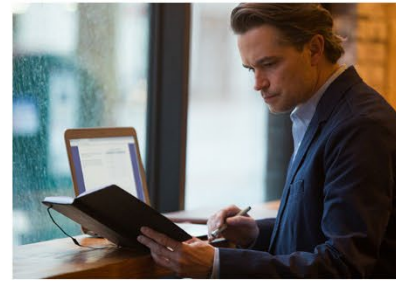


Clean Energy Implementation Plan & Demand Side Management Workshop

August 31, 2023



Clean Energy Implementation Plan Engagement Series & Demand Side Management Workshop

August 31, 2023, 12:30-4:00 p.m., PT

THIS MEETING WILL BE RECORDED

For a Better Meeting Experience



Spanish or ASL?

- Navigate to "Interpretation" at the bottom of Zoom
- Select "ASL" under Watch or "Spanish" under Audio
- If the interpretation icon is missing, try the "More" icon



Use Gallery View (icon at top right) when in group discussion



For technical support, chat "Tag G-D / E Source" as recipient, and send your message



- Questions are welcome at any time
- Please mute until speaking
- Speak by clicking the "Raise Hand" in the tool bar

Agenda

Clean Energy Implementation Plan Engagement Series

12:30 p.m.	Purpose & Objectives
12:35 p.m.	Clean Energy Implementation Plan Overview
1:00 p.m.	Integrated Resources Planning and the CEIP
1:25 p.m.	Clean Energy Implementation Plan – Interim/Specific Target
1:30 p.m.	Customer Benefit Indicators
1:50 p.m.	Community Engagements

Demand-Side Management Workshop

2:15 p.m.	Proposed 2024/25 Savings Targets
3:15 p.m.	Proposed Program
3:35 p.m.	Preview of Utility Actions
3:50 p.m.	Public Comment
3:55 p.m.	Next Steps

Clean Energy Implementation Plan Engagement Series

August 31, 2023, 12:30-2:00 p.m., PT

Purpose:

Provide a discussion on the Clean Energy Implementation Plan (CEIP) with expanded learning opportunities of the progress on the plan while gathering public input into the Biennial Update for the CEIP.

Today's Objectives:

1. Clean Energy Implementation Plan (CEIP) Overview & Update
2. Deepen understanding of:
 - How Integrated Resource Planning is used to develop the Clean Energy Implementation Plan
 - Interim and Specific Targets included in the CEIP
 - Customer Benefit Indicators (CBIs)
 - Engagement and Public Participation
3. Discussions on Biennial Update

Washington Clean Energy Implementation Plan Engagement

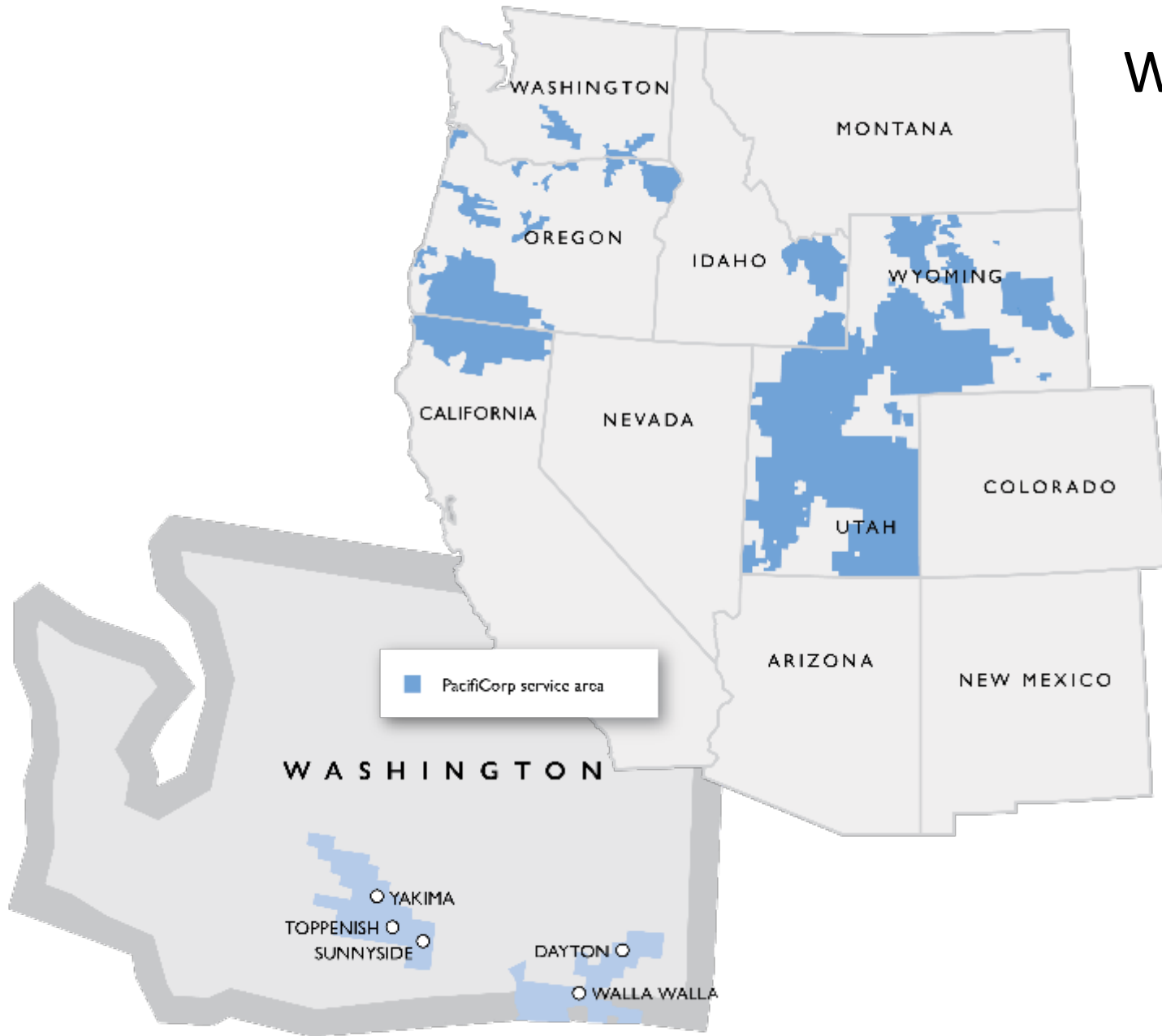
Where Do We Provide Service?

Approximately 1.9 million customers across 6 states

- **Rocky Mountain Power** serves Utah, Idaho, and Wyoming customers.
- **Pacific Power** serves Oregon, Washington and California customers.
- **Pacific Power in Washington** serves approximately 137,000 customers throughout Benton, Columbia, Garfield, Kittitas, Yakima, and Walla Walla counties.

Washington Service Area Demographics

- 43% Hispanic or Latino vs 13% Statewide
- 33% Speak language other than English at home vs 19% Statewide
- 12% impoverished vs 7% Statewide
- 15% of employed population in the agricultural, forestry, fishing, hunting and mining sector vs 3% Statewide



How Do We Serve You?



Our **geographic diversity** means that we can provide access to **low-cost renewable energy** where it is most productive throughout the Western United States – decarbonizing our grid and prioritizing affordability.



Wind facilities located in the highest-producing areas such as Eastern Wyoming, Eastern Oregon, Eastern Washington, and Montana.



Solar and energy storage facilities in the highest producing areas such as Utah and Oregon.



With over 16,900 line-miles of **high-voltage transmission** spanning 10 states and a range of climate zones.



In Washington, Pacific Power has **programs** that help offset the cost of electricity for customers and that provide weatherization and energy efficiency services.



What Is CETA?

2019 Law: The Clean Energy Transformation Act (CETA)

- Washington customers will be served by 100% renewable and non-emitting energy by 2045.
- As the transition to a cleaner grid occurs, utilities will prioritize an equitable distribution of benefits.
- Each utility made a Clean Energy Action Plan (CEAP) and a Clean Energy Implementation Plan (CEIP) to outline these plans.

CETA Targets

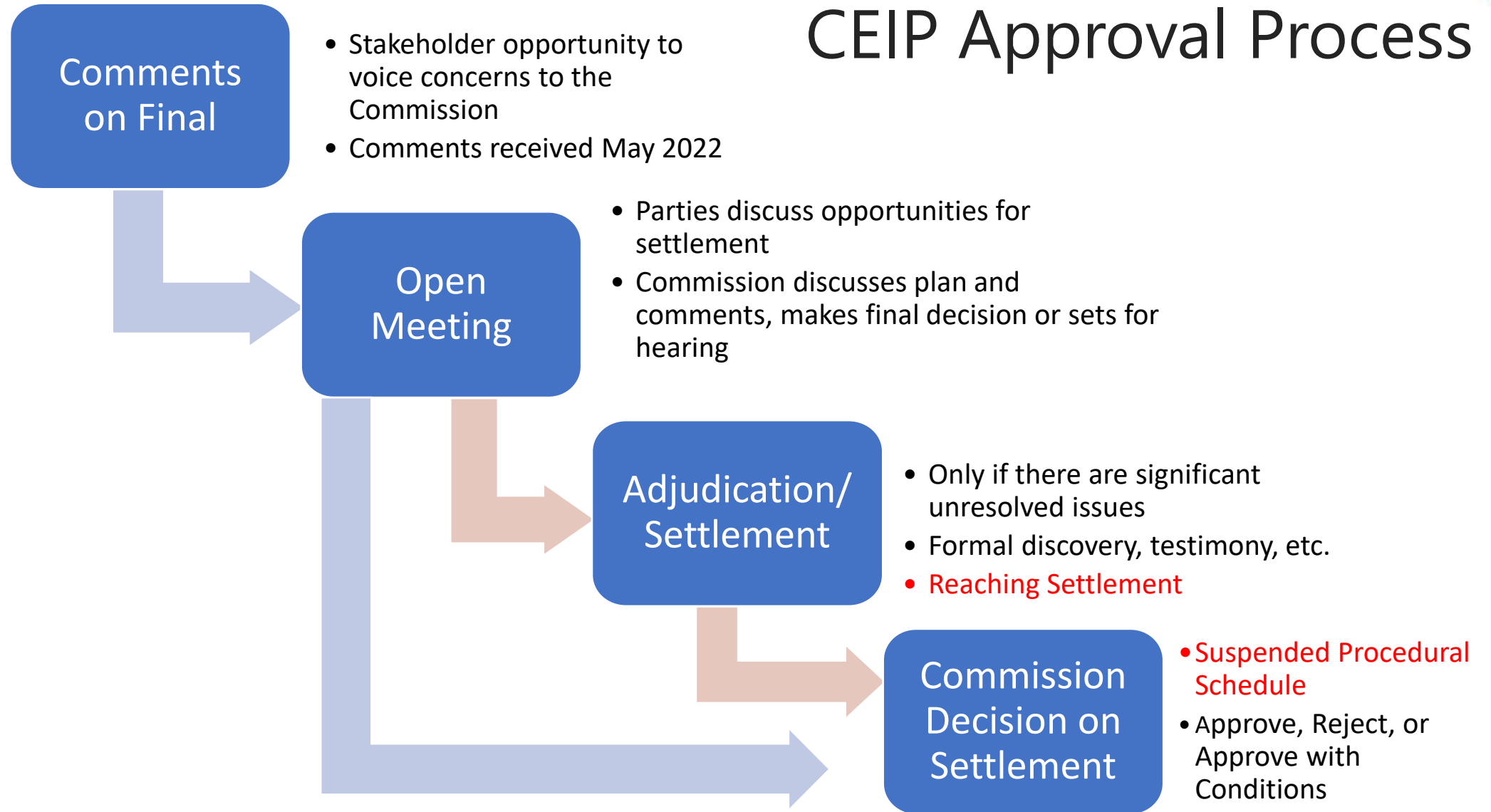
By the end of 2025, each utility must remove coal-fired resources from its allocation of electricity to Washington retail electric customers

Beginning in 2030, each utility must ensure all retail sales of electricity to Washington electric customers are greenhouse gas neutral

Beginning in 2045, each utility must ensure that non-emitting electric generation and electricity from renewable resources supply 100% of all retail sales of electricity to Washington electric customers.



CEIP Approval Process



WA Utility and Transportation Commission Public Comment Hearings

Clean Energy Implementation Plan

Thursday, September 28, 2023, at 6:00 p.m.

<https://utc-wa.gov.zoom.us/j/84731079057?pwd=OEdVZDVjdjROWkk0NEIsUTlxOHZMQT09>

Dial by your location

+1-253-215-8782

Meeting ID: 847 3107 9057

Passcode: 301516.

General Rate Case

Monday, November 20, 2023, at 6:00 p.m.

<https://utc-wa.gov.zoom.us/j/84788961145?pwd=ejRBNUoyYi9Qc2h1czVwZUNNTkZvUT09>

Dial by your location

+1 253 215 8782 US (Tacoma)

Meeting ID: 847 8896 1145

Passcode: 492613

Biennial Update

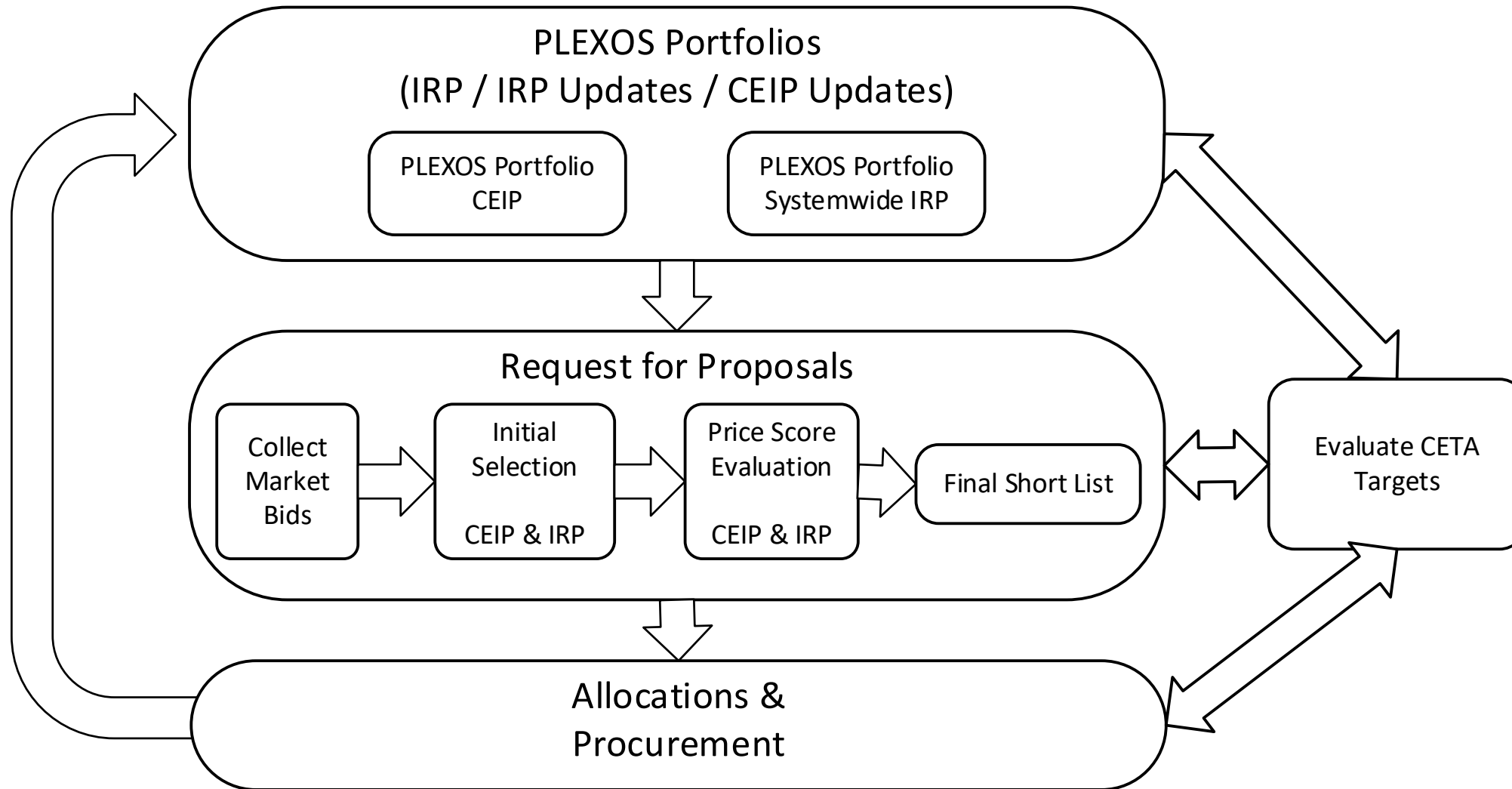
- PacifiCorp will file its biennial update on the CEIP in November
- The original CEIP was filed in December 2021, based on the 2021 IRP
- PacifiCorp's update (consistent with the March 2023 CEIP refiling) adjusts targets based on the 2023 IRP, filed May 31, 2023, and several changed factors
 - Delay in reaching agreement on a new allocation methodology
 - CEIP assumed we would have a new methodology by 2024
 - The rate impact of continuing high energy market prices
 - PacifiCorp forecasts customer savings of \$72 million from using the Jim Bridger and Colstrip generation until the CETA coal deadline
 - Resource repricing during procurement
 - 2020 AS RFP COVID/Supply Chain issues resulted in bid repricing and a limited number of new resources for 2024/2025

Integrated Resource Planning and the CEIP

Integrated Resource Planning

- The 2023 Integrated Resource Plan (IRP) was filed in Washington as a Two-Year Progress Report to the 2021 IRP
 - 2023 IRP Appendix O addresses Washington-specific elements and highlights updates relevant to the Biennial CEIP update
- The 2023 Integrated Resource Plan (IRP) was developed using the Plexos Long-Term (LT) planning model, Medium-Term (MT) schedule and Short-Term (ST) Model to optimally develop a range of least-cost least-risk portfolios under various policy and cost environments. The policy and cost scenarios include:
 - low, medium, and high natural gas prices
 - zero, medium and high carbon dioxide prices
 - an additional scenario including the **social cost of greenhouse gasses (SC)**
- The CEIP is informed by the IRP portfolio developed under the SCGHG price policy and is developed to meet the requirements of RCW 19.405.040 and 19.405.050
 - P-SC was the portfolio optimized under the social cost of greenhouse gases
 - W-10 CETA was the resulting CETA-compliant portfolio that layered additional incremental renewable resources for Washington customers on top of P-SC to meet the interim compliance targets in 2030 through 2045 -- the portfolio is optimized and dispatched under the social cost of greenhouse gases price policy

Integrated Resource Planning updates and the CEIP



Development of a CETA-Compliant Portfolio

1

Develop a systemwide portfolio optimized under the social cost of greenhouse gas price policy.

2

Washington-allocated generation outcomes are analyzed relative to CETA clean energy targets (2030 and 2045) and goals (no coal after 2024).

3

Final CETA-compliant portfolio is developed and identified, called W-10 CETA in the 2023 IRP and becomes the CEIP Portfolio.

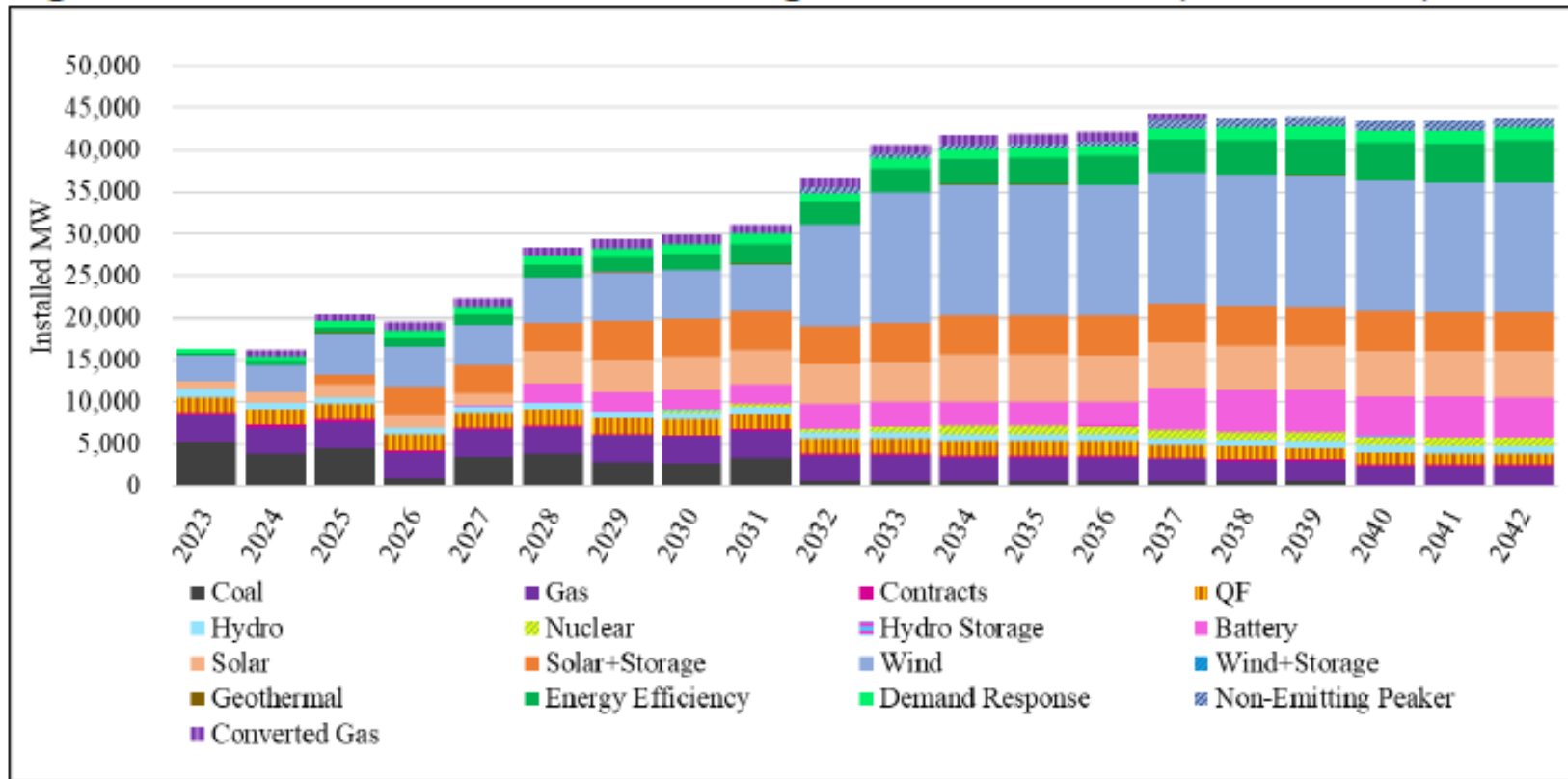
P-SC

- P-SC used as the base
- Identify compliance shortfalls in 2030 and 2045
- Add incremental situs renewable resources for WA

W-10 CETA

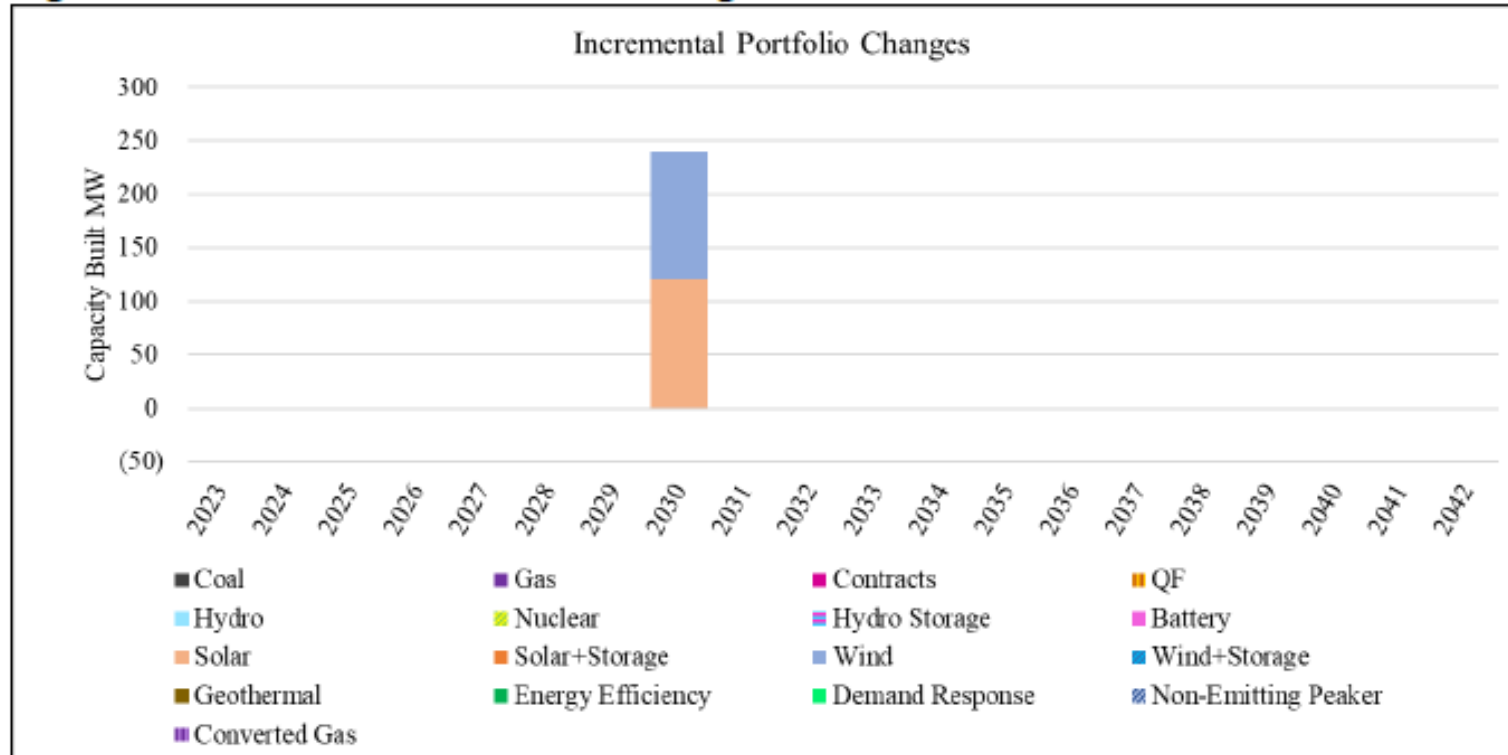
Integrated Resource Planning and the CEIP

All Portfolio Resources: W-10 CETA (systemwide)



Achieving CETA-compliance

Incremental resource additions for Washington customers to meet CETA compliance targets (based on P-SC)



Updated IRP modeling and Interim Targets

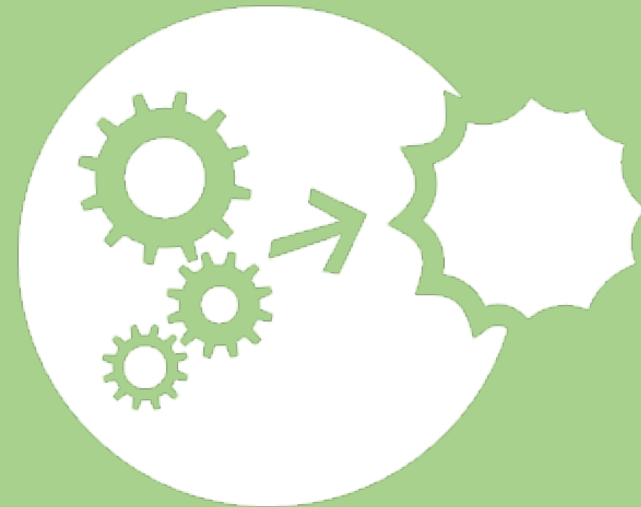


Updated IRP Model Inputs & Assumptions:

- Load forecasts
- Price curves
- 2020 All-Source Request for Proposals (AS RFP)
- Other contracts
- Post-modeling state allocation assumptions

Updated capacity expansion and dispatch outcomes:

- CEIP targets are energy based – any change to the optimal hourly dispatch order changes the annual forecast of renewable and non-emitting energy available to serve Washington retail sales
- Decrease in forecasted targets for 2024-25, resulting from higher loads, less renewable energy contracts, and state resource allocations



Updated IRP modeling and the Incremental Cost

- The Washington IRP Two-Year Progress Report filed in March 2023 included an updated estimate for the incremental cost of CETA-compliance for 2023-2025
- There are **no substantial changes** in modeled incremental costs for the CEIP planning window and there were no estimated changes in non-modeled incremental costs, which will be reviewed again in the Biennial Update
 - There are no incremental resource additions necessary for CETA compliance in the 2023-2025 planning period, and thus no associated modeled incremental costs as shown in the 2021 CEIP Refile
 - Any forecasted differences between the portfolio costs are negligible and due to random model noise
 - Non-modeled incremental costs include things like administrative costs

Updated IRP modeling and the Incremental Cost

- From the 2023 IRP the estimated incremental cost of CETA-compliance over the four-year period is about \$2.13 million on average per year.
 - Non-modeled costs are still being evaluated for the Biennial update
 - Modeled costs have changed by a negligible amount due to model noise only
 - There are no incremental actions due to compliance shortfalls during this window

\$-Millions	Compliance Year			
	2022	2023	2024	2025
Revenue Requirement				
Fixed Costs ¹	-	-	(0.00)	0.00
Variable Costs				
Fuel Costs	-	(0.03)	0.03	(0.68)
Variable O&M	-	0.00	0.01	0.04
Energy Efficiency	-	-	0.00	-
Net Market Purchase	-	(0.04)	(0.12)	(3.11)
Emissions	-	0.54	0.10	2.16
Deficiency	-	-	(0.07)	(0.06)
Total Variable Costs	-	0.47	(0.04)	(1.64)
Administrative & General				
DSM Program Costs	1.24	1.26	1.29	1.32
Outreach Costs	0.40	0.37	0.38	0.39
Materials	0.01	0.01	0.01	0.01
Staffing	0.56	0.57	0.59	0.60
Data Support	0.17	0.17	0.18	0.18
Total Revenue Requirement²	2.38	2.86	2.40	0.86
Average Revenue Requirement	2.13			

Interim and Specific Targets

Per WAC 480-100-640, a Clean Energy Implementation Plan should include **interim** targets and **specific** targets.

Interim Targets

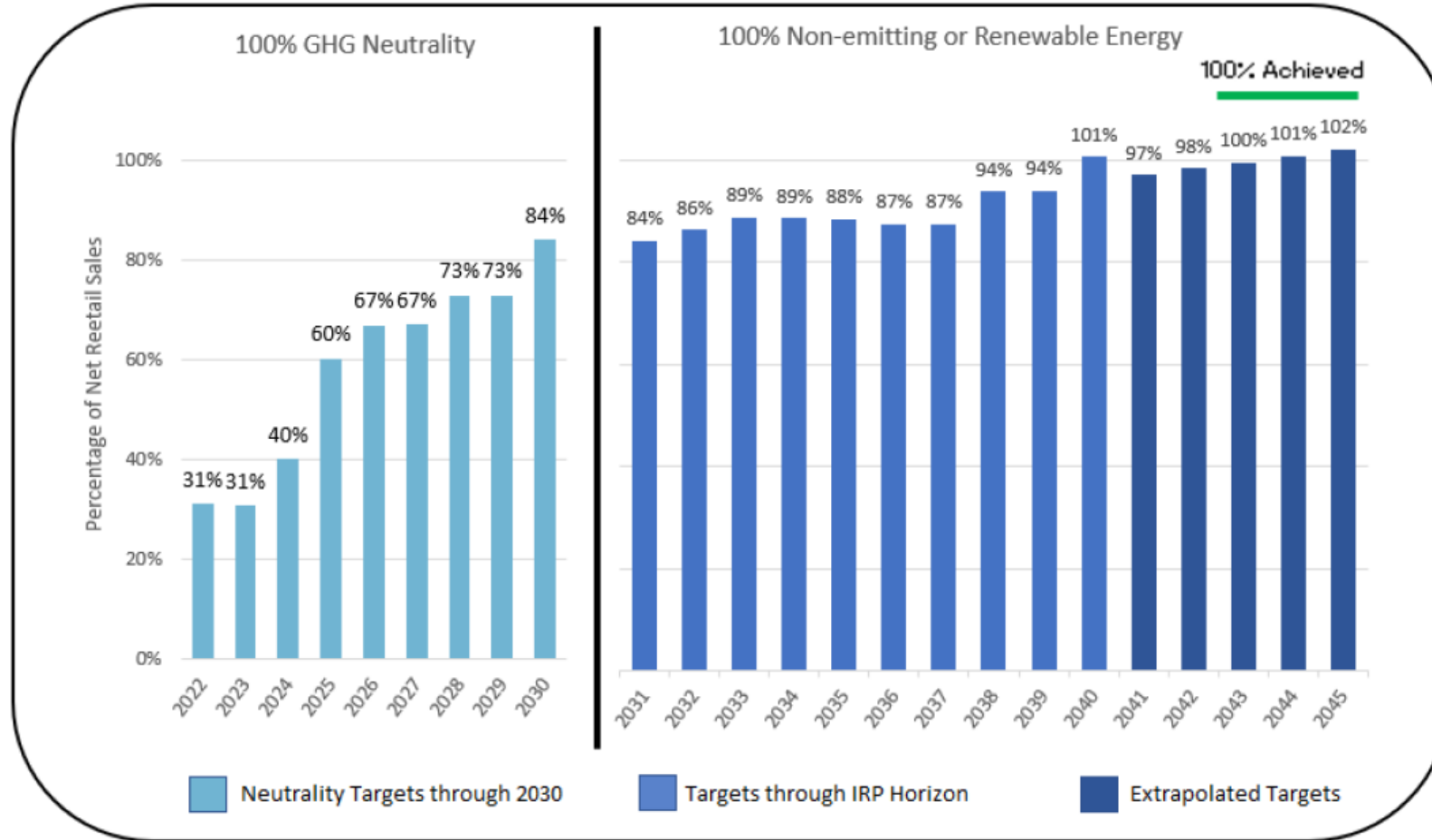
A series of interim targets that demonstrate how the utility will make reasonable progress towards meeting the clean energy standards. Interim targets are expressed as a percent of forecasted retail sales of electricity supplied by non-emitting and renewable resources prior to 2030, and from 2030 to 2045.

Specific Targets

Specific targets are proposed for energy efficiency, demand response, and renewable energy for the CEIP planning period.

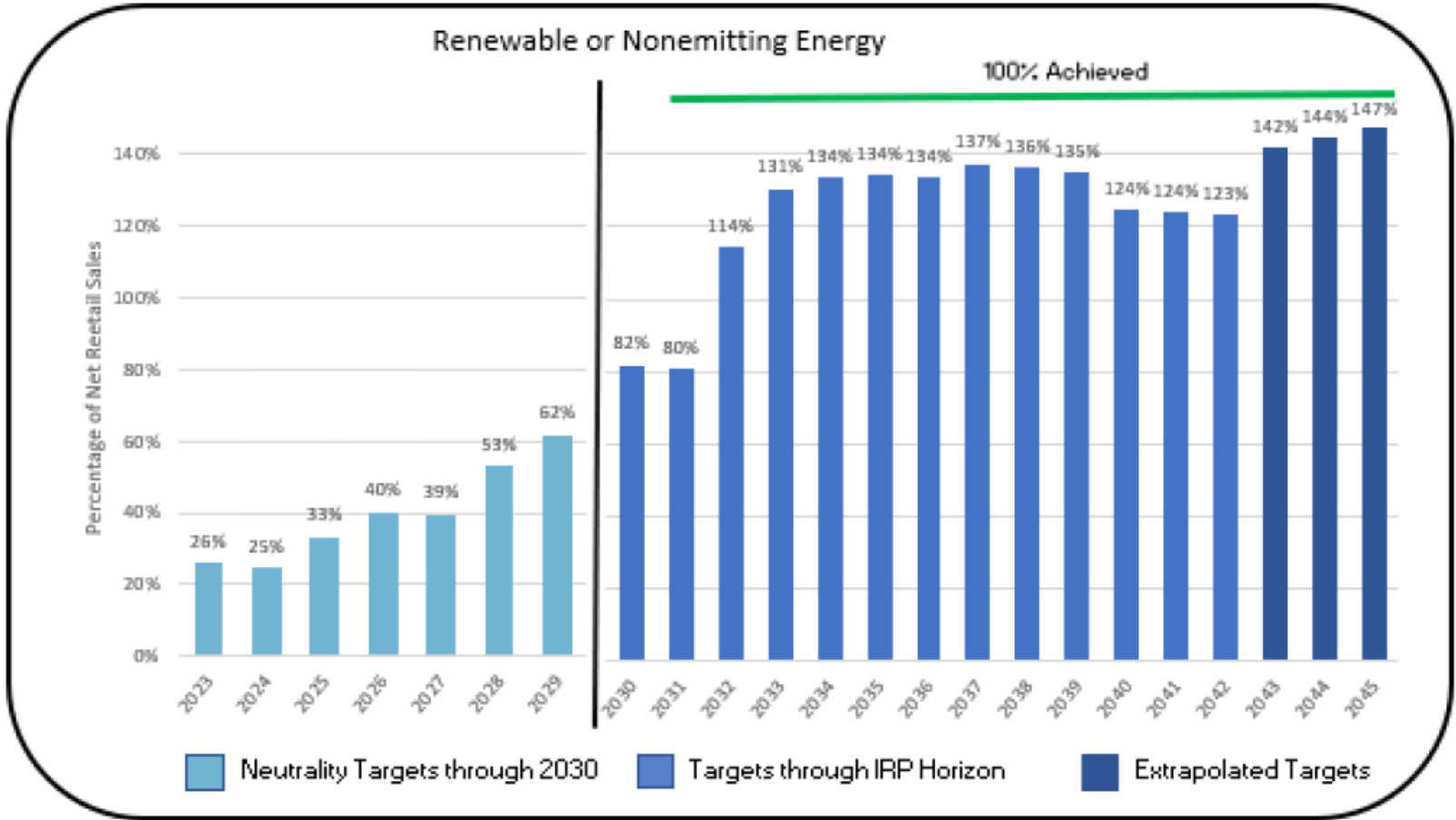
Washington Clean Energy Implementation Plan – Interim Targets

2021 CEIP Interim Targets



2021 CEIP Interim Targets from March, 2023 Refile

2023 Biennial CEIP Update Interim Targets



2023 Biennial CEIP Updated Interim Targets (from 2023 IRP Filing)

2023 Biennial CEIP Updated *Interim* Targets

Interim Compliance Targets (MWh)

	2022 ¹	2023	2024	2025	Total
Retail Electric Sales	4,051,128	4,128,751	4,141,107	4,106,386	16,427,372
Projected Renewable and Non-emitting Energy	1,262,111	1,081,277	1,028,236	1,367,667	4,739,291
Net Retail Sales	2,789,017	3,047,473	3,112,871	2,738,719	11,688,080
Target Percentage	31%	26%	25%	33%	
Interim Compliance Target	1,262,111	1,081,277	1,028,236	1,367,667	4,739,291

¹ Originally estimated target for 2022 based on Refiled 2021 CEIP, March 13, 2023

Washington Clean Energy Implementation Plan – Specific Targets

2023 Biennial CEIP Update Specific Targets

Specific Target: Renewable Energy Target (MWh)

	2022 ₁	2023	2024	2025	Total
Retail Electric Sales	4,051,128	4,128,751	4,141,107	4,106,386	16,427,372
Projected Renewable Energy	1,262,111	1,081,277	1,028,236	1,367,667	4,739,291
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¹ Originally estimated target for 2022 based on Refiled 2021 CEIP, March 13, 2023

CEIP Specific Targets – Demand Response

- Demand Response (DR) is new in the state, many unknowns remain:
 - Early phases of roll-out for programs, assessing uptake and barriers.
 - Just kicking off marketing and outreach in 2023, enrolling first customers.
 - Still learning what adoption rates and ramp-up will look like and how customers will interact with programs.
- Evaluating if or how to update the DR targets in the CEIP Biennial Update, based on forthcoming projections from field staff.
- Focusing on continued expansion and maintaining participation throughout the biennial period.
- Exploring new demand response programs such as electric vehicle (EV) managed charging and customer battery dispatch.

2021 CEIP DR Target:

37.4 MW by end of 2025

Programs we have launched and enrollment so far (as of Aug 2023):

Irrigation Load Control: 0.4 MW

Commercial & Industrial DR: 13 MW

Residential DR: 0 MW

Total: 13.4 MW

CEIP Specific Targets – Energy Efficiency

- Energy efficiency targets are based on Energy Independence Act (EIA) targets used in the biennial conservation plan conducted every two years.
- Savings were originally characterized at the generator, but consistent with EE targets in EIA and DR targets in CEIP they should be at site.
- Update 2024-2025 EE target based on upcoming biennial conservation plan.

Prior CEIP Target

Category MWh at Generation	2022	2023	2024	2025
Washington - first year Energy Efficiency from the 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	40,579
Adjusted Energy Efficiency Forecast - Pro-rata	50,579	50,579	50,579	50,579
Co-Generation	-	-	-	-
Decoupling commitment - five percent	2,529	2,529	2,529	2,529
Annual Target	53,108	53,108	53,108	53,108
2022-2025 target				212,431

Updated CEIP Target

Category MWh at Site	2022	2023	2024	2025
Washington - first year Energy Efficiency from the IRP Preferred Portfolio	31,871	34,651	37,517	43,803
Behavioral Programs (HER)	4,100	(169)	4,212	3,742
RTF adjustments (total)	313	378	(2,223)	(2,331)
Adjusted Energy Efficiency Forecast - annual	36,284	34,860	39,506	45,214
Adjusted Energy Efficiency Forecast - Pro-rata	47,089	47,089	40,613	40,613
Co-Generation	-	-	12	12
Decoupling commitment - five percent	1,814	1,743	1,976	2,261
Annual Target	48,903	48,832	41,493	47,487
2022-2025 target				186,714

Clean Energy Implementation Plan Annual Progress Report: Customer Benefit Indicators

PacifiCorp Customer Benefit Indicators

CBI		Metric(s)
1	Increase culturally and linguistically responsive outreach and program communication	<ul style="list-style-type: none"> • Outreach in non-English languages • Percentage of responses to surveys in Spanish
2	Increase community-focused efforts and investments	<ul style="list-style-type: none"> • 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 • Number of public charging stations in named communities
3	Increase participation in company energy and efficiency programs and billing assistance programs	<ul style="list-style-type: none"> • 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
4	Improve efficiency of housing stock and small businesses, including low-income housing	<ul style="list-style-type: none"> • Number of households and small businesses that participate in company energy/efficiency programs • Energy efficiency expenditures
5	Increase renewable energy resources and emissions	<ul style="list-style-type: none"> • 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
6	Decrease households experiencing high energy burden	<ul style="list-style-type: none"> • 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
7	Improve indoor air quality	<ul style="list-style-type: none"> • Number of households using wood as primary or secondary heating
8	Reduce frequency and duration of energy outages	<ul style="list-style-type: none"> • System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), and Customer Average Interruption Duration Index (CAIDI) at area level including and excluding major events
9	Reduce residential customer disconnections	<ul style="list-style-type: none"> • Number of residential customer disconnections including disconnections within named communities

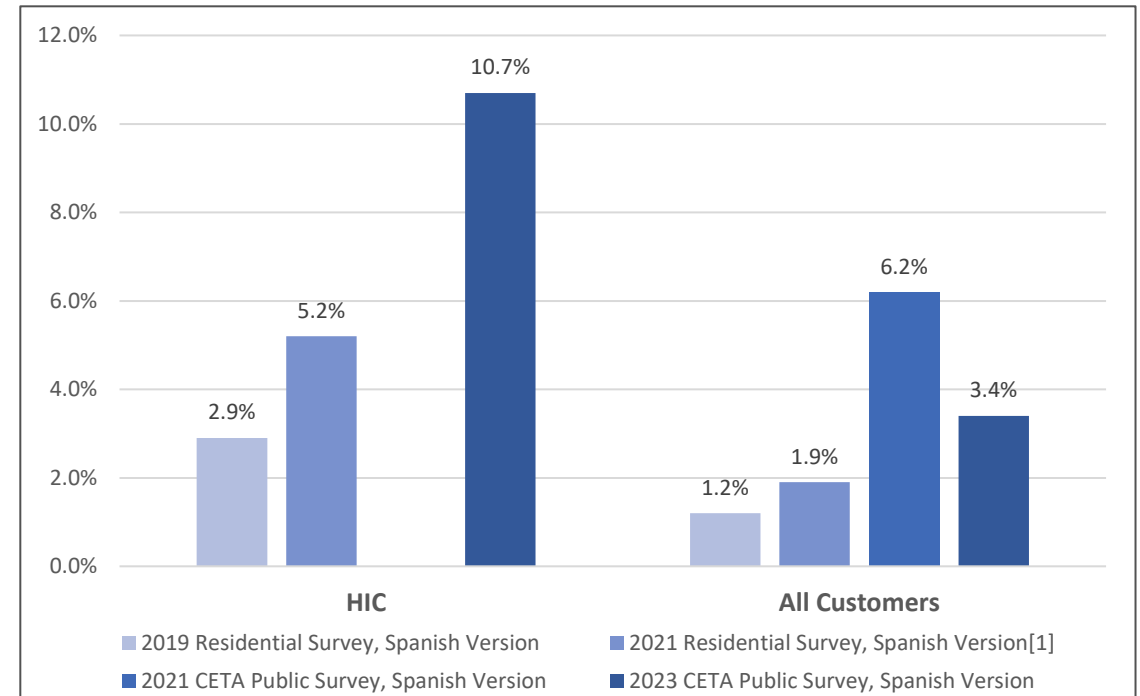
Pacific Power is committed to proactively increasing access and better communicating with the **30.7%** of Spanish speaking households within its' Washington service area.

Expansion of Communication Channels for Spanish-Language Outreach

Program or Topic	2020	2022
Billing Options / Customer Service	4	1
Energy Assistance (LIBA)	5	10
Wattsmart Residential	3	9
Wattsmart Business		9
Energy Efficiency Education	1	1
Wildfire Safety/Resilience	1	3
Safety/Preparedness	1	3
Planning for the Future (Brand Assurance)	2	4
Energy Resource Center	0	1
Regulatory/CEIP	0	2
Total	17	43

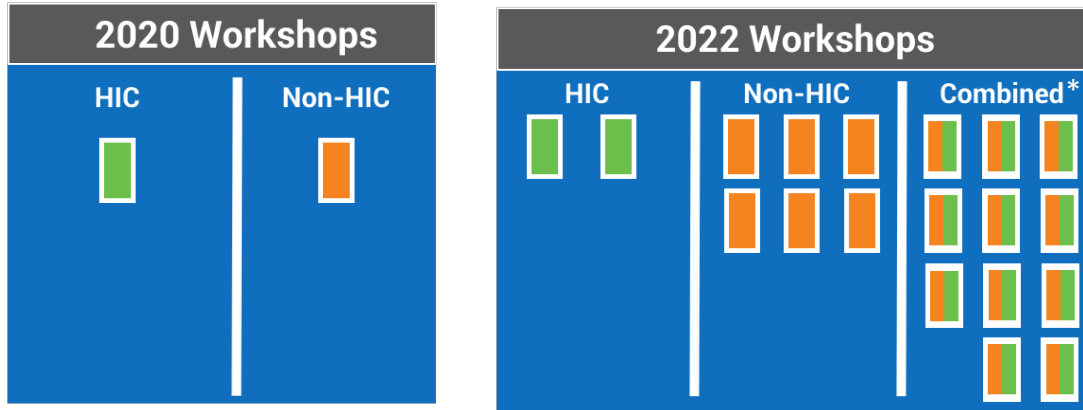
Culturally & Linguistically Responsive Outreach

Spanish-Language Survey Responses



Pacific Power's Community-Focused Efforts & Investments

Community Workshops



2020 Event Types:

- Vendor training(s)

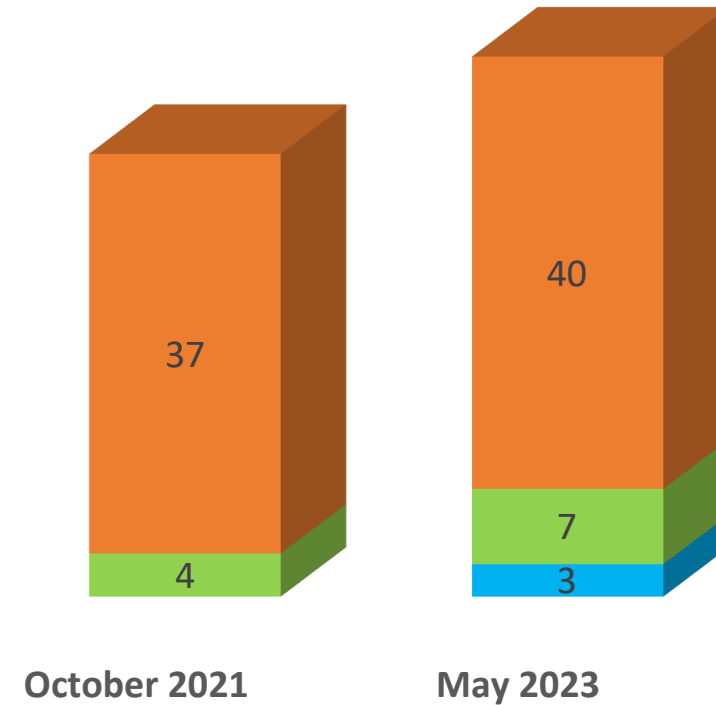
2022 Event Types:

- Vendor training(s)
- Clean Building Accelerator training (4-part series), info sessions, and community roundtable
- Presentation of residential rebates at fruit packing plants

**Workshops held online where participants reported both HIC and non-HIC locations*

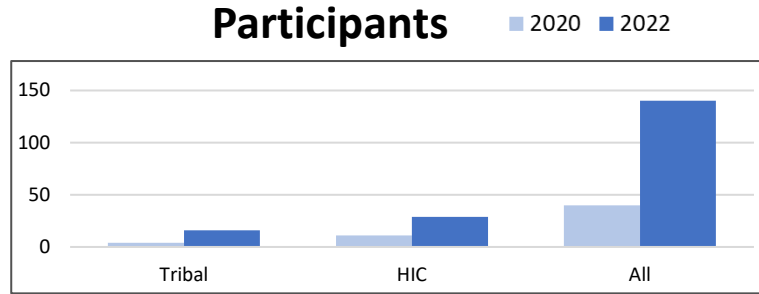
Public EV Chargers Installed

■ Tribal ■ Non-Tribal HIC ■ Non-HIC

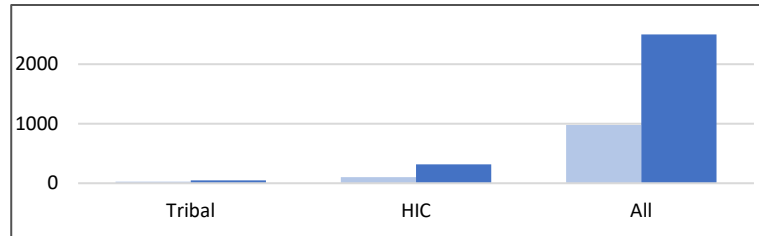


Energy & Efficiency Program Participation/ Efficiency of Buildings

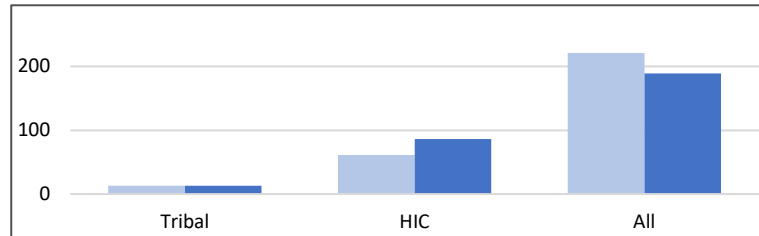
Low Income Weatherization



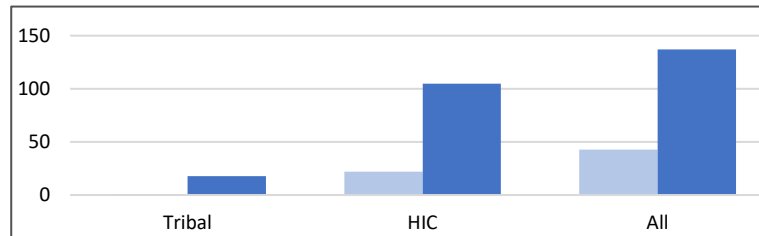
Home Energy Savings



Wattsmart Business

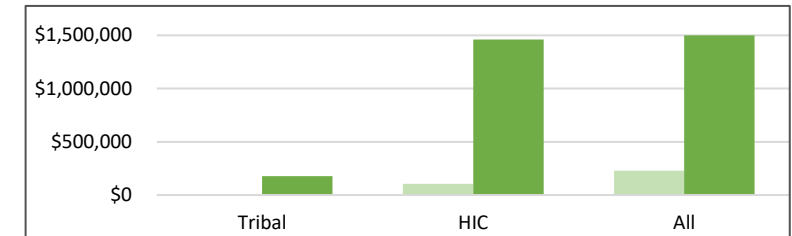
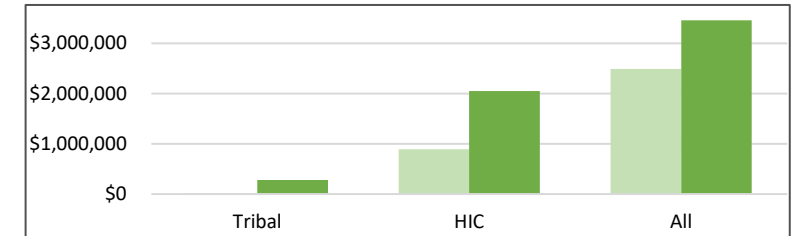
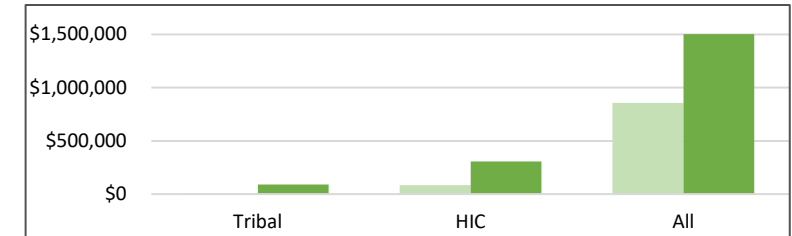
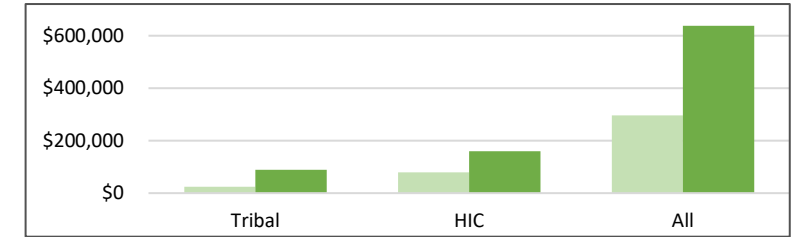


Wattsmart Small Business



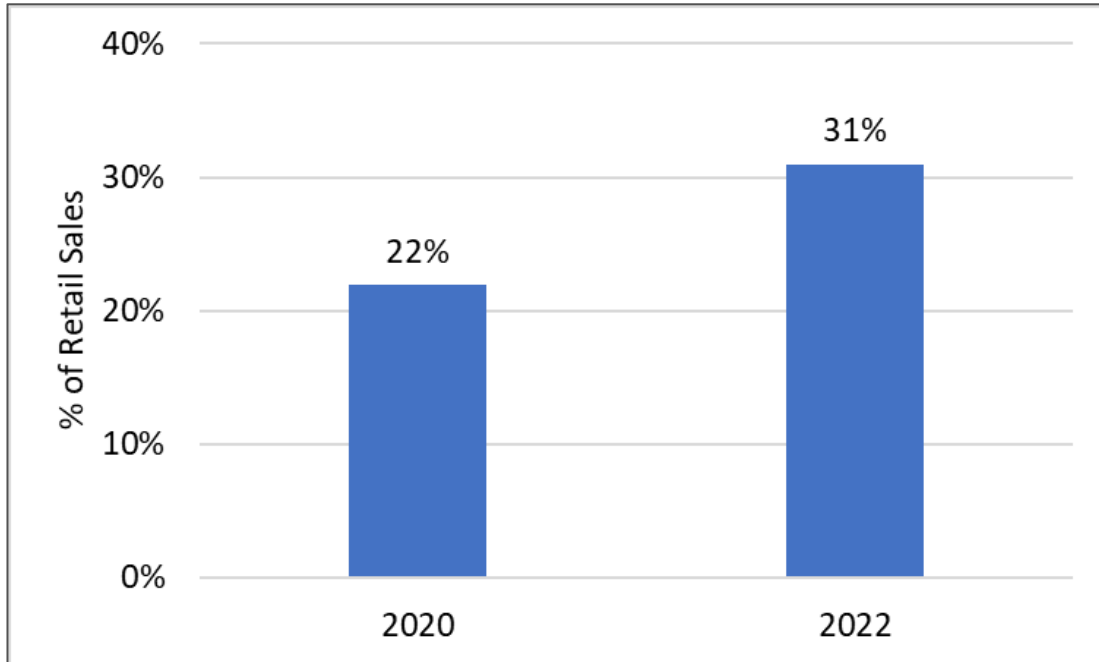
Expenditures

2020 2022

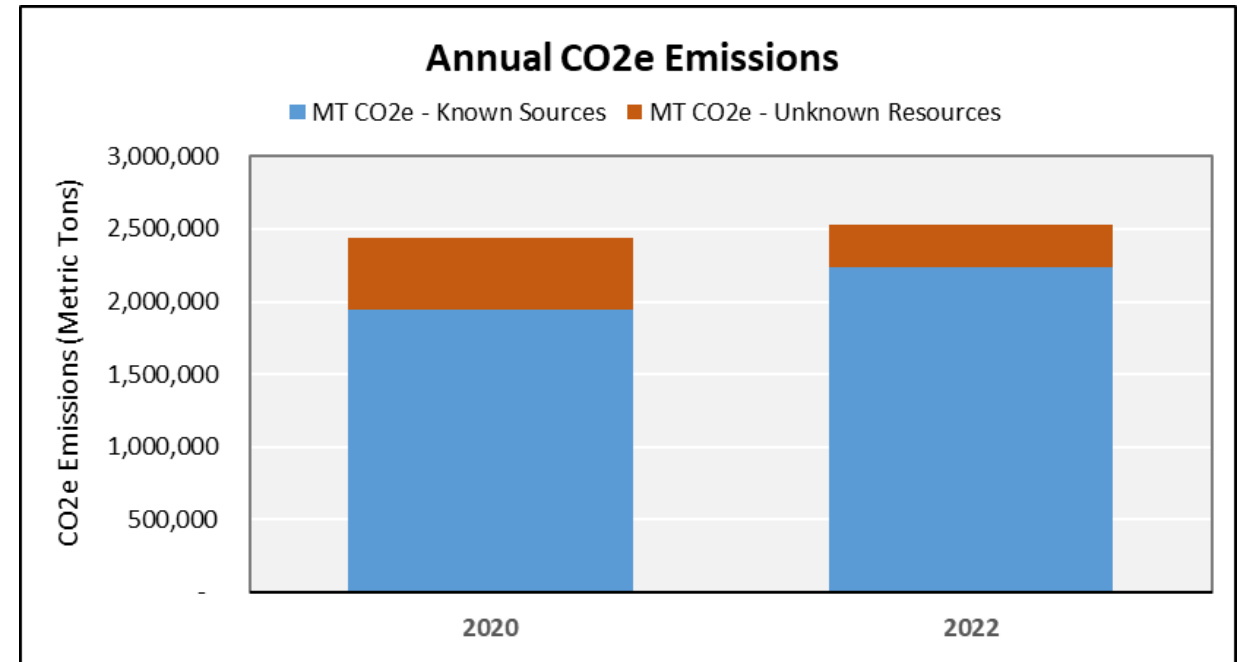


Renewable Energy Resources & Emissions

Retail Sales Served by Renewable and Non-Emitting Energy Resources

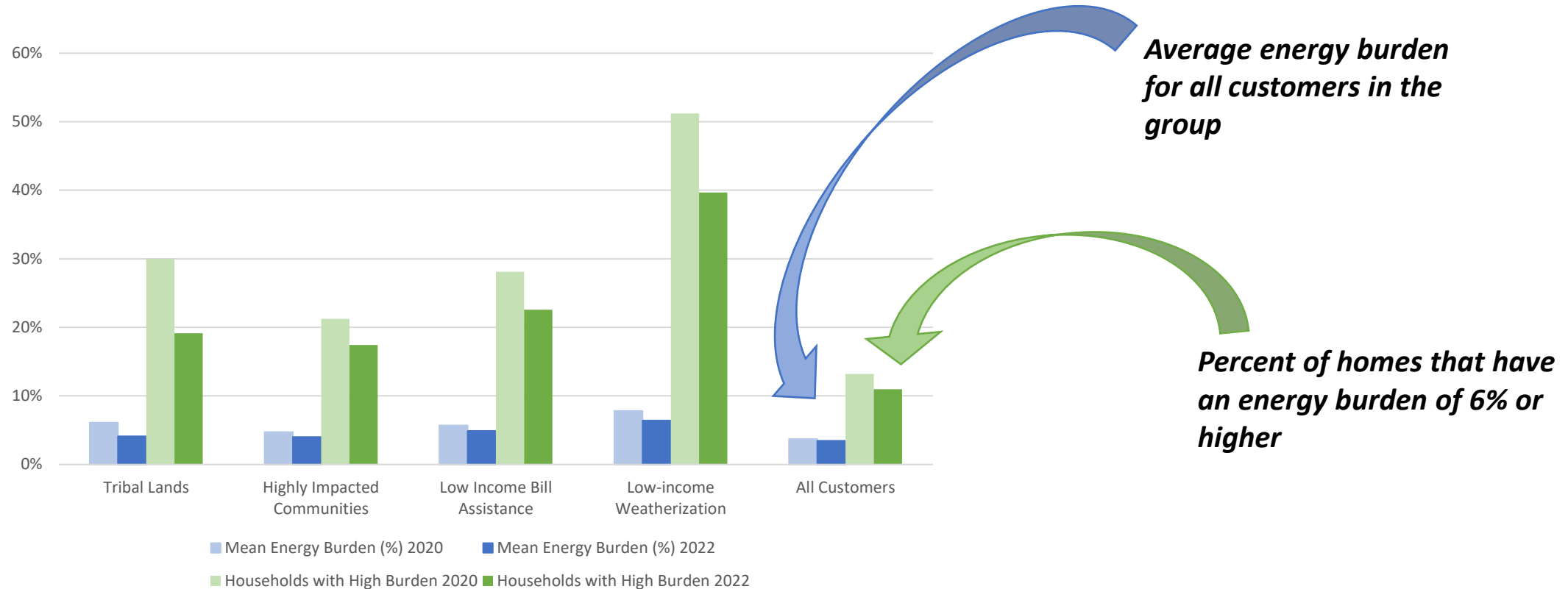


Greenhouse Gas Emission from Washington Allocated Resources



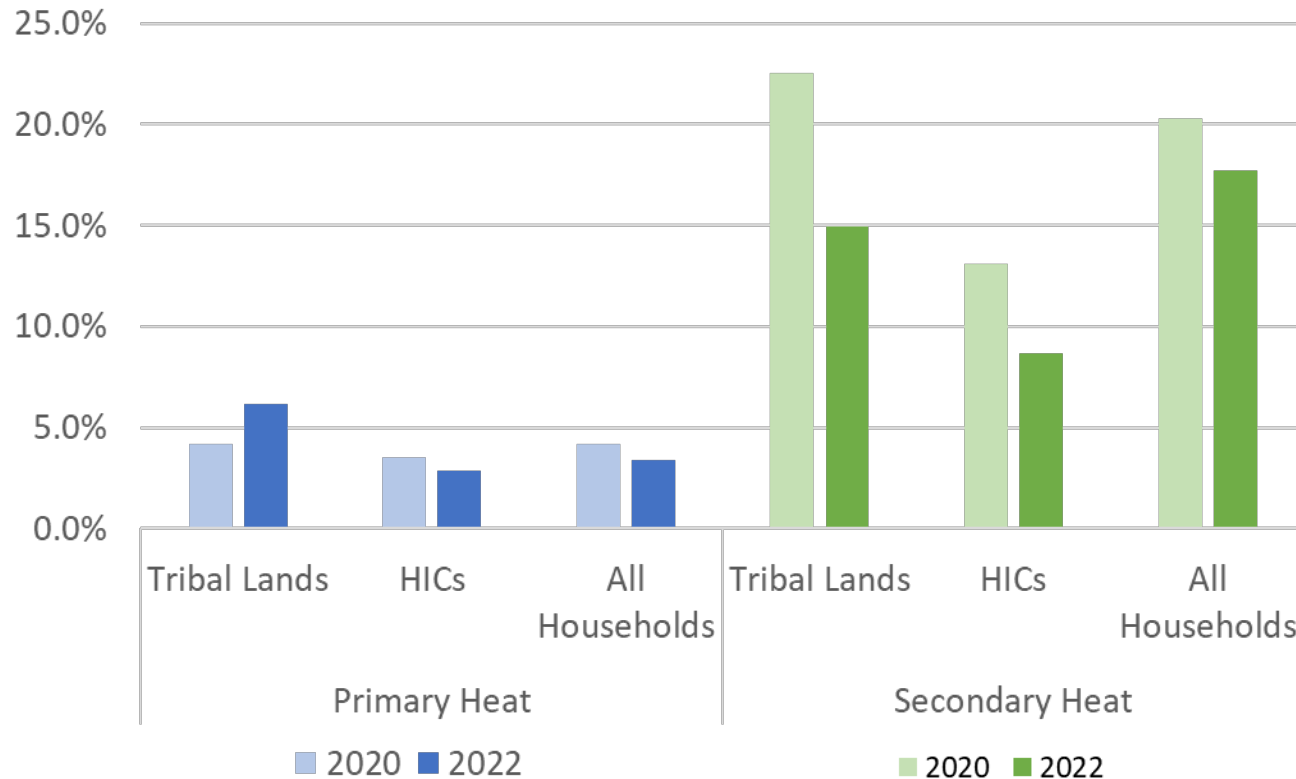
High Energy Burden

Mean Energy Burden and Percentage of Households with High Burden, by Customer Segment



Indoor Air Quality

The Indoor Air Quality CBI evaluates the number of households using wood as primary or secondary heating



From 2020 to 2022, Pacific Power has increased access to alternative heating across nearly all measured categories and seeks opportunities to further access.

Residential Customer Disconnections

	Tribal Lands		HIC		All Customers	
	2019	2022	2019	2022	2019	2022
Number of Residential Disconnections	157	0	657	1	1,375	9
Percent of Customers Experiencing a Disconnection	2.27%	0.00%	2.19%	0.00%	1.24%	0.01%

- COVID-19 related impacts on disconnections lingered into 2022, resulting in unusually low numbers of disconnections
- Disconnections will probably increase in 2023 to close to pre-COVID levels
- PacifiCorp is working with stakeholders on a plan to reduce disconnections in a more permanent way in the future



Engagement

Who Is Engaged with this Work?

**INTEGRATED RESOURCE
PLAN STAKEHOLDER GROUP**



**ENVIRONMENTAL & JUSTICE
GROUPS**



**PUBLIC CUSTOMER
ENGAGEMENT**



EQUITY ADVISORY GROUP



REGULATORS
WA UTILITIES AND
TRANSPORTATION
COMMISSION (UTC)



**DEMAND-SIDE
MANAGEMENT (DSM)
ADVISORY GROUP**

UTILITY INDUSTRY



LOW-INCOME ADVISORY GROUP

External Engagement Approach



Foster shared understanding



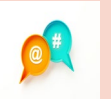
Maintain a public participation process that is open, transparent, and accessible



Inspire new tools and approaches for how we communicate and expand our outreach



Building new partnerships and amplifying opportunities for collaboration



Input shapes how we deliver programs and information on them



Community voices influence how we think about planning

Pacific Power has launched its first ever earned-media multicultural campaign in Washington

- **Topics:** Wattsmart Residential and Small Business (Energy Efficiency)
- **Goal:** To increase awareness and participation in Pacific Power's Wattsmart energy efficiency programs among Spanish-speaking Washington residential customers

*Engage communities where they are!
More than language – it's identity, culture matters!*



Public Comment

Washington Demand Side Management Workshop