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

NWESS IEEE

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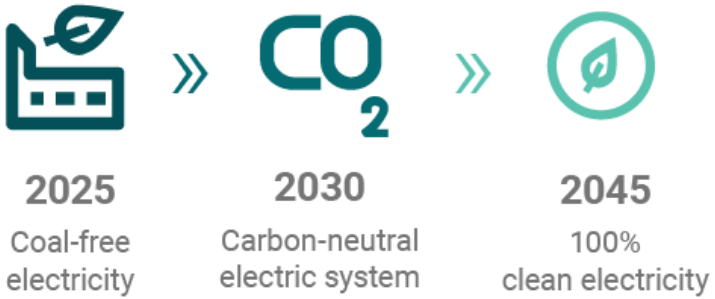
Clean Energy Transformation Act (CETA)

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

Achieve clean energy milestones



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

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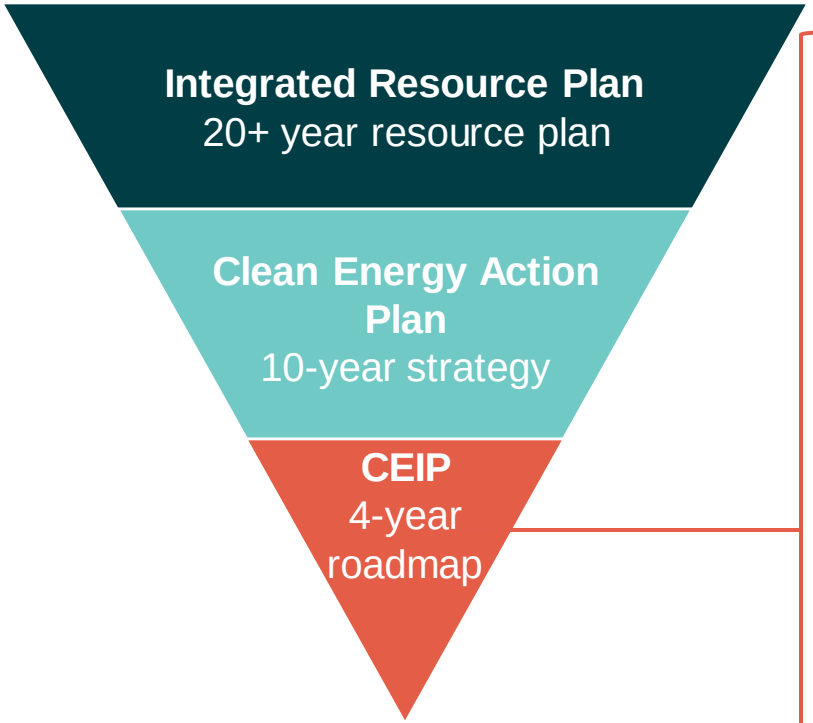
PSE electric resource planning process



- 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 will approve, deny or modify the plan

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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

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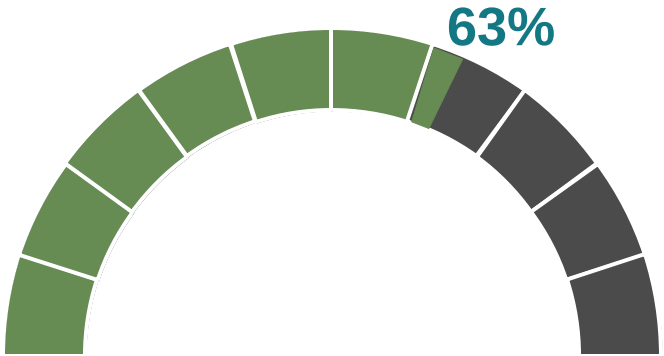
Targets to achieve our clean electricity goals in 2025

Interim clean electricity target



PSE clean electricity portfolio forecast by **end of 2025***

**measured as a % of net retail load*

Specific targets

Energy Efficiency: 1,073,434 MWh for 2022-2025
Equivalent to electricity used by more than 138,000 homes in one year

Demand response: 23.7 MW
New programs incentivizing shifting energy use during peak periods

Renewable Energy: 63% of retail sales in 2025

- *Large-scale generation, like wind and solar*
- *2x as much local solar and battery programs than today*

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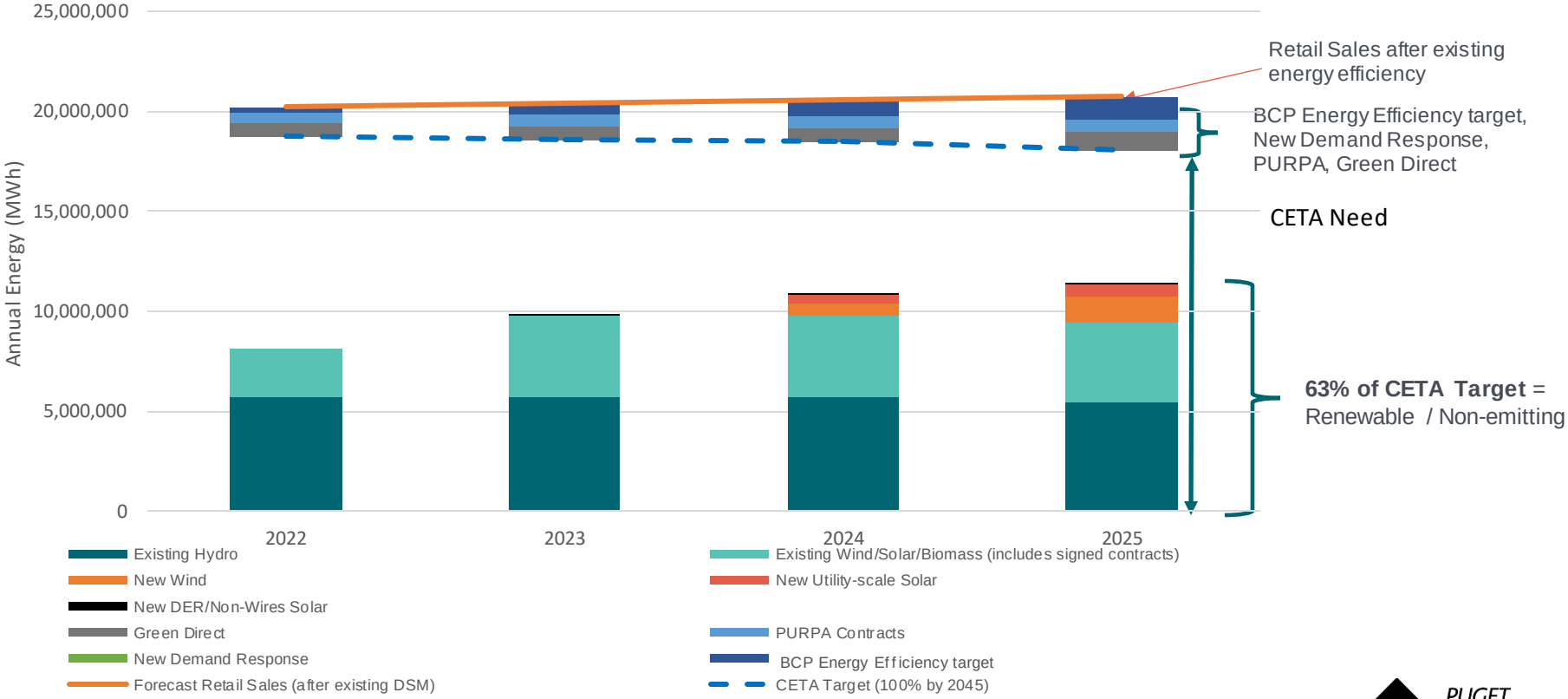
2022-2025: CETA clean electricity mix



** BCP – Biennial Conservation Plan*
PURPA – Public Utility Regulatory Policies Act Qualifying Facility

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Resource investment areas and actions

Energy Efficiency

- Developed through Biennial Conservation Plan
- Customers reduce bills, and PSE reduces total system cost

Demand Response

- Includes incentive programs for customers to reduce energy use at peak periods
- Programs determined through Targeted Distributed Energy Resources (DER) request for proposal (RFP)
- Customers reduce bills, and PSE reduces total system cost

Renewable Energy

- Includes large-scale wind and solar generation, along with distributed solar and battery storage
- Resources determined through All-Source and Targeted DER RFPs
- Decreases emissions and increases local resiliency, ownership and access

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Summary of actions that move us forward

	2022	2023	2024	2025
Resource specific (projected)	• Energy Efficiency Programs	• Energy Efficiency Programs	• Energy Efficiency Programs	• Energy Efficiency Programs
	• Complete Targeted DER RFP	• Start Demand Response Programs	• Expand Demand Response programs	• Expand Demand Response programs
	• 200 MW Golden Hills wind in service* • 100 MW BPA capacity product* • 32.8 MW Colville and 76.6 MW Chelan hydro contracts* • Complete All-Source and Targeted DER RFPs • 7 MW of DER solar in service	• 350 MW Clearwater Wind in service* • 23 MW of DER solar in service • 5 MW of distributed battery storage in service	• 200 MW of wind in service • 200 MW of solar in service • 25 MW of utility-scale storage • 25 MW of DER solar in service • 7 MW of distributed battery storage in service	• 300 MW of wind in service • 100 MW of solar in service • 25 MW of utility-scale storage • 25 MW of DER solar in service • 13 MW of distributed battery storage in service
Other investments	• Begin tariff filings for DER programs • Customer-centered program design • Baseline data collection for CBIs • Enabling technologies planning	• Tariff filings for DER programs • Build and deploy new DER and DR programs • Initial customer programs and education launch • Begin installing enabling technologies • Progress reporting and biennial CEIP Update	• Utility-scale renewables and DERs in service • Progress reporting • Ongoing programs and education • Ongoing installation of enabling technologies	• Utility-scale renewables and DERs in service • Ongoing programs and education • Ongoing installation of enabling technologies • File 2026–2029 CEIP

** CETA-eligible resources already underway (see CEIP Figure 1-3)*

Specific actions: what customers can do today

PSE's existing clean electricity programs continue in our CEIP for 2022-2025

- Energy Efficiency programs for homes and businesses
- Voluntary renewables:
    - Solar Choice (solar match)
    - Green Power (renewable match)
    - Green Power Solar Grants
    - Customer Connected Solar (net metering)
    - Green Direct (business match) – CEIP proposes additional MWs
    - Community Solar – CEIP proposes additional MWs

Source: Energy.gov

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Highlighting new, conceptual, and pilot programs

Distributed Energy Resources (DERs)

Conceptual programs*:

- Multi-family rooftop solar incentive
- Multi-family solar partnership
- Residential rooftop solar leasing**
- Commercial and Industrial rooftop solar incentive
- PSE customer-sited solar + storage offering**
- Third-party solar power purchase agreement (PPA)
- Residential battery leasing
- C&I space leasing for batteries

Demand Response

- Residential direct load control (DLC) – switch, bring your own thermostat, and grid enabled water heaters
- Medium Commercial DLC heat – switch
- Time-varying rates pilot program

Source: Energy.gov

*Final program designs to be determined through Targeted DER RFP process
**Includes income-eligible offerings

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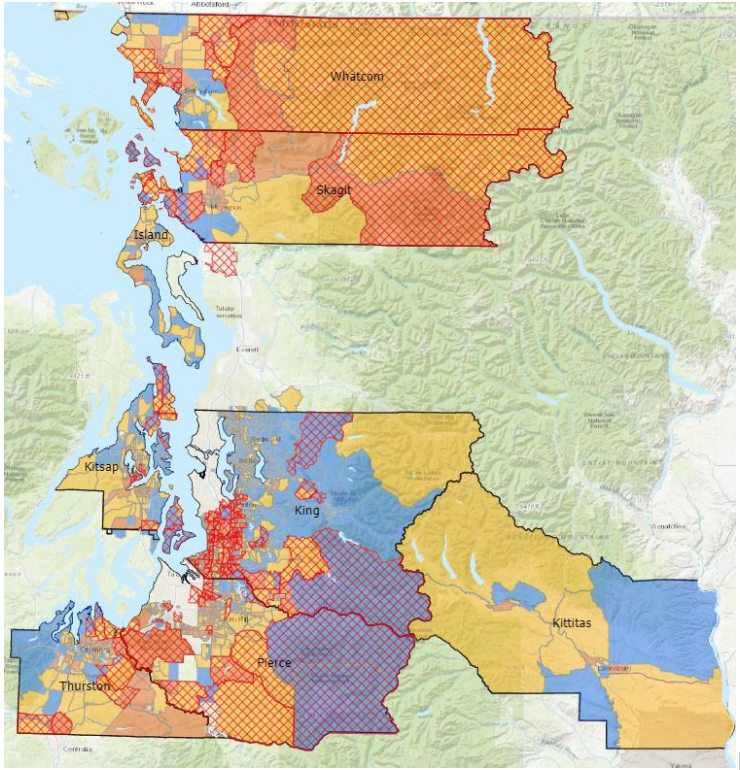
Insights into highly impacted communities and vulnerable populations



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

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Customer benefit indicators shape outcomes

Highly impacted communities and vulnerable populations
(named communities)

Energy benefits
- Improved participation in clean energy programs from named communities

Reduction of burdens
- Improved participation in clean energy programs from named communities
- Improved affordability of clean energy
- Increase in culturally- and linguistically-accessible program communications for named communities

Non-energy benefits
- Improved participation in clean energy programs from named communities
- Increase in quality and quantity of clean energy jobs
- Improved home comfort

All PSE customers (including highly impacted communities and vulnerable populations)

Public health
- Improved outdoor air quality
- Improved community health

Energy security
- Improved access to reliable clean energy

Environment
- Reduction of greenhouse gas emissions
- Reduction of climate change impacts

Risk reduction
- Reduction of climate change impacts
- Improved access to reliable clean energy

Cost reduction
- Improved affordability of clean energy

Resiliency
- Decrease frequency and duration of outages

Customer benefit indicators:

- Outcomes that improve our customers' lives
- Shape program, actions and investment decisions
- Help ensure all customers benefit from the clean electricity transition

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Customers, advisory groups, and stakeholders shaped the CEIP

Convened and engaged Equity Advisory Group – new!

35+ CEIP-focused meetings with advisory groups, community-based organizations, and other stakeholders

1,000+ Respondents to clean electricity values and benefits community survey

350+ Comments on draft CEIP

Outcomes

- Accelerated clean electricity transition
- Expanded definition of vulnerable populations
- Identified burdens, barriers and opportunities
- Development of customer benefit indicators and metrics
- Shaped specific actions and programs
- Broadened public engagement and clean energy education
- Created guiding principles for CEIP implementation

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Guiding principles for CEIP implementation*

Equity requires we ensure all customers benefit from clean electricity through an intentional effort to engage and advance the interests of vulnerable communities

Accessibility

- Increase participation and sense of ownership
- Meet people where they are using education and outreach strategies that remove barriers
- Create a reciprocal process to build community capacity

Affordability

- Create, evaluate, and continuously improve programs that increase vulnerable communities' ability to afford the resources they need
- Factor the socioeconomic considerations of vulnerable communities into design

Accountability

- Design programs that produce outcomes desired
- Commit to a future that reduces or eliminates harmful impacts
- Review and reflect upon practices that could potentially harm
- Measure, track, refine and communicate results-drive metrics

**Co-developed with Equity Advisory Group*
Summarized here; refer to CEIP for complete list of principles

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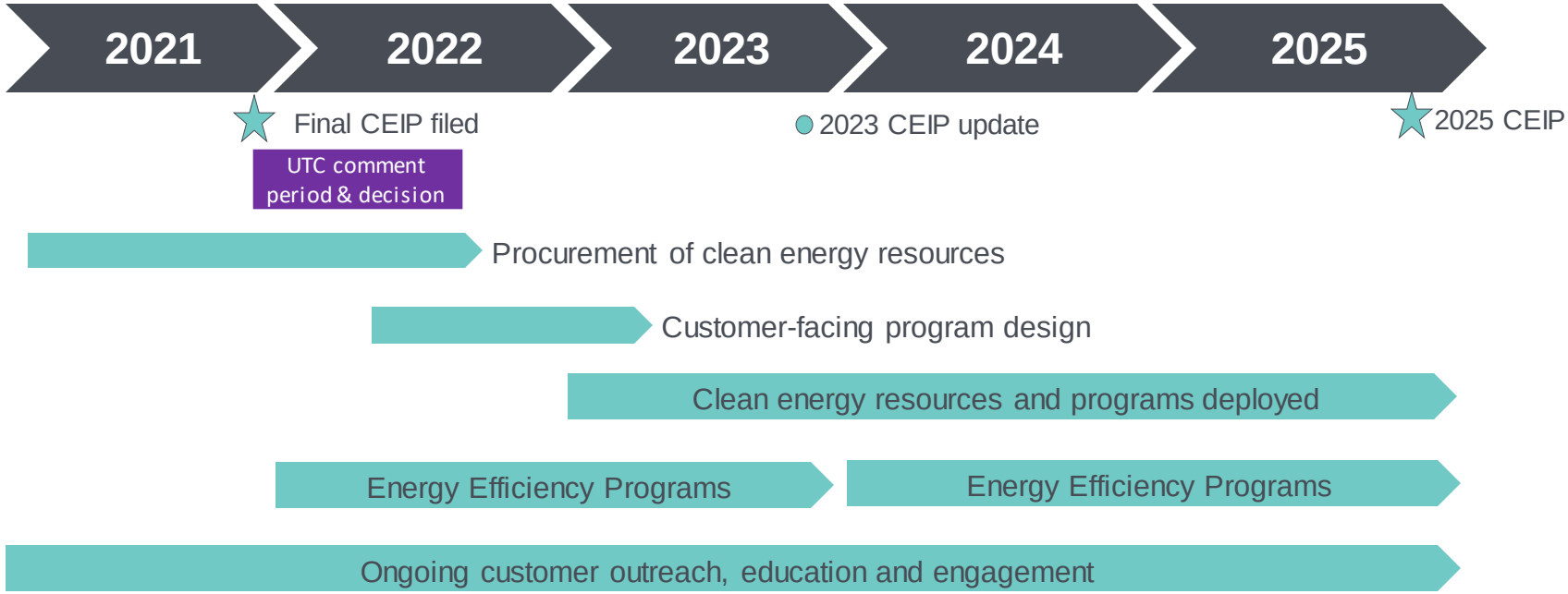
Next steps to delivering clean electricity



UTC: Washington Utilities and Transportation Commission

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PSE's ongoing work for the 2023 biennial CEIP update

- **Incorporate the analysis** contained in the **2023 Electric Progress report and results of the 2021 All-Source and 2022 Targeted DER RFPs**
- Develop the building blocks for an **equity assessment for 2023 CEIP update**:

Continue to develop **data sources for CBIs and baseline data**

Assess and measure disparities within existing programs and **understand root factors causing disparities**

Engage highly impacted communities and vulnerable populations **on program design**

Report on progress for next CEIP:
- **Potential CBIs on**:
  - Fish and wildlife impacts
  - Wildfire impacts
  - Sense of pride and self sufficiency
  - Indoor air quality
- **Methodology for scoring and weighting CBIs**

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Working together for a clean electricity future

UTC comment period through March 2, 2022

- UTC will decide whether to approve, deny or modify PSE's CEIP
- PSE's CEIP is in UTC Docket UE-210795. To file a written comment, visit: www.utc.wa.gov/e-filing

Stay informed and involved:

Get the latest news, involvement opportunities and subscribe for email updates: **cleanenergyplan.pse.com**

Email us at **ceip@pse.com**

Leave a message at **(425) 818-2051**

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Appendix

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Common acronyms

Acronym	Meaning
CBI	Customer benefit indicator
CEAP	Clean Energy Action Plan – 10-year strategy
CEIP	Clean Energy Implementation Plan – 4-year roadmap
CETA	Clean Energy Transformation Act, which set clean electricity standards for Washington
C&I	Commercial and industrial
DER	Distributed energy resource, e.g., rooftop solar & small-scale battery storage
DR	Demand response, e.g., incentive programs for customers to reduce their energy use at peak periods
EAG	Equity Advisory Group
HIC	Highly Impacted Communities
IRP	Integrated Resource Plan – 20+ year resource plan
Named Communities	Refers to "Highly Impacted Community" and "Vulnerable Populations" (defined by CETA)
PPA	Power purchase agreement
RFP	Request for proposal
SWMBE	Small-, woman-, and minority-owned businesses
UTC	Washington Utilities and Transportation Commission, which regulates PSE
VP	Vulnerable Populations

CEIP highlights

2022-2025:

- **Interim Target** of 63% (up from 59% in the draft CEIP)
- **Renewables:** 800 MW target for renewables
- **Energy Efficiency:** 1,073,434 MWh target for energy efficiency (consistent with 2022-2023 Biennial Conservation Plan)
- **Demand Response:** 23.7 MW target for demand response
- **Distributed Resources:** Establishes a sub-target consisting of:
  - 80 MW distributed solar
  - 25 MW distributed battery storage
- **Battery storage:** 50 MW of utility-scale storage
- **Incremental Cost:** Projected just above 2% incremental cost threshold over the 4 years

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Customer Benefit Indicators and metrics

*New/updated in December filing
*CETA benefit category

Energy
Non-energy
Burden reduction

Improved participation in clean energy programs from highly impacted communities and vulnerable populations

- Increase percentage of participation in energy efficiency, demand response and distributed resource programs or services by PSE customers within highly impacted communities and vulnerable populations
- Increase percentage of electricity generated by distributed renewable energy projects

Non-energy

Improved home comfort

- Increase dollars in net present value (NPV) in non-energy impact (NEI) benefits for energy efficiency programs (based on estimated lifetime value of NEIs)

Non-energy

Increase in quantity and quality of clean energy jobs

- Increase quantity of jobs based on:
  - Number of jobs created by PSE programs for residents of highly impacted and vulnerable populations
  - Number of local workers in jobs for programs
  - Number of part-time and full-time jobs by project
- Increase quality of jobs based on:
  - Range of wages paid to workers
  - Additional benefits offered
  - Demographics of workers

Burden reduction

Increase in culturally- and linguistically-accessible program communications for named communities*

- Increase outreach material available in non-English languages

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Customer Benefit Indicators and metrics

*New/updated in December filing
*CETA benefit category

Affordability

Improved affordability of clean energy

- Reduce median electric bill as a percentage of income for residential customers
- Reduce median electric bill as a percentage of income for residential customers who are also energy-burdened

Environment
Risk reduction

Reduction of climate change impacts

- Increase avoided emissions times social cost of carbon

Resilience

Decrease frequency and duration of outages

- Decrease number of outages, total hours of outages and total backup load served during outages using SAIDI and SAIFI
- Reduce peak demand through demand response programs

Environment

Reduced greenhouse gas emissions

- Reduce PSE-owned electric operations metric tons of annual CO_{2e} emissions
- Reduce PSE contracted electric supply metric tons of annual CO_{2e} emissions

Public health

Improved outdoor air quality

- Reduce regulated pollutant emissions (SO2, NOx, PM2.5)

Public health

Improved community health

- Reduce the occurrence of health factors like hospital admittance, and work loss days (using hospital discharge rates as a proxy)

Risk reduction
Energy security

Improved access to reliable clean energy*

- Increase number of customers who have access to emergency power (through net metering and battery storage)

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Estimated cost of clean electricity actions*: $450 million

The forecast of costs to pursue this cleaner portfolio* would:

- Increase the average **residentia**l customer's bill by **~$6/month in 2025**
- Increase the average **commercial** customer's bill by **~$37/month in 2025**

Cost does not include impact of:

- ***Bill discount rate (proposed)*** *for income-qualified customers*
- ***Participation in other programs that could decrease customer's bill such as*** *energy efficiency, demand response, low-income community solar, or other programs*
  - *Residential energy efficiency can lower bills by ~$30/month, assuming all appliances replaced and home insulated*
  - *Business programs are available for all sizes of business, reducing up front costs by up to 70% and offering positive returns*
- ***Participation in other bill assistance programs***
- ***Non-CEIP costs***

as compared to a portfolio that does not meet CETA clean electricity requirements

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