy	Solar with Battery	Utah South	99	49.5	2023
Parowan	First Solar	Solar with Battery	Utah South	58	58	2024
Rocket Solar II	DESRI	Solar with Battery	Utah North	45	12.5	2023
Hornshadow I & II	enyo energy	Solar with Battery	Utah South	300	75	2023
Green River I & II	rPlus Energies	Solar with Battery	Utah South	400	200	2024
Hamaker	ecoplexus	Solar with Battery	Southern OR	50	12.5	2023
Hayden 2	ecoplexus	Solar with Battery	Southern OR	160	40	2023
Dominguez I	Able Grid	Battery Storage	Utah North	n/a	200	2024
Glen Canyon	sPower	Solar Photo-	Utah South	95	n/a	2023

Table 3.2 – 2022AS RFP Specific Action Resources

Project Name	Bidder/Owner	Type	Location	Resource Size (MW)	Battery Size (MW)	Expected Online
Portland/N. Coast	TBD	Wind	NW Oregon	130	n/a	2025
Willamette	TBD	Wind	NW Oregon	615	n/a	2025
Borah Hemingway	TBD	Solar with Battery	Idaho	600	600	2025

PacifiCorp seeks resource procurement under circumstances where additional resources are warranted by expected system benefits and to meet customer need. Commonly the mechanism of procurement is Request for Proposal (RFP) process, which often follows identification of a system need by the company's latest IRP. The outcomes of the 2019 IRP and 2021 IRP are examples of this cycle of identification and targeted procurement in that both of these most recent IRPs have prompted the need for and RFP to fulfill on the preferred portfolio of optimal resources. Both are highly relevant to meeting CETA targets as the renewable resources identified (or soon to be identified, in the case of the 2022AS RFP) contribute to meeting interim targets.

2020AS RFP resources

PacifiCorp's 2020 All Source RFP (2020AS RFP) was filed for approval with the Utah PSC and the Oregon PUC in April 2020. In July 2020, the Utah PSC and the Oregon PUC approved the 2020AS RFP, and PacifiCorp issued the 2020AS RFP to market. The 2020AS RFP sought bids for resources capable of coming online by the end of 2024 up to the level of resources identified in PacifiCorp's 2019 IRP. Bids were submitted in August 2020. An initial shortlist was identified in October 2020.

Upon selection to the initial shortlist, the resources entered into a six-month FERC-jurisdictional interconnection cluster study process during which resources were studied by PacifiCorp Transmission according to its Open Access Transmission Tariff to determine the cost and timing of interconnection to PacifiCorp's transmission system. Those initial shortlist resources able to demonstrate interconnection prior to December 31, 2024 were asked to update their bid offerings with the interconnection cost. The bids were evaluated with oversight by independent evaluators from Oregon and Utah, and a final selection of resources was determined using the same portfolio optimization models, scenarios and sensitivities as the IRP process.

The final shortlist of winning bids was identified by June 2021 and is comprised of 1,792 MW of wind generation, 95 MW of solar generation, 1,211 MW of solar generation collocated storage and 200 MW of stand-alone battery storage; 590 MW of wind generation is being contracted as a build and transfer to PacifiCorp with the balance of the generation contracted through long-term power purchase agreements.

PacifiCorp is currently negotiating final terms for the build transfer agreements and the power purchase agreements with each of the final shortlisted participants with a goal of finalizing agreements by early Q1 2022. The final shortlist was acknowledged in October 2021 by the

Public Utility Commission of Oregon. All other necessary final state regulatory approvals and proceedings are expected to be complete by Q2 2022.

2022 All-Source Request for Proposals process

On September 1, 2021, in docket UE-200420, PacifiCorp filed its 2021 Integrated Resource Plan (IRP). According to Washington's Electric Companies – Purchases of Resources rules, "a utility must issue an all-source RFP if the IRP demonstrates that the utility has a resource need within four years.[27]" PacifiCorp determined that a 2022AS RFP is required to pursue resource need identified in its 2021 IRP Action Plan; specifically, the 2021 IRP preferred portfolio includes the following incremental resources:

- 1,345 MW of new proxy supply-side generation resources and 600 MW of collocated energy storage resources with commercial operation date by December 31, 2026; and
- 274 MW of new proxy demand-side resources.

For the 2022AS RFP, PacifiCorp will consider proposals that can meet part of the resource need identified above and also bids from long lead resources requiring longer lead time to develop and construct that places the project completion beyond the required 2022AS RFP commercial operation date of December 31, 2026. PacifiCorp will consider proposals offering the following transaction structures: benchmark transaction whereby the utility proposes the project; build-transfer transaction; power purchase agreement transaction; tolling agreement transaction; and professional services contracts for demand-side bids.

Washington's Purchases of Resources rules[28] require that "[a] utility must engage the services of an independent evaluator ("IE") to assess and report on the [RFP] solicitation process if:

a) The utility or its subsidiary or affiliate participates in the utility's RFP bidding process;
b) The utility intends to retain the option to procure resources that will result in the utility owning or having a purchase option in the resource over its expected useful life; or
c) The utility is considering repowering its existing resources to meet its resource need."

Because PacifiCorp anticipates it will participate in the 2022AS RFP bidding process by considering build-transfer and benchmark transactions, PacifiCorp is required to engage an IE to provide oversight, assess and report on the solicitation process.

After consulting with Commission Staff and PacifiCorp's Washington stakeholders, PacifiCorp issued a solicitation for a Washington IE. A timeline of actions related to the IE solicitation to support the 2022AS RFP are outlined below:

- On September 2, 2021, PacifiCorp consulted with Staff about the Company's plans to issue a solicitation for an IE.
- On September 2, 2021, PacifiCorp published on its public website[29] information explaining its independent evaluator selection process including the expected RFP timeframe, and the means by which interested parties could participate in the IE and RFP approval processes.
- On September 2, 2021, PacifiCorp sent an email notification to the interested parties on its Washington IRP list and CEIP service lists to notify them of the IE solicitation,

[27] WAC 480-107-009(2)
[28] WAC 480-107-023(1)
[29] https://www.pacificorp.com/suppliers/rfps/wa-ie-rfp.html

the creation of the website where updates would be posted, and an email address where interested parties could provide comments regarding the IE solicitation process, submit questions, and inquire about participating in the IE RFP.

- PacifiCorp presented information about the IE solicitation and the website on three separate occasions in September 2021; first during a September 8, 2021 CEIP public participation meeting, second on September 14, 2021 at a CEIP technical conference, and finally on September 15, 2021, at the fifth EAG meeting.
- PacifiCorp issued the Washington IE RFP on September 10, 2021 when it directly emailed and solicited bids from 34 potential IE bidders.
- PacifiCorp received three IE bids prior to the IE RFP bid deadline on September 24, 2021. All three bids met the minimum qualifications.
- On October 7, 2021, PacifiCorp filed a petition with the Commission requesting approval of the recommended IE.
- PacifiCorp has continued to present information about the IE solicitation on its website and at public meetings including PacifiCorp's October 6, 2021 CETA public participation meeting and the October 20, 2021 sixth EAG meeting.

With the Washington IE engaged, PacifiCorp anticipates filing of a final draft 2022AS RFP by December 30, 2021, for approval by the Commission. Table 3.3 presents the current proposed 2022AS RFP, as posted on PacifiCorp's public website is as follows:

Table 3.3 – 2022AS RFP Milestones

Milestone	Date
Washington IE RFP issued	09/10/2021
Washington IE bids due	09/24/2021
Commission open meeting for approval of IE	11/12/2021
PacifiCorp files 2022AS RFP with Commission	12/30/2021
WA interested persons – deadline to file comments on 2022AS RFP	02/14/2022
Commission open meeting – seek approval of 2022AS RFP	03/17/2022
2022AS RFP issued to market	Early April 2022
Notice of intent to bid due	June 2022
Demand-side RFP Issued to Market	Q2 2022
2022AS RFP bids due	December 2022
Final Shortlist Recommendation	Q2 2023

Overview of the 2022AS RFP Evaluation Process

PacifiCorp's all source RFP bid evaluation and selection process is designed to identify the combination and amount of new resources that will maximize customer benefits through the selection of bids that will satisfy projected capacity and energy needs while maintaining reliability. The same method is used to evaluate benchmark resources and market bids. The models that PacifiCorp will use to evaluate and select the best combination and amount of bids in the RFP are similar to the models that were used to evaluate proxy resources in PacifiCorp's 2021 IRP. PacifiCorp uses IRP modeling software to serve as decision support tools that can guide prudent resource acquisition paths to maintain system reliability at a reasonable cost.

At a high level, the 2022AS RFP evaluation process involves four evaluation criteria:

1. Minimum criteria and bid eligibility
2. Non-price scores
3. Portfolio optimization (IRP) model to determine price scores and identify a preferred portfolio and recommend a final shortlist of bids to serve PacifiCorp's six-state system
4. State specific resource consideration and selection. Specifically, CBI evaluation of resources allocated to Washington

Conformance to Minimum Requirements

Benchmark and market bids will initially be screened after receipt against minimum requirements to determine RFP conformance and eligibility. After IE review and consultation, non-conforming bids will be notified to correct their bid within two (2) business days or be removed from the RFP. Consistent with Oregon statute, OR 860-089-0400 (2), non-price score criteria that seek to identify minimum thresholds for a successful bid have been converted into minimum bidder requirements.

As a minimum requirement, all resources are required to complete the equity questionnaire included with the RFP. When considering resources allocated to Washington customers, PacifiCorp has a preference for projects that provide environmental and economic benefits to highly impacted communities and vulnerable populations. When considering resources to be allocated to Washington customers, equity questionnaire responses will be used in Phase IV of the evaluation process to measure Washington community benefit indicators as part of CETA.

Non-Price Scoring

After PacifiCorp has screened for eligibility, conforming bids will be evaluated and given non-price scores.

PacifiCorp's non-price scoring model evaluates whether bids are thorough and comprehensive, whether the proposed resource is viable, and whether the bidder is likely to achieve commercial operation by the required deadline. The non-price rubric is designed to be objective, intuitive, and self-scoring. As a bid requirement, bidders are required to score themselves based on the completeness of RFP bid requirements, the ability to contract with the project, and the maturity of the project and ability to deliver the project by the commercial operation deadline.

IRP Modeling to Determine Price Scores and Recommend a Final Shortlist

Prior to the final evaluation and selection of the final shortlist, the shortlist bidders from the demand-side RFP will be available for incorporation and inclusion to the IRP models. After inclusion of the demand-side resources, PacifiCorp will use Plexos (the same model used by PacifiCorp to develop resource portfolios in the 2021 IRP) to develop an optimized resource portfolio by selecting from the demand-side RFP and supply-side resources. As was done in the 2021 IRP, PacifiCorp will perform a reliability assessment to ensure that the selected portfolio of resources can meet all hourly load and operating reserve requirements with sufficient cushion to account for other system uncertainties such as non-normal weather events. Should incremental flexible resource capacity be required to maintain system reliability, additional resources will be selected from the initial shortlist of bids that are capable of providing incremental flex capacity or remove resources to hit the targeted reliability requirements.

PacifiCorp evaluates portfolios under a range of different environmental policy and market price scenarios (policy-price scenarios). In this way, PacifiCorp uses Plexos to optimize its selection of bid resources to identify the lowest cost, reliable portfolio under multiple scenarios prior to undergoing additional stochastic risk analysis and further consideration as part of the final shortlist process.

PacifiCorp next uses Plexos to evaluate each portfolio and its ability to perform under dynamic weather and market conditions. Plexos measures the stochastic risk of each portfolio through its production cost estimates. By holding a resource portfolio fixed and using Monte Carlo simulations of stochastic variables, including load, wholesale electricity and natural gas prices, hydro generation, and thermal unit outages, Plexos can measure the expected cost of each portfolio in an uncertain future.

PacifiCorp then summarizes and analyzes the portfolios to identify the specific bid resources that are most consistently selected among the policy-price scenarios. Finally, PLEXOS will be used to calculate a price score for each bid. The price and non-price score will be used to recommend a final shortlist of system resources. In consideration of certain non-price scores and other qualitative criteria, and in consultation with the IE, PacifiCorp may perform further scenario risk analysis and use PLEXOS to evaluate changes to the recommended portfolio of resources prior to making its final shortlist determination.

Washington CETA and CBI Evaluation of Action Items

Following the final shortlist selection for resources across its six-state system, PacifiCorp will consider resources additions and changes required for Washington CETA compliance purposes. In consultation with the IE, PacifiCorp will evaluate the final shortlist bids designated in part to be allocated to and serve Washington customers. In accordance with Washington Electric Utilities – Procurement of Resources rules[30], PacifiCorp will review the Equity Questionnaire for each resource and evaluate the associated risks and benefits to vulnerable populations and highly impacted communities associated with those bids. PacifiCorp, in consultation with the IE, may add or replace resources allocated to Washington customers in order to meet CETA goals with the understanding that the incremental cost associated with those resources would later be assigned to Washington customers.

Demand-side Actions

Existing Customer Programs in Washington

PacifiCorp offers a variety of programs which can be beneficial to customers that are living in a highly impacted community or designated as a vulnerable population (referred to as 'named communities') such as providing low-cost electricity, which positively impacts housing expenditures and lessens the cost burden for impoverished households. Below are some additional details regarding a select number of PacifiCorp programs which beneficially impact Washington named communities.

- **Low-income Weatherization Program:** Provides energy efficiency services through a partnership between the Company and local non-profit agencies to low-income eligible households residing in single family homes, manufactured homes and multi-unit residential housing. Services are provided at no cost to participants.

[30] WAC 480-107-025(2) and WAC 480-107-035

- **Project Help – Fuel Fund** provides energy assistance to customers in need with funds donated by customers and employees which PacifiCorp matches 2 to 1 - up to $34k annually in Washington. Donated funds are provided to Project Help in Washington, a non-profit program providing energy assistance with donated funds.

- **LIBA Program:** Provides a bill discount to income eligible households year-round. A three-tiered bill discount based on the income and monthly billing include a discount on each kWh usage in excess of 600 kWh. The program is administered through partner Low Income Home Energy Assistance Program (LIHEAP) agencies for income certification services.

- **Time-of-Use Pilot Program:** Provides a time of use pilot program which can lower bills for participating customers who can shift usage to off-peak periods of time. This pilot program is limited to the first 500 residential customers that enroll.

- **Energy Efficiency Programs** (available regardless of income)**:** For residential customers, the Home Energy Savings program provides cash incentives for qualifying home energy efficiency improvements and appliance upgrades. Approximately half of the residential customers receive a Home Energy Report that provides information on energy use within the home and comparisons with similar homes. For business customers (including small businesses), the Wattsmart Business program provides cash incentives and technical expertise for upgrades to efficient lighting, heating and cooling and more. Enhanced incentives are available for small businesses for lighting retrofits. Both programs provide support and training for participating retailers, suppliers and contractors so these trade allies can help bring the program to customers.

2021 Demand Response RFP

PacifiCorp's 2019 IRP identified the addition of 178 MW of demand response system wide by 2029 as resource additions of a least cost least risk long term resource plan. To acquire the demand response resource needs identified in the 2019 IRP, the company issued a demand response RFP for cost-effective demand response resources. Successful initial short list bids from this demand response RFP joined final bids from the AS 2020 RFP for a combined analysis in the 2021 IRP to determine the optimal acquisition of resources to meet system needs. On February 8, 2021, PacifiCorp issued an RFP soliciting proposals from implementation contractors for demand response resources. Although a variety of programs were eligible for consideration, of most interest to PacifiCorp were programs located in Oregon and/or Washington with the following focus:

1) Non-Residential Curtailment
2) Residential and/or Small Commercial Smart Thermostat or Water Heaters
3) Irrigation load control

The final shortlist of bids was identified in June 2021 and includes over 600 MW of capacity during the planning horizon. PacifiCorp is finalizing the procurement and negotiation of demand response resources following the completion of 2021 IRP. Contract negotiations and program filings are expected to conclude in Q4 of 2021. All necessary state regulatory approvals and proceedings are expected to be complete by the spring of 2022.

Incremental Energy Efficiency Program Utility Actions

PacifiCorp will use the energy efficiency programs listed below, and more fully described in the DSM Business Plan prepared for the 2022-2023 Energy Independence Act, to deliver the energy efficiency targets. PacifiCorp programs in combination with market transformation savings delivered by the Northwest Energy Efficiency Alliance are projected to deliver 217,408 MWh which exceeds the target of 212,431 MWh.

Table 3.4 – Energy Efficiency Programs

Program or Initiative (MWh/Yr)	2022	2023	2024	2025	2022-2025
Low Income Weatherization (114)	182	182	182	182	
Home Energy Savings (118)	10,349	10,986	10,349	10,986	
Home Energy Reports	4,414	(182)	4,414	(182)	
Total Residential Programs	14,945	10,986	14,945	10,986	
Wattsmart Business (140) - Commercial	22,645	23,256	22,645	23,256	
Wattsmart Business (140) - Industrial	13,936	13,776	13,936	13,776	
Wattsmart Business (140) - Irrigation	935	935	935	935	
Total Business Programs	37,516	37,967	37,516	37,967	
Northwest Energy Efficiency Alliance	3,314	3,977	3,314	3,977	
Total Conservation	55,774	52,930	55,774	52,930	217,408

*All savings values are at the generator

PacifiCorp will make changes to residential and non-residential customer energy efficiency programs and increase focus on delivery to named communities. These changes were informed in part based on input from the EAG and relate to the following CBI:

- Households experiencing high energy burden
- Participation in company energy and efficiency programs and billing assistance programs
- Indoor Air Quality
- Efficiency of housing stock and small businesses, including low-income housing

Details are available in PacifiCorp's DSM 2022-2023 Business Plan. The changes related to Clean Energy Transformation Act incremental utility actions are described below.

Residential:

Home Energy Savings:

- Enhanced incentives for windows in multi-family units on residential rate schedules. Initial focus on buildings in highly impacted communities.
- Continue direct install residential lighting in multi-family units. Continue focus in highly impacted communities.
- Maintain and expand if possible general purpose lamp buy down in "dollar stores" in highly impacted communities. This will be the only retail lighting buy down offer.
- Continue manufactured home direct install duct sealing and lighting. Continue focus in highly impacted communities.

- Continue promoting new construction offerings for multifamily and single family units. Continue focus in highly impacted communities.
- Non-electric, non-natural gas upgrades in named communities.
- Serve named community residential customers who use non-electric and non-natural gas fuel sources in their primary heating systems by decommissioning these systems and installing ductless heat pumps. This measure will be offered at the same incentive rate as the typical ductless heat pumps measure, and will be available in single family, manufactured homes, and multifamily residences. Customers in highly impacted communities will be eligible for this incentive and customer eligibility criteria will be available on the program website. The standard ductless heat pump measure replacing electric forced air furnace or zonal electric primary heating systems is still available for all residential customers.
- The program will use RTF deemed values for ductless heat pump installations that assume a zonal electric resistance baseline since RTF does not have any measures for alternative fuel source replacement or conversions. highly impacted community determination will be included in customer data provided by PacifiCorp.

Low Income Weatherization:

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

Non-residential:

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

- Create a new offer within the current small business enhanced incentive offer targeting the smallest businesses using less than 30,000 kilowatt-hours per year and Named Community small businesses on Schedule 24.
    - Offer a higher incentive and increase the incentive cap for this new offer from 90 percent to 100 percent of project costs to reduce the customer out-of-pocket cost barrier.
- Target a portion of company initiated proactive outreach to small businesses located in highly impacted communities. Continue to tie proactive outreach to approved small business vendor capacity to respond to customer inquiries.
- Offer approved small business lighting vendors a higher vendor incentive for completed lighting retrofit projects with small businesses located in highly impacted communities.

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

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

- Home Energy Savings
  - Participants located in a highly impacted communities
  - Participants whose primary language spoken is other than English (question asked of the contact person completing the incentive application)
  - Participants who rent or lease rather than own
  - Participants living in a manufactured home
  - Participants living in a multi-family unit

- Wattsmart Business (except midstream/Instant Incentive)
  - Participants located in a highly impacted communities
  - Participants whose primary language spoken is other than English (question asked of the contact person completing the incentive application)
  - Participants who rent or lease rather than own
  - Participants who are smaller businesses (e.g., account associated with project receives electric service on Schedule 24)

Measurement & Verification Protocols for Energy Efficiency
Appendix 3 of the 2022-2023 DSM Business Plan provides the EM&V framework for energy efficiency.

Table 3.5 – Proposed Cost (millions) of Energy Efficiency programs

Year	Incentives/direct benefits	General implementation	Total
2022	$ 14.72	$ 8.09	$ 22.81
2023	$ 14.72	$ 8.31	$ 23.03
2024	$ 14.72	$ 8.09	$ 22.81
2025	$ 14.72	$ 8.31	$ 23.03
Total	$ 58.87	$ 32.79	$ 91.67

This table reflects the total estimated costs of the energy efficiency portfolio, consistent with the 2022-2023 DSM Business Plan. Only the estimated portion of incremental costs attributable to CETA are included in the incremental cost analysis in Section 4.

Costs of the energy efficiency programs align with the budgets and the calculation of direct benefits in the 2022-2023 DSM Business Plan. Costs include funding for NEEA. 2024 and 2025 are set equal to 2022 and 2023.

PacifiCorp in conjunction with the other investor-owned utilities contracted with DNV to assess and quantify additional non-energy impacts. Work scope, preliminary findings, their application to the 2022-2023 planning process were shared with the DSM Advisory Group. The final DNV report is included as Appendix 4 in the Biennial Conservation Plan

Equity and Customer Impacts
Measurements of energy efficiency impacts go beyond kilowatt-hour reductions in an effort to adequately represent the impacts of energy efficiency among other customer types, particularly in named communities.

Energy impacts
Energy impacts by program (except for low income weatherization which is not required to be cost effective and is not included in the analysis) for 2022-2023 are available in the cost effectiveness analysis from AEG provided as an Appendix to the DSM Business Plan provided in the Biennial Conservation Plan. Energy impacts for 2024-2025 have not been calculated yet, but are expected to be similar since the annual energy savings are comparable.

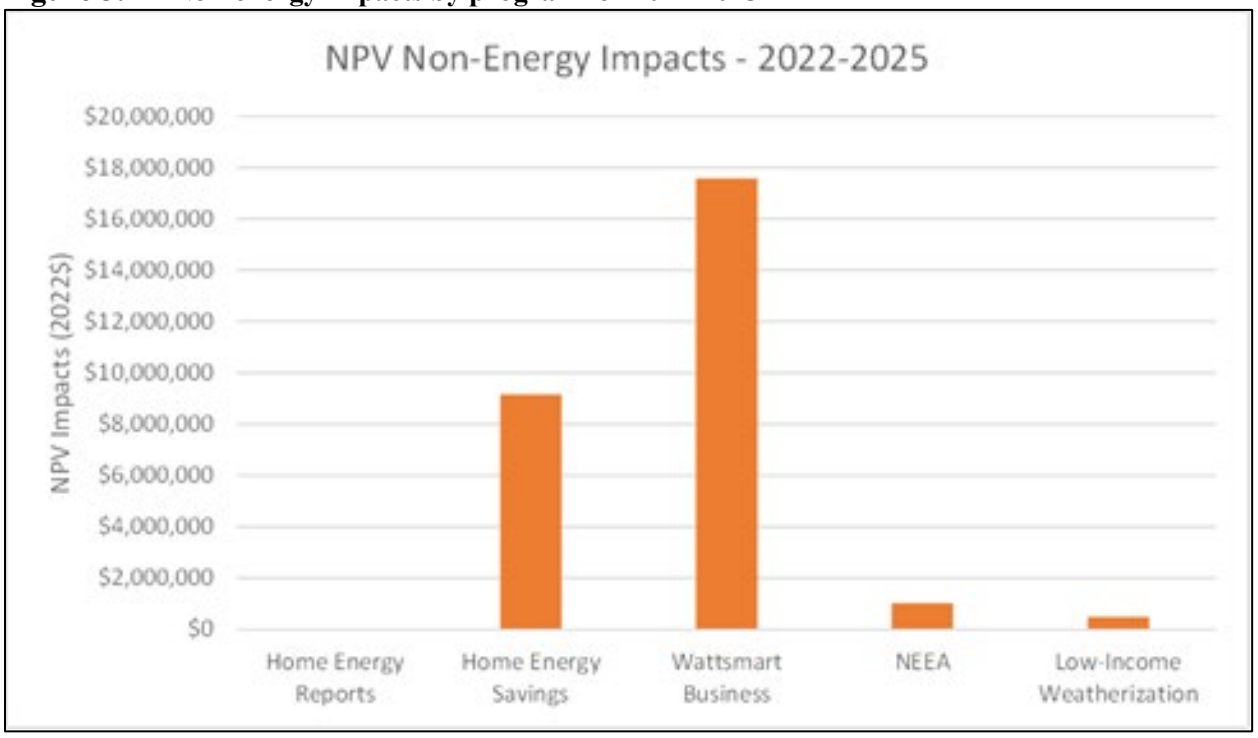
Non-energy impacts
As part of the 2022-2023 biennial planning process, PacifiCorp in conjunction with the other investor-owned utilities contracted with DNV to assess and quantify additional non-energy impacts. The final DNV report is included as Appendix 4 in the Biennial Conservation Plan. The treatment of the NEIs, including the use of a proxy value used in the energy efficiency selection process is addressed in the Biennial Conservation Plan.

The table and figure below provide an initial estimate of how the measure specific non-energy impacts (NEIs) from the DNV analysis are distributed by customer programs for the 2022-2025 period (utilizing the assumption that the last two years are equal to the first two years). The values presented below represent the net present value of NEI's over the lifetime of measures installed during the 2022-2025 period.

Table 3.6 – Non-energy impacts by program for 2022-2025

Program	NEI ($)
Low Income Weatherization	$495,672
Home Energy Savings	$9,160,974
Home Energy Reports	$0
Wattsmart Business	$17,586,509
Northwest Energy Efficiency Alliance	$1,021,151
Total Conservation	**$28,264,306**

Figure 3.1 – Non-energy impacts by program for 2022-2025



Demand Response Resources

PacifiCorp presently does not run any demand response programs in Washington. However, as a result of the 2021 demand response RFP, the Company anticipates demand response and load management programs will be in place during the implementation plan period. The start period of programs is dependent on a number of variables, however the Company anticipates programs may begin enrolling customers as soon as 2022. Program details represented below are characterized based on current expectations and information available and are subject to change based on forthcoming contract negotiations and program filings. Anticipated programs during the implementation period may include:

- **Commercial and Industrial Curtailment:** This program will target commercial and industrial customers with loads exceeding 100 kW in the prior year. PacifiCorp will contract with a third-party vendor to help administer the program to qualifying customers. The program is expected to start with a block resource that is dispatched in its entirety for each event. Though in later years dispatch flexibility around MW volume and location could potentially be utilized. Customers can participate through DLC and manual response with availability for dispatch year-round though events are expected to be during summer and winter months.
- **Irrigation Load Control:** This program will target agricultural irrigation loads from customers on Schedule 41 or 48, who are irrigating or soil drain pumping agricultural areas. PacifiCorp will contract with a third-party vendor to help administer the program to qualifying customers. The program will use billing demand data and gather customer information on pump size to target customers which meet the ideal operational profile and load factor for the program. The program will rely on field installed DLC devices to send signals to pumping equipment for reduction of irrigation loads. Once enrolled in the

program, participants can set up notifications to be received via email or text. In addition, participants can view pump status, power usage, and event information for scheduled, running, and past events using their smart phone, tablet, or desktop computer. Expected dispatch for events are expected to be during summer during the hours from 6 AM – 8 PM.

Bring Your Own Thermostat: The Bring Your Own Thermostat program will target residential customers with existing, Wi-Fi connected, customer-owned smart thermostats. PacifiCorp will contract with a third-party vendor to help administer the program to qualifying customers. The vendor will work with smart thermostat manufacturers to facilitate the relationship between PacifiCorp customers and manufacturers available resources and programs to locate, communicate with, and enroll participants. Participant enrollments entered through the manufacturer provided interfaces will then flow into the energy management system. The program will focus on homes with heat pumps, electric resistance heating, and central A/C's. Once enrolled customers will be notified prior to an event where they can elect to opt-out of a specific event. Availability for dispatch is year-round though events are expected to occur peak periods in summer and winter months.

- **Residential Grid Interactive Water Heaters.:** This program will target residential customers with electric resistance water heaters and a Wi-Fi connection. PacifiCorp will contract with a third-party vendor to help administer the program to qualifying customers. The program intends to control both CTA-2045 compatible water heaters and non-CTA-2045 compatible water heaters via a retrofit to existing heaters. The program intends to work with manufacturers to increase awareness and leverage software to aggregate water heater loads for responsive control. Availability for dispatch is year-round though events are expected to be during evening and morning hours during summer and winter months.
- **Batteries:** This program will target residential and commercial customers with a Wi-Fi connection to promote and incentivize the installation of individual batteries for system wide integration in support of overall grid management. The Company plans to leverage and expand existing contracts with a third-party vendor supporting the Wattsmart Batteries Program for Rocky Mountain Power. The Company anticipates that initially, participation will come from residential customers with solar, and will charge the batteries with excess generation. Customers may participate by installing eligible battery equipment and allowing the Company to utilize the battery for grid management. While program design is not final, it is likely that a minimum commitment term will be required in order to receive an enrollment incentive. Availability for dispatch is expected to be year-round in any hour with rapid response for traditional demand response, frequency reserve, contingency reserve, regulation reserves, regional grid management, backup power and other ancillary needs.

Proposed program budgets

PacifiCorp is still in the process of determining program costs, the values presented below are estimates based on information from the 2021 demand response RFP. Proposed costs for PacifiCorp's demand response programs are subject to change based on contract negotiations and program filings and timing. For the 2022-2025 implementation period a range of prospective budgets for the demand response programs described above are shown in Table 3.9.

Table 3.7 – Proposed Demand Response Program Budgets 2022-2025

Year	Incentives/Direct Customer Benefit	General Implementation Expense	Total Spending
Total 2022-2025	$3,400,000 - $4,200,000	$2,850,000 - $3,500,000	$6,250,000 - $7,700,000 -

* Proposed costs for PacifiCorp's demand response programs are subject to change based on contract negotiations and program filings and timing.

Measurement and verification (M&V) protocols

The Company intends to follow guidance and practices outlined in the "*Measurement and Verification for Demand Response*[31]" developed for DOE and FERC as part of the national action plan on demand response. M&V for settlement of payments to participants will vary depending on each program and is subject to change based on contract negotiations with vendors. M&V strategies for estimating kW impacts are outlined in Table 3.10 below.

Table 3.8 – Potential M&V Strategies by Program Type

Program Category	Potential M&V Strategies
Commercial and Industrial Curtailment	Data is anticipated to be collected on site from installed meters to verify performance. Baseline is expected to be generated using historical interval meter data and may also use weather and/or historical load data for baseline development.
Irrigation Load Control	Data on actual curtailed load is expected to come from integrated load control devices, providing near real time metrics on the amount of load curtailed for an event. Baseline usage is expected to be estimated using prior day or prior day averages of consumption during event periods.
Bring Your Own Thermostat	Individual capacity reduction can be highly variable depending on individual schedules, occupancy, and weather. Incentive is intended to be fixed per participant, with total kW reduction provided by vendor. Ex post analysis may utilize regression analysis to verify impacts.
Residential Grid Interactive Water Heaters	Controller attached to equipment is expected to meter circuit measuring voltage, current, and power. To quantify impact the pre-heat and post-curtailment energy are expected to be compared to typical non controlled consumption during those intervals, as well as the typical non curtailed consumption during the curtailment window.
Batteries	Batteries are anticipated to connect to Company's Energy Management System via Wi-Fi connection to support near real time metrics for performance.

[31] Available online: Measurement and Verification for Demand Response | Electricity Markets and Policy Group (lbl.gov)

Equity and Customer Impacts

Measurements of demand response impacts go beyond kilowatt reductions in an effort to adequately represent the impacts of demand response among other customer types, particularly in named communities. CETA is more focused on the equitable distribution of energy and non-energy benefits, and other benefit areas described in WAC 480-100-640 (4)(b). As part of the 2021 IRP process PacifiCorp had AEG researched the applicability and application of non-energy impacts to determine to what extent utilities in other jurisdictions quantify, monetize, and attribute NEIs to demand response programs. The results of this work are illustrated below in Table 3.11.

Table 3.9 - Examples Non-Energy Benefits and Costs of Demand Response Programs

Societal Non-Energy Impacts	*Utility Non-Energy Impacts*	*Participant Non-Energy Impacts*
Employment above the job creation benefits of manufacturing a combustion turbine or constructing T&D upgrades[1 2 3]	Changes in billing costs of utility (e.g., customers unable or unwilling to participate may see bill increases, customers responding to demand response signals may see bill decreases)[1]	Satisfaction/pride from preventing outages and being "green"[1 3]
Economic development (e.g., changes in gross domestic product)[2 3]	Changes in the number of customer complaint calls or service requests[1]	Improved ability of integrated load management solutions to manage energy use (e.g., demand response -enabled thermostat)[1]
Improved air quality (avoiding criteria pollutants above and beyond the level of existing environmental regulations)[1 2 3]	Changes in the number of delinquent bills or disconnections[1]	Economic well-being (e.g., fewer bill-related calls, fewer power shut-offs/reconnects, reduced foreclosures)[3]
Additional greenhouse gas (GHG) mitigation benefits (beyond avoided GHG cost embedded in the energy price and criteria pollutants included in the generation cost)[1 3]	Improved customer relations[1]	Better public image for commercial enterprises[1]
Changes in public health including healthcare and healthcare insurance costs associated with lower emission levels, especially decreased air pollution (gains with less pollution, loss with back-up generators, potentially more medical emergencies with malfunctioning medical equipment)[1 2 3]	Reduced marketing and administrative costs due to demand response customer participation in multiple distributed energy resource programs[1]	Transaction costs beyond the demand response technology/service itself (e.g., application fees, paperwork, time spent researching processes, developing load shedding plans)[3 5]

Societal Non-Energy Impacts	*Utility Non-Energy Impacts*	*Participant Non-Energy Impacts*
Environmental justice improvements[1 3]		Productivity losses (e.g., lower productivity levels, more spoilage/defects, lower sales during demand response events)[3 5]
Impacts on cultural resources[1]		Convenience/comfort losses (e.g., thermal, lighting levels/aesthetics)[3]
Changes in noise pollution (e.g., benefit when equipment is shut off, but cost when back-up equipment is turned on)[1 2]		Safety and health losses (e.g., less lighting may lead to increased crime, non-operational medical equipment)[4]
Biological impacts[1]		Improved asset value (e.g., improved property value, equipment functionality/performance improvement)[3]
Land use, including impacts of energy infrastructure on local ecosystems (fewer power plants)[1]		
Changes in water use, wastewater treatment, and water quality[1]		
Changes in visual resources (e.g., due to removal of power plant stacks or transmission towers, or adding back-up equipment)[1]		
Increases/decreases in criteria pollutants and GHG emissions (e.g., participants use back-up diesel generators during demand response events or increases when loads shift from hours with low- to high-emission resources)[2]		
Improved energy security/resilience (e.g., reduced dependence on imported fossil fuels)[2 3]		

Data sources and notes:

1. California Public Utilities Commission. 2016 Demand Response Cost Effectiveness Protocol, July 2016.

2. EPRI. *The Total Value Test: A Framework for Evaluating the Cost-Effectiveness of Efficient Electrification.* August 2019.
3. National Energy Screening Project, *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources.* August 2020**.**
4. AEG added this, as it was missing from the three sources.
5. PacifiCorp is already capturing the transaction costs beyond the demand response technology/service itself in the cost-effectiveness analysis.
6. PacifiCorp is already capturing the productivity losses in the cost-effectiveness analysis.

PacifiCorp plans to use the California demand response cost effectiveness protocol[32] for evaluating expected distribution of cost and benefits for demand response programs. Similar to energy efficiency, the Company expects to examine impacts from a utility cost test (UCT) and a total resource cost (TRC) test perspective. The TRC perspective includes non-energy impacts in its assessment of costs and benefits. Where quantifiable, PacifiCorp will include non-energy impacts in its analysis of program costs and benefits. Once program details are finalized following contracting, PacifiCorp will provide details on expected costs and benefits of its demand response programs.

Community Outreach and Engagement

The Company envisions a number of CEIP actions that are not explicitly demand-side or supply-side actions. Generally, these "other" actions focus improvements on delivery of programs and communications to customers including to named communities (as defined in Chapter 4). Specifically, PacifiCorp plans to implement the following other actions as part of the CEIP:

1. Outreach, language and education: PacifiCorp plans to improve language accessibility by assessing customer needs, reviewing current programs, identifying gaps, and developing clear plans and processes for action. This includes identifying opportunities to develop program materials, web content and outreach in non-English languages. The Company additionally plans to develop a webpage to host educational resources in English and Spanish. This will include energy-related educational collateral, modules and resources for customer and community use. PacifiCorp also will continue to identify and expand outreach to non-profits that provide services to named communities with the goal of increasing grant applications and approvals. PacifiCorp believes we can make a big difference with modest costs – the Company plans to review current program outreach and look for ways to improve targeting and outreach to named communities.
2. Establish an Electric Vehicle (EV) grant program: PacifiCorp plans to establish an Electric Vehicle (EV) Grant program that provides additional support for named communities to install electric vehicle charging infrastructure, purchase electric vehicle charging infrastructure, conduct outreach and education related to transportation electrification, and potentially purchase electric vehicles. The program will plan to run annually and be developed with stakeholders to ensure an inclusive grant program design.

[32] https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/demand-response-cost-effectiveness

CHAPTER 4 – INCREMENTAL COST

Overview and requirements

WAC 480-100-660(1) states that to determine the "incremental cost of the actions taken to comply with RCP 19.405.040 and 19.405.050" the utility must compare its lowest reasonable cost portfolio to the alternative lowest reasonable cost portfolio that would have resulted in the absence of CETA requirements. Rule dictates that the company should use a portfolio optimization model consistent with the most recent integrated resource plan as the basis for calculating the lowest and alternative lowest reasonable cost portfolios. The utility must also show the difference between portfolio choices and investment decisions between the two portfolios to demonstrate which investments and expenses are directly attributed to meet the requirements of RCW 19.405.040 and 19.405.050.

The CEIP is informed by PacifiCorp's 2021 Integrated Resource Plan (IRP) and the preferred portfolio of resources that was optimally developed to meet CETA requirements. However, concurrent with this document the Company is filing a petition for exemption specific to rule in the WAC 480-100-605 that requires the Alternative Lowest Reasonable Cost portfolio be developed using the SCGHG cost adder "in the resource acquisition decision". Instead, the following sections describe the proposed incremental cost calculation methodology that rests on the premise of comparing the CETA-compliant preferred portfolio to the portfolio which would have truly resulted in the absence of CETA requirements. This methodology is consistent with PacifiCorp's planning and considerations for revenue requirement.

The forecasted incremental costs in the compliance years 2022 through 2025 reflect both IRP derived incremental costs and non-modeled incremental costs. The average annual costs based on current estimates is approximately $5.6 million per year. An average $5.6 million increase in revenue requirement would result in customer rate impacts of approximately 1.7 percent on average. This average annual forecasted costs of $5.6 million per year is well below the annual threshold for alternative means of compliance per RCW 19.405.060(3). As such, the Company will not seek alternative compliance under this provision for the four-year compliance window documented in this CEIP.

Portfolio analysis

Chapter 1 described the 2021 IRP development process used to determine the preferred portfolio. In summary, to ensure the 2021 Integrated Resource Plan (IRP) and the Washington Clean Energy Action Plan included as an appendix to the 2021 IRP complied with WAC 480-100-660(1), PacifiCorp used the Plexos Long-Term (LT model), Medium-Term schedule (MT model) and Short-Term model (ST model) to optimally develop a range of least-cost least-risk portfolios under various policy and cost environments. The policy and cost environments include:

- Low, medium and high natural gas prices
- Zero, medium and high carbon dioxide prices
- An additional scenario including the SCGHG.

Evaluation of the resulting set of portfolios informed the selection of the 2021 IRP preferred portfolio: the top-performing portfolio over a range of metrics including expected cost, low-probability high-cost outcomes, reliability, and carbon dioxide emissions, which also demonstrates the ability to meet the requirements of RCW 19.405.040 19.405.050 in a least-cost least-risk manner.

The Alternative Lowest Reasonable Cost Portfolio

Concurrent with its filing of this draft CEIP, PacifiCorp is filing a petition for an exemption from the WAC 480-100-605 requirement that the Alternative Lowest Reasonable Cost Portfolio use the SCGHG "in the resource acquisition decision." PacifiCorp's reasoning is discussed in more detail in the petition, but in short, using the SCGHG "in the resource acquisition decision" leads to an incremental cost calculation result that does not bear any relationship to costs that customers will actually pay. This outcome would be inconsistent with the customer protection interests that underpin the incremental cost calculations. PacifiCorp's analysis in this section assumes that its petition for a limited exemption from WAC 480-100-605 will be granted.

During the 2021 IRP portfolio development process, the P02-MM portfolio emerged as the top-performing portfolio. It was not developed to use SCGHG "in the resource acquisition decision," which is why PacifiCorp has requested a waiver. It is the case that would have been selected as the preferred portfolio in the absence of CETA legislation. In the absence of CETA requirements, P02-MM is the Alternative Lowest Reasonable Cost portfolio that optimally ensures reliable and cost-effective energy for the system over the forecasted 20-year planning horizon given medium gas and medium carbon dioxide price assumptions.

This portfolio was evaluated against the following targets laid out in RCW 19.405:

1. By 2025, utilities remove coal-fired generation from Washington's allocation of electricity;
2. By 2030, Washington retail sales are carbon-neutral:
    a. 80 percent from long-term system resources[33]
    b. 20 percent from alternative compliance using purchase of unbundled RECs[34];
3. By 2045, Washington's retail sales are met with 100 percent renewable and non-carbon-emitting resources.

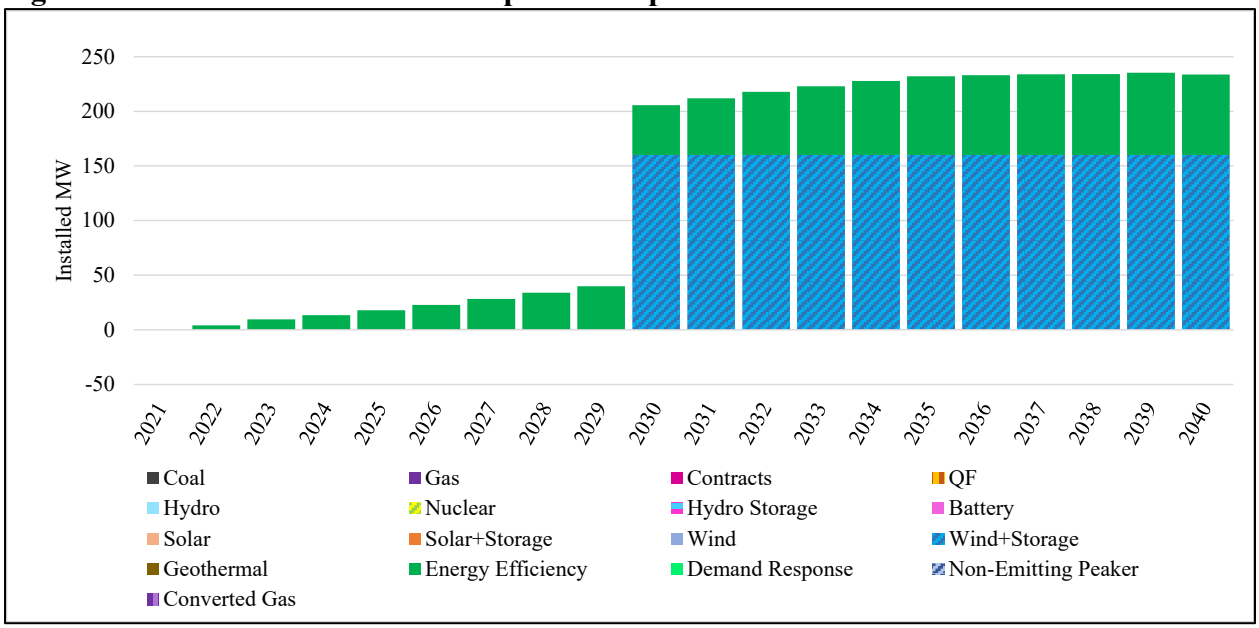
Evaluation of the P02-MM portfolio against CETA targets required certain modeling assumptions to account for uncertainties related to the future of interjurisdictional cost allocation among the PacifiCorp states and resolution of outstanding CETA implementation issues. Assumptions underlying the Washington resource allocation of the portfolio are outlined in subsection Target Development.

The P02-MM portfolio is very similar to the CETA-compliant preferred portfolio because PacifiCorp's system is already substantially aligned with Washington's clean energy standards. The alternative lowest reasonable cost portfolio, developed on a system-wide basis including all

[33] RCW 19.405.040(1)(a)(ii) requires utilities to "use electricity from renewable resources and non-emitting electric generation in an amount equal to one hundred percent of the utilities retail electric loads over each multiyear compliance period."
[34] RCW 19.405.020(38)

of PacifiCorp's six states, is approximately 87 percent CETA-compliant[35] by year 2030. Figure 4.1 illustrates the changes in the resource portfolios comparing the CETA-compliant preferred portfolio (lowest reasonable cost) to the alternative lowest reasonable cost portfolio.

Figure 4.1 – Cumulative CETA Compliance Impacts



PacifiCorp's long-standing trajectory is towards increasing renewable energy as a percentage of retail sales, benefiting Washington customers and aligning with CETA objectives. Specifically, because of the relatively small magnitude of change necessary to achieve CETA compliance, the most cost-effective portfolio nearly meets CETA objectives in 2025, 2030 and 2040 is identified as P02-MM-CETA.

Interim Target Shortfall Resolution

During portfolio development, upon evaluation relative to the 2030 CETA target, a shortfall of roughly 69 MW of annual capacity was identified in 2030 (the highest shortfall year), with significantly smaller shortfalls identified on average in the years between 2030-2033, for the top-performing portfolio. Under a four-year compliance window for the time period 2030 – 2033, an average annual shortfall of 49 MW was identified. This shortfall is addressed with a Washington-situs assigned 160 MW wind and solar resource co-located with storage located in Yakima, Washington. This additional co-located resource increases the renewable capacity contribution of the combined hybrid resource project (including solar and battery components) toward CETA objectives while operating within existing transmission limits. By operating within existing transmission limits the company avoids building new transmission which can be disruptive to vulnerable communities. A further discussion of how the preferred portfolio was evaluated relative to the requirements of CETA can be found in the 2021 IRP.[36]

[35] Calculated as Washington allocated energy divided by Washington retail load plus the 20 percent unbundled REC purchase allowance to achieve greenhouse gas neutrality by year 2030.
[36] Volume I, Chapter 9 (Modeling and Portfolio Selection), PacifiCorp's 2021 Integrated Resource Plan.

SCGHG Consideration

In PacifiCorp's 2021 IRP portfolio development process, the company used four different carbon dioxide price scenarios – zero, medium, high, and a price forecast that aligns with the SCGHG. The medium and high scenarios are derived from expert third-party multi-client "off-the-shelf" subscription services. Both scenarios apply a carbon dioxide price as a tax beginning 2025.

The SCGHG price forecast was incorporated into a scenario in compliance with RCW 19.280.030. In this scenario, SCGHG emissions are assumed to start in 2021. The SCGHG is applied such that the price for the SCGHG is reflected in market prices and dispatch costs for the purposes of developing each portfolio (*i.e.*, incorporated into capacity expansion modeling).

The results from the P02-SCGHG portfolio were informative in the development of the CETA-compliant preferred portfolio of resources. In the action plan window, 2022-2025, the only significant resource differences under the SCGHG that would be allocated to Washington customers were impacts on DSM resources. Energy efficiency resources were optimized across the system under the SCGHG assumptions and resulted in different selections than under the medium gas medium carbon price scenario; the SCGHG optimal energy efficiency bundles for Washington were selected as part of the preferred portfolio to help meet 2030 and 2045 clean energy targets.

Revenue Requirement Methodology

Costs Included for Consideration

Incremental costs included for consideration in this CEIP can be broadly considered in two categories – IRP modelled incremental costs, and non-IRP modelled incremental costs. IRP modelled incremental costs were identified through the comparison of changes in investment costs between the Lowest Reasonable Cost portfolio (2021 IRP Preferred Portfolio) and the Alternative Lowest Reasonable Cost portfolio, described above. Per rule WAC 480-100-660(1), the only differences in investment decisions between the two portfolios described are a direct result of CETA requirements, determined to be met in a least-cost least-risk manner. The cumulative impacts of CETA compliance are described in Table 4.1.

Incremental investments and expenses were identified from the comparison of the two portfolios and summarized on an annual, nominal basis, for the compliance years in this CEIP. Below table summarizes the resource-driven incremental expenses identified by the comparison of relevant portfolios as described in the above section:

Table 4.1 – Annual Impacts of CETA

	Compliance Year			
($million)	**2022**	**2023**	**2024**	**2025**
Net Power Costs	(0.23)	0.00	3.16	1.27
Energy Efficiency	0.79	1.81	2.51	3.35
Total	**0.56**	**1.81**	**5.67**	**4.62**

Further to the IRP derived incremental costs, to determine non-IRP modelled incremental costs, all workstreams engaged in the preparation of this report were asked to evaluate and identify any costs expected to be incurred that would not otherwise have been absent CETA requirements

during the 4-year period. The resulting non-IRP modelled costs reflected in this CEIP include administrative type costs such as EAG-related moderation and communication costs, incremental staffing requirements, and costs related to activities undertaken to enhance reach and equitable distribution of DSM programs. Table 4.2 summarizes the identified non-IRP modelled incremental costs by category:

Table 4.2 – Non-modeled Incremental Costs

	Compliance Year				
($million)	**2022**	**2023**	**2024**	**2025**	**Description of Cost Item**
CEIP Management, Coordination & Communication	0.56	0.57	0.58	0.60	Additional Staffing to help coordinate, facilitate and strategic planning for CEIP
Enhanced Outreach & Communication	0.40	0.30	0.30	0.30	Outreach and materials for EAG and Public meetings
External Data Support	0.10	0.11	0.11	0.11	Vendor expense for data support
EV Grant Program	0.25	0.25	0.25	0.25	Program costs for named communities
CETA-specific DSM Program Expenses	1.21	1.22	1.22	1.22	Costs incurred to enhance reach and equitable distribution of DSM programs
Total	**2.52**	**2.45**	**2.46**	**2.47**	

These administrative costs, in addition to the costs identified through the comparison of the preferred portfolio and alternative lowest reasonable cost portfolio, are then flowed into a revenue requirement calculation described below.

Revenue Requirement for 2022 – 2025

Taking the estimated incremental costs identified based on methodologies described in this report, the Company then makes an annual revenue requirement calculation, by calculating the return on investments, and return of expenditures by ways of a standard revenue requirement formula:

$$\textit{Revenue Requirement} = \textit{Rate of Return} \times (\textit{Net Rate Base}) + \textit{Operating Costs}$$

Using the above formula, the estimated annual revenue requirement for each year in the compliance period is as follows:

Table 4.3 – Estimated Annual Revenue Requirement

$-Millions	2022	2023	2024	2025
Revenue Requirement				
Capital Investment	-	-	-	-
Depreciation Reserve	-	-	-	-
Net Rate Base	-	-	-	-
Pre-Tax Rate of Return	8.409%	8.409%	8.409%	8.409%
Pre-Tax Return on Rate Base	-	-	-	-
Depreciation	-	-	-	-
Operating & Maintenance				
Net Power Costs	(0.23)	0.00	3.16	1.27
Energy Efficiency	0.79	1.81	2.51	3.35
Administrative & General				
DSM Program Costs	1.21	1.22	1.22	1.22
EV Grant Program Costs	0.25	0.25	0.25	0.25
Outreach Costs	0.37	0.27	0.27	0.27
Materials	0.03	0.03	0.03	0.03
Staffing	0.56	0.57	0.58	0.60
Data Support	0.10	0.11	0.11	0.11
Total Revenue Requirement	**3.08**	**4.26**	**8.13**	**7.10**
Average Revenue Requirement	**5.64**			

The average annual incremental revenue requirement over the reporting period is approximately $5.6 million. An average $5.6 million increase in revenue requirement would result in customer rates impact of approximately 1.7 percent on average.

Annual Threshold for Alternative Means of Compliance

Per RCW 19.405.060(3), utilities are also required to calculate an Annual Threshold Amount for the purpose determining eligibility to use alternative means of compliance. The mathematical formula for the Annual Threshold Amount is as follows:

$$\text{Annual Threshold Amount} = \frac{(WASR_0 \times 2\% \times 4) + (WASR_1 \times 2\% \times 3) + (WASR_2 \times 2\% \times 2) + (WASR_3 \times 2\%)}{4}$$

Applying the Company's forecasted weather adjusted sales revenues for the applicable years to this compounding formula, the Company's four-year cost threshold is $67.6 million. This translates to an Annual Threshold Amount of $16.9 million.

Table 4.4 – Cost Thresholds

($ million)	**2021**	**2022**	**2023**	**2024**	***Reference***
Forecasted WA Revenues	335,302	338,743	341,031	339,874	
2% of Revenues	6,706	6,775	6,821	6,797	*Line 1 x 2.0%*
Multiplier	4	3	2	1	
Threshold Amount	26,824	20,325	13,641	6,797	*Line 2 x Line 3*
Four-Year Threshold Amount	67,587				*Sum Line 4*
Annual Threshold Amount	**16,897**				*Line 5 / 4*

Based on current forecasts, the estimated incremental costs identified in the above section for 2022 through 2025 are well within the annual threshold amount. The Company will not seek alternative compliance under this provision.

CHAPTER 5 – PUBLIC PARTICIPATION

As required by CETA, utilities in Washington must ensure that all customers served in Washington benefit equitably from the transition to renewable energy. In compliance with WAC 480-100-655(2), PacifiCorp established a plan to encourage public participation throughout the development of the 2022 CEIP. PacifiCorp's July 30, 2021 Revised Public Participation Plan addressed the ways in which PacifiCorp planned to seek and incorporate public feedback to inform the preparation and filing of the 2022 CEIP. As outlined in that plan, public participation for the 2022 CEIP was built on four pillars to support robust and inclusive participation: (1) Engaging members of the public by selecting outreach, methods, timing, and language considerations that address barriers to participation, (2) making data accessible and available to members of the public and CEIP stakeholders, (3) building upon learnings from existing advisory groups and stakeholders interested in the CEIP development process, and (4) building upon learnings from the EAG. PacifiCorp incorporated learnings from each of these 4 pillars of input to ensure that the health, safety, and well-being of its communities was considered in the CEIP development process.

Public Engagement - Outreach, Timing, Methods, and Language Considerations

PacifiCorp worked to establish a CEIP public participation process that was open, transparent, and accessible. To meet these goals, we developed a process of seeking public participation by embracing inclusive design and ensuring that communication with stakeholders was proactive and easy to understand.

Outreach

An overview of PacifiCorp's Public Participation outreach methods is provided in Table 5.1 below. Additional details are described throughout Chapter 5.

Table 5.1 - Outreach Methods and Opportunities for Feedback

GETTING THE WORD OUT	
Tool	**Description**
Project website: https://www.pacificorp.com/energy/washington-clean-energy-transformation-act-equity.html[37]	The project website provides information about the CEIP in English and Spanish, including sharing public participation opportunities, hosting project information, collecting feedback on online surveys, documenting EAG and other advisory group meeting materials, etc.
Email updates	Announcements and CEIP website updates were communicated to stakeholders via e-mail. Public meeting information was communicated to customers via e-mail.

[37] WAC 480-100-655(2)(g)(i)-(iv)

Project fact sheet and flyers	PacifiCorp provided digital and printed public participation information to customers in English and Spanish.
Existing advisory groups and EAG pre-meeting materials	Meeting materials were shared with advisory group members prior to each meeting. EAG pre-meeting materials included the presentation slide deck and an expanded agenda that described the meeting objectives and discussion topics.
Meeting summaries	Following each EAG meeting, meeting summaries were prepared and posted on the CEIP website and distributed to EAG members. Meeting notes were also prepared for public meetings following Public Meeting No. 1.
Utility bill inserts	Informational bill inserts were provided to customers who receive their bill in the mail in printed format and provided digitally to customers who are on paperless billing. Bill inserts included information in English and Spanish. Call-in information was included to notify customers of public participation meetings to reach those who may not have access to the Internet.
Utility bill messages	Informational bill messages were printed or provided digitally with customer bills in both English and Spanish.
Interactive Voice Response (IVR)	PacifiCorp customers in Washington who call customer service receive a pre-recorded Interactive Voice Response (IVR) message in English or Spanish that directs customers to the CEIP webpage.
Social media	Informational content is posted on the company's social media accounts directing customers to the CEIP website.
Paid media	To reach customers in Washington, the company uses paid advertising across various media channels, including newspaper, radio, and social media ads.
Press release	Press releases were issued to local publications in PacifiCorp's Washington service area to notify customers about the public participation meetings.
Text message notices	Text message notices were sent to Washington customers informing them about public participation meetings.
Partner channels	PacifiCorp partnered with its EAG and local community groups and organizations to share CEIP information.

PacifiCorp website	PacifiCorp has referenced the CEIP project on its primary website and provided a link to https://www.pacificorp.com/energy/washington-clean-energy-transformation-act-equity.html
SHARING INFORMATION AND SEEKING INPUT	
Tool	**Description**
Community surveys	Data on the benefits from a clean energy transformation were collected from PacifiCorp's Washington customer base, PacifiCorp's existing advisory groups and the EAG. A summary of survey results was posted on PacifiCorp's CEIP webpage.
Project email (ceip@pacificorp.com) and web comment form	Input from stakeholders has been collected via e-mail.
CEIP Public Meetings	PacifiCorp hosted a series of all-customer meetings to solicit additional feedback from its customer base. Meeting materials were prepared and shared on the CEIP website. Public meeting notes were shared on the CEIP website.
CEIP Technical Conferences	PacifiCorp hosted a series of technical meetings with parties interested in a deeper examination of the CEIP to solicit direct feedback on its development. Meeting materials were prepared and shared on the CEIP website. The meetings were interactive, and comments were directly addressed during the meetings.
EAG and Existing Advisory Group Meetings	PacifiCorp's CEIP project team and subject matter experts (SMEs) presented information on CEIP topics for the EAG and existing advisory group members to discuss, react to, and comment on. Participants provided input and/or engaged in dialogue with the CEIP project team, SMEs, and each other on the designated topics.

Timing

PacifiCorp's outreach began in spring 2021 and focused on outreach through existing channels – especially the existing advisory groups in Washington – and through community-based organizations to identify potential members of the newly-formed EAG.

In April 2021, RMI (formerly Rocky Mountain Institute) assisted PacifiCorp reaching out to and conducting interviews with community-based organizations and members of the public who were identified as potential participants in the EAG. The feedback and learnings obtained through this interview process helped to inform the EAG's scope. Through this process and as described below, the formal EAG was established; the first meeting was held in May 2021.

PacifiCorp provided an email notification to each of the company's existing advisory groups in Washington – as well as the full six-state public IRP distribution list – on May 4, 2021. The email provided notice that the development of the 2022 CEIP was beginning and provided an opportunity to review the company's public participation plan, to join the email distribution list specific to the CEIP (CEIP@pacificorp.com), and to visit the company's webpage for next steps in CEIP participation (https://www.pacificorp.com/energy/washington-clean-energy-transformation-act-equity.html).

In July 2021, PacifiCorp distributed a customer survey, intended to seek preliminary feedback from all Washington customers who were not otherwise participating in an advisory group.

PacifiCorp's existing Washington advisory groups met regularly in 2021 and will continue to hold meetings to, in part, support CEIP development and implementation. A timeline of advisory group meetings, stakeholder meetings, and public participation meetings throughout 2021 is shown in Table 5.2 below.

Table 5.2 – Advisory Group and Public Participation Meeting Schedule

Meeting Type	Date
Low Income Advisory Committee Meeting	May 6, 2021
EAG Meeting (#1)	May 13, 2021
EAG Meeting (#2)	June 16, 2021
DSM Advisory Group Meeting	June 17, 2021
Low Income Advisory Committee Meeting	June 18, 2021
IRP Public Input Meeting	June 25, 2021
Low Income Advisory Committee Meeting	July 20, 2021
EAG Meeting (#3)	July 21, 2021
DSM Advisory Group Meeting	July 22, 2021
IRP Public Input Meeting	July 29-30, 2021
IRP Public Input Meeting	August 6, 2021
IRP Public Input Meeting	August 12, 2021
EAG Meeting (#4)	August 18, 2021
CEIP Public Meeting (#1)	September 8, 2021
CEIP Technical Conference	September 14, 2021
EAG Meeting (#5)	September 15, 2021
CEIP Public Meeting (#2)	October 6, 2021
DSM Advisory Group Meeting	October 12, 2021
CEIP Technical Conference (#2)	October 19, 2021
EAG Meeting (#6A)	October 20, 2021
CEIP Technical Conference (#3)	November 10, 2021
CEIP Public Meeting (#3)	November 10, 2021
EAG Meeting (#7)	November 17, 2021
EAG Meeting (#8)	January 2022

Methods

PacifiCorp's initial public participation outreach was via both telephone and email and was designed to inform existing advisory groups (including the IRP Public Input Process) of the opportunity to provide feedback, as well as to form the EAG.

Direct outreach methods to the IRP public-input stakeholders occurred via email and through a dedicated IRP webpage that provides meeting materials, stakeholder feedback forms, and participation information for each meeting. Outreach for both the DSM Advisory Group and the Low-Income Advisory Group occurred via email to participants on the distribution list. PacifiCorp continued to use these outreach methods as applicable throughout the development of the 2022 CEIP.

In addition to specific outreach to stakeholders, PacifiCorp established a dedicated webpage to provide information to the public regarding how to participate in the development of the 2022 CEIP. The webpage includes information about CETA, the CEIP development processes, links to relevant documents, and:

- A schedule of advisory group meetings and a tentative schedule of topics to be discussed.
- Meeting summaries, materials, and documents, including those from past meetings.
- Information on how to participate in the development of the CEIP.
- Data and information provided to support participant education as part of the EAG.
- Links to filings and plans associated with CETA compliance (2021 IRP filing that included the CEAP, CEIP filing, etc.) posted no later than thirty days following final action by the Commission.
- Spanish translations of EAG meeting materials and webpage content.

The website is found at: https://www.pacificorp.com/energy/washington-clean-energy-transformation-act-equity.html.

The company also set up a dedicated email address, CEIP@pacificorp.com, that is posted on the webpage to facilitate timely responses to any stakeholder questions. PacifiCorp also encouraged members of the public who wanted to participate in the development of the CEIP to join the company's email list, which was used to communicate upcoming meetings, meeting materials, and other opportunities for education and feedback.

PacifiCorp developed a survey targeted to our broader Washington customer base to gather input on the development of the CEIP. The survey was made available in English and Spanish between July 2, 2021, and August 10, 2021. There were separate versions for residential and non-residential customers. Outreach for this survey included a printed and digital bill insert to all Washington customers; direct email to approximately 53,000 customers; survey links on the CEIP webpage; a recorded IVR message through PacifiCorp's customer care center; electronic and hard-copy distribution to community members through the EAG; and direct outreach to Washington business and community leaders from PacifiCorp regional business managers and additional internal contacts. A separate survey was also made available for advisory group input and was shared via email. Survey results were prepared, summarized, and posted on the CETA webpage.

PacifiCorp held three public meetings on the CEIP development process that were targeted for the Company's Washington customer base. The first meeting was held September 8, 2021, and focused on providing background context on CETA and the CEIP, as well as the initial CBIs and public engagement. The second meeting was held October 6, 2021, and focused on the results of the IRP and actions that PacifiCorp can take to influence the CBIs and their

defined metrics. The third meeting will be held November 10, 2021, and will provide an overview of the draft CEIP for public feedback.

PacifiCorp held three technical conferences on the CEIP development process that were targeted for parties interested in a deeper examination of the CEIP. The first meeting was held on September 14, 2021, and provided an overview of the 2021 IRP and CEIP workplan, highlighted PacifiCorp's proposed Utility Actions, and discussed near-term procurement actions. The second technical conference was held on October 19, 2021, and provided an overview of resource planning and utility costs, refined CBIs, and an update on Utility Actions. The third technical conference to be held on November 10, 2021, will present an overview of this draft CEIP.

PacifiCorp documented its responses to questions, comments and input received as part of its public participation process. PacifiCorp's responses to comments are found in Appendix B.

Addressing Barriers to Participation

PacifiCorp understands that accessibility is key to ensuring an inclusive public participation process. Through our interviews with experts and EAG members, we identified potential barriers to public participation more broadly, and worked to apply the learnings to encourage participation from members of the public. PacifiCorp identified the following potential barriers to public participation:

In-person outreach and in-person meetings were not possible due to the COVID-19 pandemic and PacifiCorp primarily relied on digital channels for outreach. PacifiCorp continually worked to address the barrier caused by reduced in-person and in-community outreach by refining its methods of communication. As the 2022 CEIP is implemented, PacifiCorp will continue to explore avenues of community engagement and outreach/education in coordination with its EAG and other existing community organizations as more in-person options become available.

For customers who do not regularly participate in utility planning processes, there may be a perception that input will not be considered by the utility. PacifiCorp worked to clearly outline how feedback was being considered and accounted for as part of the 2022 CEIP. The company worked to address this barrier by conducting proactive outreach to community groups through our regional business managers, by providing meeting notes and materials that include what stakeholder feedback was received during meetings, and through a summary of stakeholder feedback and how that feedback was ultimately incorporated into the CEIP.

Language Considerations. PacifiCorp addressed language considerations by working with a translation service to provide a Spanish version of the company's CEIP website and meeting materials. Providing Spanish translations of materials is consistent with the company's current outreach process in Washington. The website included Spanish translated versions of meeting materials, instructions regarding how to participate in future meetings as well as a tentative schedule for topics to be addressed during future meetings, and a link to contact PacifiCorp to request translation services at future CEIP meetings. PacifiCorp also provided live Spanish interpretation services for public participation meetings.

Cultural Considerations. PacifiCorp worked to address cultural barriers and embrace cultural

differences by obtaining a deeper understanding of the communities within its service area. PacifiCorp's EAG advised that the company needs to learn more about our different communities so that we can specifically refine and enhance our mechanisms for outreach and communication. Through contacts with community organizations, we are continually learning and working toward accommodating cultural differences. PacifiCorp also recognized the need for diversity training within our organization and as of June 2021, all employees have received Unconscious Bias training so that we can be more aware of how our actions affect others.

Members of the public may face economic barriers to participation as most utility engagement has historically been held during weekdays. As part of the interview process in formulating the EAG, PacifiCorp asked potential members to provide feedback on preferred meeting times, with options for meetings outside of typical working hours. While meetings during weekdays were still the preferred option for the EAG, PacifiCorp took steps to address economic barriers by offering a stipend to EAG members who indicated that a stipend would be helpful.

Utility planning processes are often data-heavy, and improvements are planned to make data available in broadly understood terms. PacifiCorp is working to ensure that data is available in broadly understood terms.

As a result of input received from existing advisory groups, the EAG and requests from the public and other stakeholders, PacifiCorp implemented alternative approaches to promote public participation that included:

- Bill inserts and bill messages provided electronically for customers who receive their bills electronically or printed for customers who receive their bills by mail.
- Social media posts targeted to PacifiCorp's service area in Washington.
- Notices published in newspapers of general circulation in PacifiCorp's service area in Washington.
- Radio ads running on stations in PacifiCorp's service area in Washington; and
- Direct email to customers who have provided email information to us.

Incorporating Learnings from Existing Advisory Groups

PacifiCorp has historically considered input throughout the planning process from the company's existing Washington advisory groups: DSM, low-income programs, and the IRP public participation process. These processes will continue to inform how the company approaches long- and intermediate-term planning. Input from these stakeholders informed the resource, strategy, and CBI considered in the development of the 2022 CEIP. Generally, the input from the stakeholder groups discussed in this chapter was used in the following ways to inform the company's 2022 CEIP:

- Iterative development of future Washington-specific Clean Energy Action Plans (CEAPs)
- Identification of highly impacted communities and vulnerable populations (referred to as named communities) within the CEIP
- Development of CBIs flowing to named communities and all customers including

named communities
- Weighting factors for CBIs specific to named communities and all customers, including named communities
- Development of the utility interim targets within the CEIP
- Development of the CEIP utility actions

Incorporating Stakeholder Feedback from the Low-Income Advisory Committee

PacifiCorp's Low-Income Advisory Group meets regularly to discuss issues related to energy burden, as well as to advise the company on programs designed to increase limited-income customers' ability to pay their monthly bills through energy assistance, efficiency measures, and bill discounts. The group currently has two existing programs in its purview:

- **Bill Discount Program:** Included 6,100 participating households in 2019 with a total assistance amount of $3.1 million.
- **Low-Income Weatherization:** Has provided weatherization funding to over 7,800 homes since the program began. Program eligibility based on 200 percent of federal poverty guideline or 60 percent of state median income, whichever is greater.

This group discussed the methods by which utilities must make funding available on July 31, 2021, for low-income households with income that do not exceed the higher of 80 percent of area median income or 200 percent of federal poverty level. This change modifies the eligibility threshold of the current low-income bill assistance program, and PacifiCorp held meetings to seek advice from the advisory group on meeting income guidelines.

Members of the Low-Income Advisory Group include: Commission Staff, The Energy Project, Public Counsel, NW Energy Coalition, PacifiCorp and the three local Community Action Agencies that administer Low Income Bill Assistance Program (Schedule 17) (Blue Mountain Action Council in Walla Walla, Northwest Community Action Center in Toppenish, and Opportunities Industrialization Center in Yakima). A few of the Low-Income Advisory Group members are also members of PacifiCorp's EAG.

The Low-Income Advisory Group met in May and June 2021 to discuss potential modification to Schedule 17, which is the company's LIBA tariff, and supported modifications including income guideline tier structure, removal of enrollment cap extending program to all income qualified applicants, and straight percentage discount of net bill. Modifications to the LIBA program approved by the Commission and implemented effective August 1, 2021. PacifiCorp obtained input from the Low-Income Advisory Group through the Clean Energy Benefit Survey and presented draft CBIs to the group on July 20, 2021. Input from the Low-Income Advisory Group informed the CBIs and metrics developed as part of this 2022 CEIP.

Incorporating Stakeholder Feedback from the DSM Advisory Group

PacifiCorp uses its DSM Advisory Group to meet the requirements of WAC 480-109-110. The DSM Advisory Group was initially created under the June 16, 2000 Comprehensive Stipulation in docket UE-991832, which the Commission approved in the August 9, 2000

Third Supplemental Order in that docket, and its IRP public input process created under WAC 480-100-238.

DSM Advisory Group topics are focused on energy efficiency (also known as conservation) and include but are not limited to the Energy Independence Act (EIA or I-937) biennial target setting process, including program design and plans, adaptive management, budgets, and communication strategies to achieve the Commission-approved biennial target, cost recovery through the system benefit charge, cost effectiveness. Regulatory filings related to conservation must be provided to the DSM Advisory Group at least 30 days ahead of filing. Members are asked to provide written comments on conservation filings within 1-2 weeks so their review can be incorporated into the final filed documents.

The DSM Advisory Group meets at least four times per year. Presentation materials are provided 1-2 days in advance of the meeting. Supplemental files may also be provided. The meeting is typically conducted by one or more members of PacifiCorp's conservation delivery team. Company speakers rotate depending on subject matter. Subject matter experts outside the company may be asked to speak. Presentations are informal with questions encouraged and discussed in the presentation. Meeting notes are kept by the company, but not typically circulated back to the group. Specific group follow-ups are captured and included in the next meeting agenda.

Members include Commission Staff, The Energy Project, Public Counsel, NW Energy Coalition, and PacifiCorp. Representatives from Northwest Power and Conservation Council, Northwest Energy Efficiency Council, PacifiCorp customers, Puget Sound Energy, Avista and the Northwest Energy Efficiency Alliance have attended selected meetings in the past. PacifiCorp members have attended Puget Sound Energy and Avista advisory group meetings in the past.

On June 17, 2021, PacifiCorp presented details regarding CETA, the EAG and highly impacted communities within the Washington service area to the DSM Advisory Group. Further, on July 22, 2021, PacifiCorp provided details regarding vulnerable populations, draft CBIs, and requested the DSM Advisory Group to complete the Clean Energy Benefit Survey. On September 2, 2021, PacifiCorp presented an update on CBI development, CBI weighting and a residential benefits crosswalk. On September 15, 2021, PacifiCorp provided draft program details and budgets which included utility actions for energy efficiency that would be included in the draft CEIP. The draft DSM Business Plan provided to the group on October 1, 2021, requested comments and also included the utility action information. The DSM advisory group provided direct input on PacifiCorp's specific actions developed as part of the 2022 CEIP.

Incorporating Stakeholder Feedback from IRP Public-Input Process

PacifiCorp develops its 20-year IRPs on a biennial basis through a robust and inclusive public-input process that allows for stakeholder review and feedback on the company's long-term planning assumptions, methodologies, analysis, and results. Stakeholders have been involved in the development of the 2021 IRP from the beginning. The public-input meetings held beginning in January 2020 were the cornerstone of the direct public-input process, and there have been a total of 18 public-input meetings held as part of the 2021 IRP development cycle.

Three of the meetings were topic-specific technical workshops to discuss development of its CPA. An additional IRP stakeholder meeting was held post-filing on October 1, 2021. The IRP public-input process also included state-specific stakeholder dialogue sessions held in July 2020. The goal of these sessions was to capture key IRP issues of most concern to each state, as well as to discuss how to tackle these issues from a system planning perspective.

PacifiCorp's IRP public-input process uses stakeholder feedback forms as a vehicle outside of the public input meetings to receive and respond to stakeholder questions and recommendations – as of August 31, 2021, the company had received 91 stakeholder feedback forms comprised of more than 480 questions, comments, or recommendations. PacifiCorp makes these stakeholder feedback forms and the company's responses publicly available on the company's IRP webpage. PacifiCorp also provides a summary of the public input process in Appendix C, Public Participation, within its filed IRP.

The company's IRP public-input process generates input that directly informs the development of the company's IRP. Most notably, this can be seen through the company's scenarios and sensitivities run as part of the portfolio modeling process, inputs to modeling assumptions such as the supply-side resource table and price-policy scenarios, and its portfolio modeling methodology and approach. The robust, transparent, and inclusive IRP public-input process provides for public input to ensure that PacifiCorp's IRP produces a 20-year resource portfolio that is reliable, least-cost and least-risk. This resource portfolio, the preferred portfolio, will inform the 10-year Washington-specific CEAP and subsequently, development of the four-year CEIP. IRP public-input meetings are open to the public, and to the extent that members of other advisory groups – or anyone interested in the process – would like to attend and provide feedback, PacifiCorp welcomes the participation.

As part of the June 26, 2021, July 30, 2021, and August 27, 2021, IRP public-input meetings PacifiCorp provided an update on the CEIP development process and ways for the public to provide feedback.

Establishing and Supporting the EAG

To establish a cleaner and more equitable electricity system for Washington, PacifiCorp formed its EAG. The EAG is intended to elevate issues of energy equity in the planning process by providing a seat at the table to affected communities. Members of the EAG are community leaders supporting underserved populations, and they provide insights into the lived experiences of Washington communities.
To establish an EAG in compliance with WAC 480 100 655(1)(b), PacifiCorp consulted with experts in energy equity and invited stakeholder input from the onset of the outreach process. These experts included:

- American Council for an Energy-Efficient Economy (ACEEE)
- Front and Centered
- Initiative for Energy Justice (IEJ)
- RMI*
- The Public Counsel Unit of the Washington Attorney General's Office
- Washington Utilities and Transportation Commission Staff

**RMI served as a consultant to this project, facilitating and designing EAG meetings alongside PacifiCorp's CEIP team.*

With these experts, PacifiCorp's team worked not only to identify representative community members for the EAG but also to design an inclusive input process for the EAG to meaningfully engage in the planning process. This included identifying pathways to integrate EAG expertise into the resource planning process, CEAP, and CEIP.

Identifying EAG Members and Participants

PacifiCorp's two Washington-focused Regional Business Managers (RBMs) serve as ties between the company and community. These RBMs actively participate in community events and engage with Washington customers. RBMs were integral in identifying prospective EAG participants and supporting stakeholder outreach.

The stakeholder outreach phase of this work served as a forum for gathering insights on local energy equity-related challenges. These interviews provided PacifiCorp and RMI with an understanding of important priorities and perspectives to consider as we designed the EAG and planned for group discussions.

As part of these interviews, PacifiCorp and RMI asked for additional recommendations and referrals for potential EAG participants that have direct knowledge and experience with communities or populations identified as highly impacted or potentially vulnerable. The following organizations provided perspective through this process:

- Asian Pacific Islander Coalition (APIC)-Yakima
- Blue Mountain Action Council (BMAC) of Walla Walla
- Central Washington Hispanic Chamber of Commerce
- The Energy Project
- Greater Yakima Chamber of Commerce
- La Casa Hogar
- Northwest Community Action Center (NCAC)
- Northwest Energy Coalition (NWEC)
- Opportunities Industrialization Center (OIC) of Washington
- Perry Technical Institute
- People for People
- SonBridge
- University of Washington
- Walla Walla Sustainable Living Center
- Washington State Department of Commerce
- Washington State Department of Veterans Affairs
- Washington State Office of the Attorney General
- Washington Utilities and Transportation Commission Staff
- Yakama Nation
- Yakama Power
- Yakima County Development Association
- Yakima County Health District

Overall, these stakeholders expressed passion for the importance of this work and its related outcomes. Stakeholders emphasized the importance of including new voices, creating an accessible public process, and ensuring that the perspectives adequately reflect these communities. Interviewees also shared perspectives on challenges that the communities are facing and how energy equity directly relates to the conditions and situations that people are facing. Challenges shared included: the COVID pandemic, access to computers and internet, language barriers, heating homes with wood-burning stoves, and a lack of equitable economic development.

Other input captured from stakeholder interviews included priorities related to energy equity, suggested topics to cover in EAG meetings, reasonable expectations to have of EAG members, as well as EAG member accommodations and support. Stakeholders were also asked to share ideas for additional organizations or individuals to reach out to about this effort.

Based on input from these stakeholders, PacifiCorp recruited 12 EAG members (see Table 5.3) to represent local perspectives related to:

- Environmental justice
- Public health
- Social Services
- Businesses
- Tribal populations
- Asian Pacific Islander community
- Hispanic community
- Seniors
- Veterans
- Low-income population
- Agricultural workers

Table 5.3 – PacifiCorp 2021 Equity Advisory Group Members

Name	Organization
Paul Tabayoyon	Asian Pacific Islander Coalition
Sylvia Schaeffer	Blue Mountain Action Council of Walla Walla
Angelica Reyes	La Casa Hogar
Laura Armstrong	Independent representative (former employee of La Casa Hogar)
Noemi Ortiz	Northwest Community Action Center
Isidra Sanchez	Opportunities Industrialization Center
Kaila Lockbeam	Perry Technical Institute
Norman Thiel	SonBridge
Erendira Cruz	Walla Walla Sustainable Living Center
Raymond Wiseman	Representing Yakama Nation; employee of Yakama Power
Jonathan Smith	Yakima County Development Association
Nathan Johnson	Yakima Health District

Building an Inclusive and Accessible Process of Consultation and Collaboration

For the engagement of the EAG to be meaningful, the collaboration process supported full and authentic participation by all individuals. PacifiCorp worked closely with EAG members to address the following potential barriers to EAG and public participation:

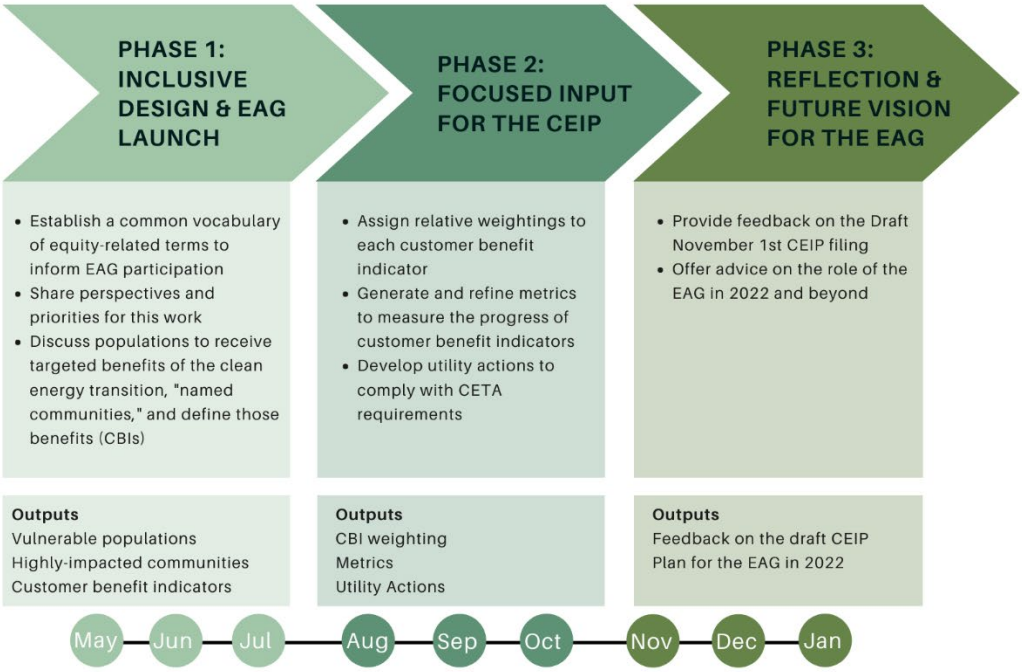
- **Information Accessibility.** To ensure that people of various backgrounds were able to participate in this work, PacifiCorp used a variety of outreach and communications channels, including:
    - PacifiCorp's CEIP webpage
    - Email distribution list for CEIP stakeholders, which members of the public were invited to join by emailing CEIP@pacificorp.com,
    - Pre-meeting materials that outline meeting objectives and discussion topics, sent directly to EAG members at least 3 business days prior to each scheduled EAG meeting
    - Spanish translation of EAG materials shared with EAG members and posted on the CEIP website
    - Conference calls with EAG members e.g., when requested by EAG members; make up EAG meeting when 5 members were not able to attend
    - Cross-channel communication between the EAG, DSM Advisory Group, Low-Income Advisory Group, and IRP Public Process to inform these groups about the opportunity to participate in CEIP development
    - Use of collaboration tools (e.g., MURAL digital workspace, online documents, and online spreadsheets) to collect input and feedback
- **Meeting Accessibility.** Timing and schedules of meetings were determined in collaboration with EAG members to provide the greatest opportunity for participation. In addition to inclusive scheduling, PacifiCorp has a publicly facing CEIP webpage that publicizes the following meeting information:
    - Times
    - Duration
    - Frequency
    - Virtual meeting web links and phone numbers (or location for future in person meetings when it is safe to do so)
- **Language Accessibility.** Feedback on language considerations and translation support were requested following the first EAG meeting on May 13, 2021. In response, the company expanded translation services to include meeting materials and notes.
- **Meeting Transparency.** EAG meetings were open to the public for observation, though active participation in discussion and breakout rooms was limited to EAG members. Each meeting had a period for public comment. Following each EAG meeting, meeting notes were posted on the Company's CETA website for public review and comment.
- **Compensation.** PacifiCorp piloted a program to compensate EAG members for their time and participation. Five EAG organizations opted into the compensation pilot in 2021. It is expected that the compensation program will be adopted for the CEIP implementation period of 2022-2025.

EAG Collaboration and Meeting Schedule

As described below and illustrated on Figure 5.1, PacifiCorp engaged the EAG across three phases in 2021:

- Phase 1 – Inclusive Design and EAG Launch
- Phase 2 – Focused Input on the CEIP
- Phase 3 – 2021 Reflection and Future Vision for the EAG

Figure 5.1 – PacifiCorp EAG Collaboration



Phase 1 – Inclusive Design and EAG Launch

Phase 1 focused on creating a common vocabulary and mission among EAG members and PacifiCorp. In Phase 1, the EAG shared the lived experiences that informed their contributions to this work, noted the communities that they serve, and co-created definitions of terms important to this work. The outcomes of this phase served as the foundation for the rest of this work.

In Phase 1, the EAG was also tasked with reviewing the definition of highly impacted communities and identifying "vulnerable populations." PacifiCorp's EAG defined vulnerable populations as "Communities that experience a disproportionate cumulative risk from environmental burdens due to a) Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, linguistic isolation, and access to food, education, health care, capital and credit; and (b) Sensitivity factors, such as low birth weight and higher rates of hospitalization." The EAG brainstormed populations that fit this definition in PacifiCorp's service area and iterated on that list throughout their work together.

The highly impacted communities and vulnerable populations together comprise the named communities that are a focal point of this work, through the development and deployment of CBIs that the EAG began scoping at the end of Phase 1.

Phase 2 – Focused Input for the CEIP

In Phase 2, the EAG began the work of applying the outcomes from Phase 1 to the CEIP. To that end, the EAG helped define the relative weights of the CBIs—this weighting also accounted for the more than 1,000 public responses to a survey about benefit categories and CBIs (more information about the survey is included earlier in this Chapter (Public Engagement - Outreach, Timing, Methods, and Language Considerations) as well as Chapter 2, CBI Development.

EAG members also brainstormed ways to measure the CBIs that they saw as most crucial to their communities. The EAG then provided feedback on a more complete list of metrics. PacifiCorp compiled this list of metrics by examining existing and accessible data resources available to support CBI progress tracking. Further details on this data process are provided in Chapter 2: Summary of Customer Benefit Indicators.

Phase 3 –Reflection & Future Vision for the EAG

In Phase 3, the EAG will be tasked with two distinct duties: (1) provide feedback on the Draft November 1 CEIP, and (2) offer advice on the role of the EAG in 2022 and beyond.

For task 1, the EAG will provide direct comments on the CEIP and participate in a CEIP feedback meeting on November 17, 2021. This meeting will support the EAG in understanding, digesting, and providing comments on the CEIP. It will start with an overview of the CEIP, followed by more details on the chapters that pertain to equity outcomes—the EAG's feedback is crucial on equity outcome topics and planning for an equitable clean energy transformation.

For the second task of Phase 3, EAG members will be asked to reflect on their work together, identify lessons learned, and set priorities for future EAG engagement. Such future engagements may include EAG participation in resource procurement, customer program design, or other aspects of PacifiCorp's service and operations in Washington.

Past and planned EAG meetings are summarized in Table 5.4 below.

Table 5.4 – PacifiCorp EAG Schedule

Date	Topics for Discussion
May 13, 2021	EAG Meeting 1: Background and introductions Discussion topics included initial introductions, providing background on PacifiCorp and CETA, collaboratively defining equity, and mutual sharing of perspectives, backgrounds, and experiences.
June 16, 2021	EAG Meeting 2: Named communities Topics included the review of highly impacted communities, identification of vulnerable populations, and exploring potential benefits, burdens, and opportunities of clean energy for highly impacted communities and vulnerable populations.
July 21, 2021	EAG Meeting 3: Customer benefit indicators: Part I Topics for discussion included an overview of PacifiCorp's CEIP, initial view of existing customer programs, and the role of CBIs for tracking progress on equity; CBI alignment with challenges for named communities with community priorities; and initial draft of CBIs.
August 18, 2021	EAG Meeting 4: Customer benefit indicators: Part II Topics for discussion included input from EAG on CBIs; CBI prioritization and weighting factors; methods and data to support CBI metrics; constraints and challenges of CBI metrics.
September 15, 2021	EAG Meeting 5: CBI metrics, utility planning, and utility actions Topics for discussion included continued input on CBI metrics; an initial list of PacifiCorp actions, and an overview of PacifiCorp's upcoming draft CEIP.
October 20, 2021	EAG Meeting 6: Preparing for draft CEIP comments Topics included highlights on the impact of the EAG on the work thus far; review of CBIs and metrics; more detail on utility actions; process for providing feedback on the CEIP.
November 1, 2021	Draft CEIP published
November 17, 2021	EAG Meeting 7: Draft CEIP review and comments Topics for discussion will include an overview of the November 1 Draft CEIP, input from the EAG on PacifiCorp utility actions and equity included in the November 1 Draft CEIP.
January 1, 2022	PacifiCorp CEIP filed
January 2022	EAG Meeting 8: EAG next steps Topics for discussion will include reflections on EAG process in 2021, and next steps for EAG 2022.

Clarifying How PacifiCorp Incorporated Feedback from the EAG

The EAG's input was critical to the development of the CEIP. In particular, the EAG's input directly fed into the development of named communities, CBIs, utility actions, and metrics.

1. **Named Communities:** Members of the EAG helped construct the definitions of equity that served as guiderails for this work. With these definitions in mind, the EAG provided feedback on the highly impacted communities as determined by CETA and developed the list of vulnerable populations that are a focus of this work. Further, they helped scope the precise challenges and barriers to participation that these populations face that contribute to the Company's CBIs and actions.

2. **CBIs:** Using these named communities, the EAG defined the benefits that they would like these communities to realize through the clean energy transition in the CBI outcomes. The EAG also provided crucial insight on the lived experiences of community members to understand the relative importance and prioritization of CBIs, which resulted in the CBI weighting.
3. **Utility Actions:** The EAG's ideas led to a number of equity-focused Utility Actions, which are outlined in Chapter 2 in the section entitled Communication, Outreach and Engagement. The EAG prioritized the accessibility of utility programs with a focus on helping communities to understand what programs are available and how they can take advantage of them. As part of these considerations, the EAG emphasized the need for PacifiCorp to communicate in ways that meet the language and cultural needs of its communities. EAG discussions led to new program design considerations, including funding for residential energy efficiency repairs and an electric vehicle grants program.
4. **Metrics:** PacifiCorp's EAG demonstrated a deep understanding of program tracking and appropriate metrics. This expertise helped in the development of leading metrics included in the CEIP. Not only will these metrics support PacifiCorp's progress along key indicators, but they will help to build equity into the success of important programs.

Together, this input has formed the basis of PacifiCorp's long-term commitment to equity and an equitable transition to clean energy in the state of Washington.

Definitions

- **Customer benefit indicator (CBI)**: an attribute, either quantitative or qualitative, of resources or related distribution investments associated with customer benefits.
- **CBI metric**: the variety of methods in which PacifiCorp understands change in data/criteria used to track CBI progress.
- **Clean Energy Action Plan (CEAP):** The Clean Energy Action Plan (CEAP) is a ten-year planning document that is derived from the IRP and included as an appendix to the IRP. The CEAP provides a Washington-specific view of how PacifiCorp is planning for a clean and equitable energy future that complies with CETA.
- **Clean Energy Implementation Plan (CEIP):** This document, the CEIP, is a plan that lists the specific actions PacifiCorp will take over the next four years to move toward the 2030 and 2045 clean energy directives.
- **Conservation Potential Assessment (CPA):** The Conservation Potential Assessment (CPA) for 2021-2040, conducted by Applied Energy Group (AEG) on behalf of PacifiCorp, primarily seeks to develop reliable estimates of the magnitude, timing, and costs of DSM resources likely available to PacifiCorp over the IRP's 20-year planning horizon.
- **Demand-side Management (DSM):** PacifiCorp classifies DSM resources into four categories, differentiated by two primary characteristics: reliability and customer choice. These resource classifications can be defined as: demand response (e.g., a firm, capacity focused resource such as direct load control), energy efficiency (e.g., a firm energy intensity resource such as conservation), demand side rates (DSR) (e.g., a non-firm, capacity focused resource such as time of use rates), and behavioral-based response (e.g., customer energy management actions through education and information).
- **Highly impacted community (HIC)**: a community designated with a score of 9 or 10 based on the DOH cumulative impact analyses or a census tract that is fully or partially on sovereign tribal territory. Scores are assigned based on several indicators that express: 1) environmental exposures, 2) environmental effects, 3) sensitive populations, and 4) socioeconomic factors. This information is available on the Washington Department of Health's Information by Location Environmental Health Disparities (EHD) map.
- **Integrated Resource Plan (IRP):** The IRP is a comprehensive decision support tool and roadmap for meeting the company's objective of providing reliable and least-cost electric service to its customers. The plan is developed through open, transparent and extensive public involvement from state utility commission staff, state agencies, customer and industry advocacy groups, project developers, and other stakeholders.
- **Named communities:** a term for both highly impacted communities and vulnerable populations.[38]
- **Vulnerable population:** a community that experiences a disproportionate cumulative risk from environmental burdens due to: (a) Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, linguistic isolation, and access to food, education, technology, broadband, health care, capital and credit; and (b) Sensitivity factors, such as mental health, low birth weight, and higher rates of hospitalization.

[38] PacifiCorp recognizes these terms do not reflect the strength, individuality, and cultural values of the communities referenced. These are the terms being used to align with CETA legislation, however, PacifiCorp modified CETA's vulnerable population definition to include the insights and perspectives of the EAG.