

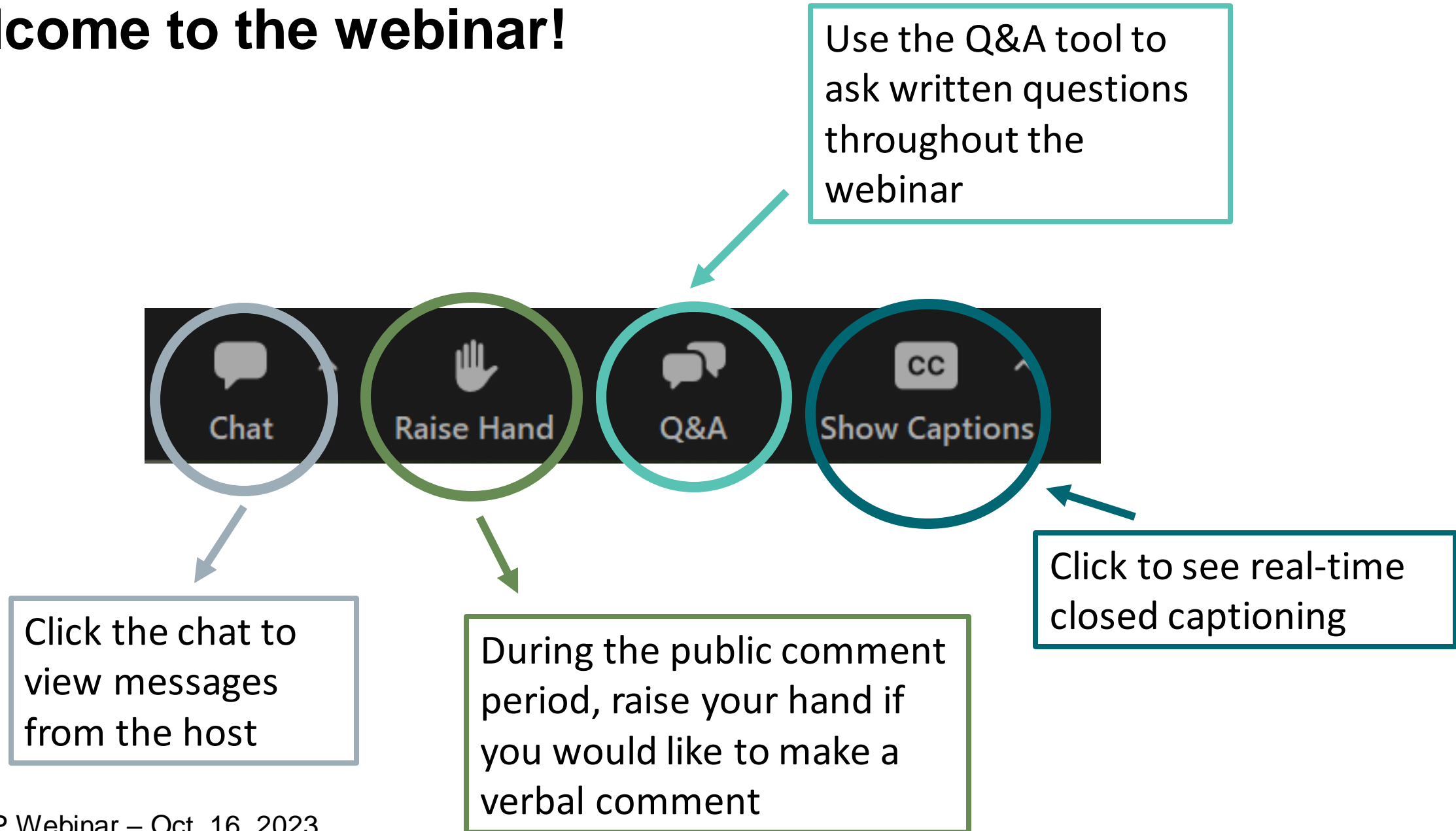
Biennial Update Webinar

2021 Clean Energy Implementation Plan

October 16, 2023



Welcome to the webinar!



Facilitator requests

- Engage constructively and courteously towards all participants
- Respect the role of the facilitator to guide the group process
- Avoid use of acronyms and explain technical questions
- Use the Feedback Form for additional input to PSE
- Aim to focus on the webinar topic
- Public comments will occur after PSE's presentations

Safety moment

Food safety tips

- Wash your hands and food prep services often
- Separate raw meats from other foods
- Cook your food to the right temperature
- Refrigerate foods promptly
- Report any foodborne illnesses to your healthcare provider

Today's speakers

Brian Tyson

Manager, Clean Energy Planning and Implementation, PSE

Kara Durbin

Director, Clean Energy Strategy, PSE

Sophie Glass

Facilitator, Triangle Associates

Agenda

Time	Agenda Item	Presenter / Facilitator
1:00 p.m. – 1:05 p.m.	Introduction and agenda review	Sophie Glass, Triangle Associates
1:05 p.m. – 1:15 p.m.	2021 CEIP status update	Kara Durbin, PSE Brian Tyson, PSE
1:15 p.m. – 1:30 p.m.	Biennial Update overview	Brian Tyson, PSE
1:30 p.m. – 1:45 p.m.	Specific actions in the Biennial Update	Brian Tyson, PSE
1:45 p.m. – 1:50 p.m.	Public engagement overview and next steps	Brian Tyson, PSE
1:50 p.m. – 2:00 p.m.	Public comment	Sophie Glass, Triangle Associates
2:00 p.m.	Adjourn	All

2021 CEIP status update

Kara Durbin

Director, Clean Energy Strategy

Brian Tyson

Manager, Clean Energy Planning and Implementation



Clean Energy Transformation Act (CETA)

Washington's Clean Energy Transformation Act (CETA) goals:

Achieve clean energy milestones



2025

Coal-free
electricity



2030

Carbon-neutral
electric system



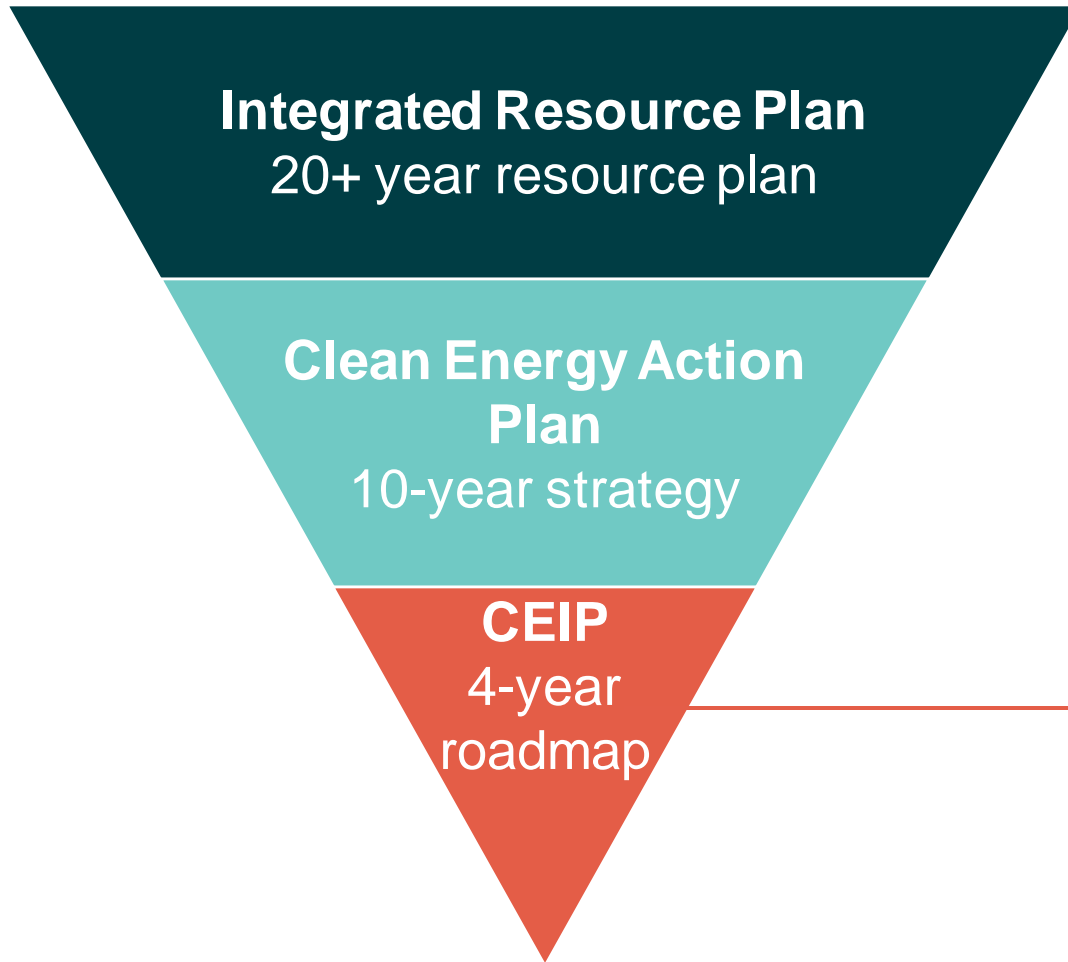
2045

100%
clean electricity

Ensure all customers benefit through:

- Equitable distribution of energy and non-energy benefits and reduction of burdens to vulnerable populations and highly impacted communities
- Public health and environmental benefits
- Reduction of costs and risk
- Energy security and resiliency

PSE electric resource planning process



- Our Clean Energy Implementation Plan (CEIP) is a **new plan** required by CETA
- Four-year plan that **guides PSE’s clean electricity programs, actions, and investments for 2022-2025**
- This is the first of many plans, as the energy resource planning **process is a continuous, iterative cycle**
- **CEIP filed on Dec. 17, 2021.**
- **UTC approved CEIP**, with conditions, on June 6, 2023

PSE's first Clean Energy Implementation Plan (2022-2025)



Defines targets to achieve our clean electricity goals



Identifies how all customers benefit with focus on highly impacted communities and vulnerable populations



Uses customer benefits to shape our resource decisions and enhance the clean electricity transition



Lists specific actions, programs and investments



Maintains reliability and affordability



Describes how we engaged customers in our efforts



Holds PSE accountable to future work and commitments










2021 Clean Energy Implementation Plan (CEIP) review

Goals and targets










2025	<ul style="list-style-type: none"> Coal-free electricity Increase from 35% to 63% clean electricity
2030	<ul style="list-style-type: none"> Carbon-neutral electric system
2045	<ul style="list-style-type: none"> 100% clean electricity

Customer benefits

	Energy benefits
	Non-energy benefits
	Burden reduction
	Public health
	Environment
	Cost reduction
	Energy security
	Risk reduction
	Resiliency

2025 clean resources

	Utility-scale renewables  (800 MW)
	Distributed renewables  (80 MW)
	Demand response  (23.7 MW)
	Energy efficiency 1,073,434 MWh

CEIP status update

- **First Clean Energy Implementation Plan (CEIP) submitted in November 2021**
- **Began formal adjudication (legal process) in mid-2022**
- **Public comment & formal UTC hearings in January 2023**
- **Commission issued formal decision on June 6, 2023**

Biennial Update overview

Kara Durbin

Director, Clean Energy Strategy

Brian Tyson

Manager, Clean Energy Planning and Implementation



What is the 2023 CEIP Biennial Update?

- Refines how we're delivering clean electricity through the remainder of the first implementation period (2023-2025)
- Responds to Commission decision issued on June 8, 2023

Key updates:

- Integrating four tenets of justice
- Updating definition of Named Communities
- Defining “deepest need” and related minimum designation
- Updating interim and specific targets
- Refining and adding specific actions
- Reporting on public engagement progress

Integrating the four tenets of justice

Resources

- Energy Equity Project (EEP) Report, University of Michigan
- American Council for an Energy Efficient Economy (ACEEE)
- Cascade Natural Gas Order
- Pacific Northwest National Laboratories (PNNL)

Recognition justice

- Designation of Named Communities – highly impacted, vulnerable populations, deepest need
- Disparities and root factor analysis – identify barriers and measures to address disparities/barriers

Procedural justice

- Robust engagement with named communities, advisory groups, interested parties, CBOs, external SMEs, academic and research institutions, etc.
- Targeted education and awareness outreach for customers in named communities
- Document and integrate feedback from engagement efforts

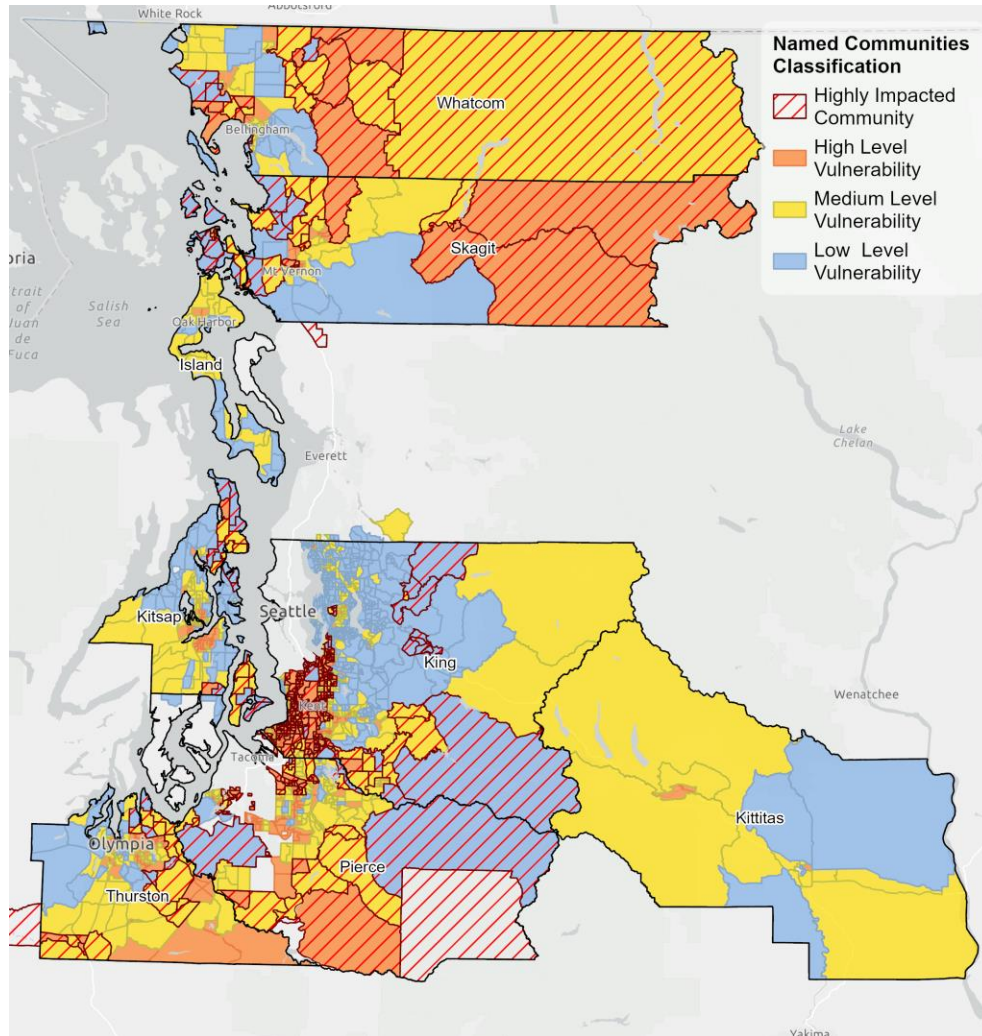
Distributive justice

- Program design, CBIs, minimum designations for named communities
- Tracking and measuring benefits and burdens across named communities

Restorative justice

- Deliberate actions to incorporate equity and minimize inequities
- Track efforts in advancing recognition, procedural and distributional justice

Insights into highly impacted communities and vulnerable populations



PSE electric service area

These insights will help us **ensure equitable distribution of benefits** by:

Identifying existing disparities

Measuring and tracking progress in addressing disparities

Understanding and including specific needs in:

- Education and awareness
- Resource acquisition process
- Program design

*Data refreshed since 2021 CEIP

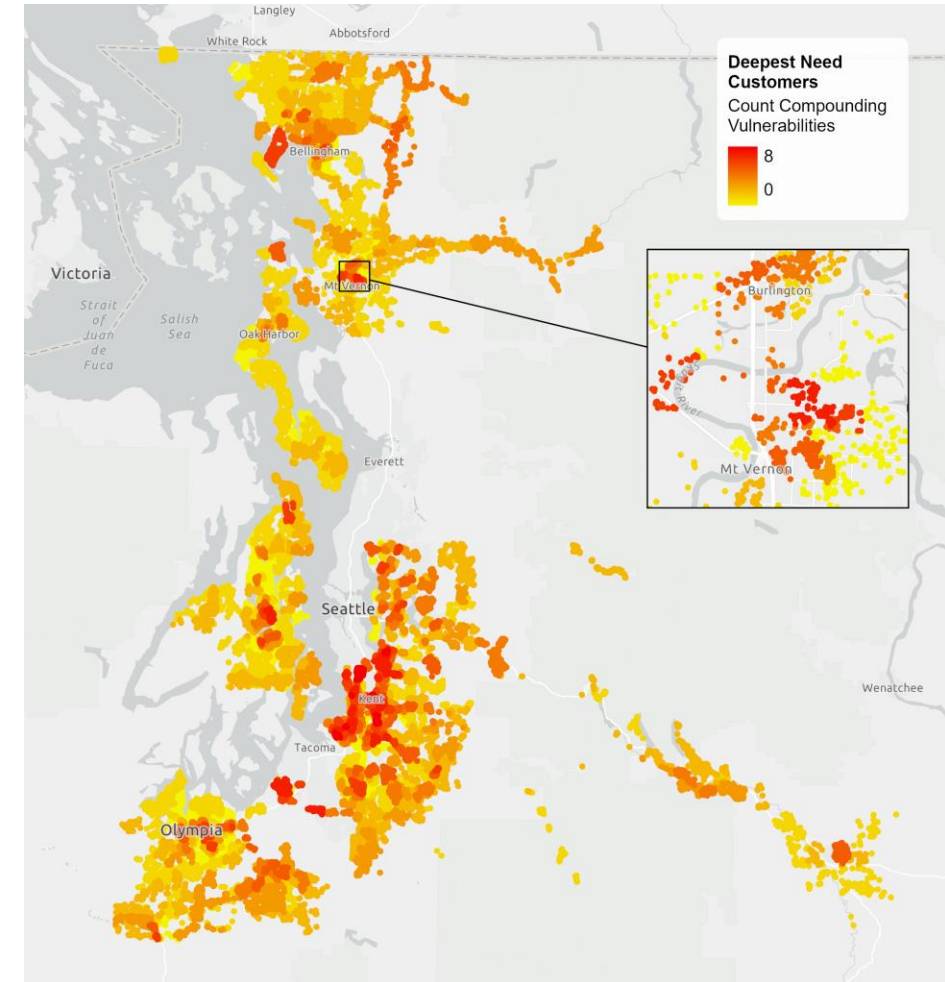
Proposed new definition of Named Communities

- Condition 9 approach showed high vulnerability across entire service area
- Proposing new approach to include the following improvements:
 - Updated older data sets
 - Replaced data with better data resources
 - Limited factors to percentage values rather than percentage and counts
 - Selected one measure of a vulnerability factor when there were many.
 - Added factors for heat risk, housing quality, wildfire vulnerabilities

Defining “deepest need”

- Defined at the customer level
- Severely Energy Burdened* (EB) customers within:
 - Neighborhood pockets (clusters)
 - Or block groups with many EB customers
- Compounding vulnerabilities add context for prioritization
- Qualitative guidance from PSE community and customer teams
- ~65k customers

* *Severe energy burden is defined as households with energy bills that exceed 10 percent of the annual household income.*



Minimum designation for customers with deepest need

Considerations

- Work to date has focused on Named Communities more broadly
- Designation should be achievable by the end of 2025 (remainder of implementation period)
- Achieving target will require highly focused strategy (program design, enrollment, engagement)
- Intend to re-evaluate working definition of deepest need and any minimum designation as part of the development of the 2025 CEIP

Updated CETA annual goals for Biennial Update

Category	2022 actual	2023 actual + projected	2024 projected	2025 projected	Average actual + projected
2021 CEIP targets	43%	53%	59%	63%	54.5%
Current goals based on draft Biennial Update projections	45.4%	53%	60%	60%*	54.5%

Successes:

- Forecasted to meet or surpass annual goals in **3 out of 4 years**
- On track to **deliver approximately 2,500,000 more MWh** over the 4-year period than originally planned in the 2021 CEIP

Challenges:

- Load forecast for CEIP period has **increased significantly** (~ 7% greater in 2025) compared to 2021 CEIP
- Some short-term hydroelectric contracts are ending in 2024
- New resources may not be constructed and online in 2025
- Short-term contract options in 2025 are uncertain with growing demand for CETA qualifying resources
- Forecasted generation trending lower than expected (e.g., hydroelectric)

***PSE will strive to meet 63% but achievement is uncertain at this time.**

Specific targets

Type	2021 CEIP	2023 Biennial Update	Notes
Renewable energy percentage (expressed as avg. over 4 years)	54.5%	54.5%	Adjusted to 4-year average; see previous slide
Energy efficiency	536,717 MWh (2022-23)	397,820 MWh (2024-25)	Updated based on 2024-2025 Biennial Conservation Plan
Demand response by 2025	23.7 MW	86 MW	Increased based on Commission order and cost-effective RFP resources
Distributed energy resources – solar by 2025	80 MW	80 MW	On track
Distributed energy resources – storage by 2025	25 MW	25 MW	On track

New clean energy resources through

2022	2023	2024	2025
<ul style="list-style-type: none">• 250 MW CETA eligible short-term transaction(s)	<ul style="list-style-type: none">• 350 MW Clearwater wind project in Montana• 500 MW CETA-eligible short-term transaction(s)	<ul style="list-style-type: none">• 265 MW CETA-eligible short-term transaction(s)	<ul style="list-style-type: none">• 90 MW Vantage wind project in Eastern WA

- PSE continues to evaluate projects and pursue opportunities to achieve our clean energy goals in this CEIP period and beyond

Specific actions in the Biennial Update

Kara Durbin

Director, Clean Energy Strategy

Brian Tyson

Manager, Clean Energy Planning and Implementation



Specific actions – Energy Efficiency*

Energy efficiency includes a variety of programs with a focus on reducing energy consumption and usage within customer homes and businesses

- Total 2024-2025 energy efficiency target = 397,820 MWh
- Named communities designation = 30% across programs*

Sample energy efficiency programs targeting Named Communities**

Program/Product	Description	MWh (2024-2025)	Year(s)	Counties
Low Income Weatherization	Home weatherization (e.g., windows, insulation) assistance for low-income customers	4,308	2024-25	All counties
Multifamily Retrofit	Energy-efficient upgrades for condos, townhomes and managed properties	11,026	2024-25	All counties
Multifamily New Construction	Lower the cost of incorporating energy-efficient systems and equipment into your design	8,015	2024-25	All counties
Small Business Direct Install	Help conduct energy-efficiency surveys and <i>install free or low-cost solutions</i>	26,000	2024-25	All counties

* Excludes Northwest Energy Efficiency Alliance or Schedule 258 programs

** The full program list will be included in the 2024-25 Biennial Conservation Plan on November 1, 2023

Specific actions – demand response

Demand response (DR) is a measure for reducing energy load in response to supply constraints, generally during periods of peak demand to manage and maintain system reliability

Program/Product	Description	Program Launch	Counties
Flex Rewards	Customers receive rewards for <u>shifting their behavior</u> to reduce their energy usage.	Winter 2023	Territory wide
Flex Smart	Customers receive rewards for <u>enrolling smart devices</u> in automatic energy reduction - such as smart thermostats, water heater, and EV	Summer 2023	Territory wide
Flex Events	Customers notified and given tips on how to <u>shift their behavior</u> and reduce their energy usage.	Summer 2023	Territory wide
Flex Rewards – Business Demand Response	Businesses receive rewards for participating in <u>personalized energy reduction plan</u>	Winter 2023	Territory wide

Specific actions – distributed energy resources (storage)

DER storage includes programs and products that provide localized energy storage within PSE's service territory to enable direct customer interaction with renewable energy and use to meet system needs

Program/Product	Description	Capacity (2025)	Year(s)	Counties
Distributed Storage Projects	Standalone storage projects (batteries), ranging from 1 – 5 MWs, that <u>store energy</u> for use <u>during peak times</u> to increase reliability	33.5 MWs	2025	Pierce, Thurston, Skagit, King, Whatcom
Residential BESS Services	PSE offers an <u>incentives on battery energy storage systems</u> will help remove the high upfront cost of installing a battery and further increase access to battery ownership.	5 MW	2025	Throughout PSE's service territory

Specific actions – distributed energy resources (solar)

DER solar includes programs and products that provide localized solar generation within PSE's service territory to enable direct customer interaction with renewable energy

Program/Product	Description	Capacity (2025)	Year(s)	Number of projects	Counties
Community Solar and Income Eligible Community Solar	Offers electric customers the opportunity to choose <u>100% locally generated</u> solar energy by subscribing to shares	50 MW (increased from 30 MW in 2021 CEIP)	2023-25	~25	Kittitas, Thurston, King, Pierce, Whatcom, Skagit
Green power solar grants	Annual grants that <u>fund solar projects</u> at nonprofits, public housing authorities and Tribal entities serving low-income and/or BIPOC community members	1.5 MW	2023-25	20 - 30	All
Net metering	PSE tracks energy used and the amount of <u>excess power</u> a customer's solar system generates; renewable energy sent back to the grid is <u>credited to PSE account</u>	59 MW	2024-25	5,500-7,000	All
Distributed generation	Developer and PSE owned projects in the range of 200 kW – 5 MWs. Projects include solar, storage and hybrid (solar + storage)	Solar: 9 MWs; Hybrid: 8.9 MWs solar	2025	10-15	Whatcom, Skagit, South King, Pierce, Thurston, Kitsap
Solar Purchase Rate	Aims to grow new <u>customer owned distributed solar capacity</u> . The program contains Equity-Focused design elements to address barriers identified through community engagement	13.6 MW	various	30-60	Any
Residential Rent-to-Own	PSE developing <u>rent-to-own options</u> for both residential rooftop solar and residential battery for Named Communities and other residential customers	2 MW	various	TBD	various

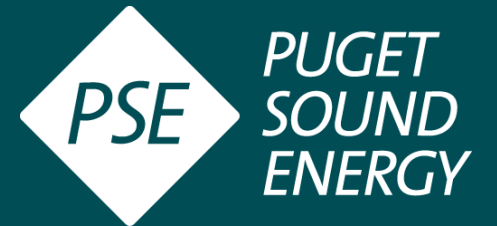
Other specific actions

- Time varying rates pilot (2023) ~ 7,500 customers (2,500 in Named Communities)
- Grid modernization to enhance resiliency and enable DERs and microgrids
- Virtual Power Plant to enable, control and monitor distributed energy resources (ex. Thermostats, water heaters, etc.) in an efficient manner

Public engagement for the Biennial Update

Ray Outlaw

Manager, Communications Initiatives



Reporting on Biennial Update public engagement

Advisory Group/Organization	Meetings	Topics included <ul style="list-style-type: none"> • Vulnerable populations • Deepest Need and minimum designations • New required and potential CBIs • Specific actions • Initial design of DER Public Engagement Pilot
Equity Advisory Group	7	
Conservation Resource Advisory Group	4	
Low Income Advisory Committee	4	
Joint advisory group meetings	2	
Joint advisory group work sessions	2	
Community Based Organization 1:1 interviews	20	
Online survey	2,028 responses*	

*Responses accepted through Oct. 16, 2023

Public engagement lessons learned

- Basic needs must come first before engaging on clean energy
- Clean energy knowledge is highly varied across communities
- Interest in learning more about clean energy is high across most groups, but also highly varied
- Clean energy transition is seen as both a risk and an opportunity across communities
- Reliability and resiliency are a key concern in many communities
- Community organizations and leaders are extremely important as partners and messengers, but many are resource-constrained

What happens next?

2023 Biennial Update

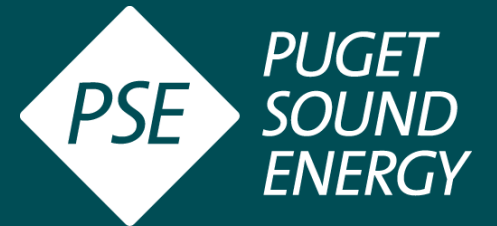
- Formal submittal on Nov. 1, 2023
- Commission public comment period to follow
- Commission review and approval process

Beyond the update

- Continue addressing Commission conditions
- Continue clean energy resource acquisition
- Continue refining existing and developing new programs
- Continue and advance equity efforts
- Develop 2025 CEIP (2026-29)

Public comment period

Please raise your "hand" if you would like to provide a comment



Thank you for joining us!

