PUGET SOUND ENERGY

CEIP Public Participation Appendix C-2

Response to comments on the draft CEIP

This appendix responds to advisory group input and stakeholder feedback on the draft CEIP. Following the draft CEIP public comment period between October 15 - November 12, 2021, PSE reviewed stakeholder comments and used them to shape the final CEIP. PSE's responses to comments are included in this appendix. Individual comments can be referenced in appendix C-7.

Materials in this appendix included the following:

- Advisory group input into the CEIP
- Response to stakeholder organization and public comments

Summary of Advisory Group input into the Clean Energy Implementation Plan

Overview

In 2021, PSE engaged with its customers, advisory groups, and others to seek their input and feedback on development of the Clean Energy Implementation Plan (CEIP)[1]. PSE engaged with the new Equity Advisory Group (EAG), the Low Income Advisory Committee (LIAC), Conservation Resource Advisory Group (CRAG), and the Integrated Resource Plan (IRP) stakeholders.

Through a total of 26 meetings, PSE engaged advisory groups and the IRP stakeholders on the following topics:

- Burdens, barriers and opportunities (EAG and LIAC)
- Defining vulnerable populations definition (EAG only)
- Developing customer benefit indicators, specifically the indicators themselves, metrics, and scoring and weighting
- Draft programs and actions
- Public participation
- Guiding principles for CEIP implementation (EAG only)
- Draft CEIP

As we worked with these groups, we sought to join them in their existing meetings when possible. Although the meeting topics were typically similar, the approach and feedback sought were tailored, given each group's unique perspective. Tables C-1 and C-2 outline the meeting dates and objectives.

This document summarizes advisory group input into the CEIP. PSE appreciates the insights, time and questions shared by advisory group members and stakeholders. Their input has shaped the final CEIP, as well as PSE's future work and commitments.

[1] For details on PSE's broader engagement, refer to Chapter 6: Public Participation and PSE's Public Participation Plan for 2021.

Table C-1: EAG Meetings

EAG Meeting	Date	Meeting Objectives
Meeting 1	April 19, 2021	• Provide context on EAG purpose, role, and charter • Provide an overview of PSE and clean energy • Discuss EAG interests and clean energy values
Meeting 2	May 3, 2021	• Shared understanding around the Clean Energy Transformation Act (CETA) and the CEIP • Connect how the EAG's discussions will help shape the CEIP • Gather EAG input to inform PSE's understanding of barriers, burdens and opportunities for programs in the CEIP
Meeting 3	May 17, 2021	• Inform about PSE's demographics and participation research • Shared understanding on the CETA and highly impacted communities and vulnerable populations • Consult on refining the definition of vulnerable populations • EAG determination of recorded meetings, and next steps regarding charter
Meeting 4	May 24, 2021	• Advance discussion on vulnerable populations definition • Shared understanding on customer benefit indicators and how they shape the CEIP • Engage EAG in developing customer benefit indicators
Meeting 5	June 21, 2021	• Seek EAG member feedback on customer benefit indicators and weightings • Shared understanding of next steps in developing the draft CEIP • Reflect on how EAG input was incorporated into vulnerable populations' definition
Meeting 6	July 26, 2021	• Refresh on EAG's role, the electric resource planning process, and our work goals for this four-year CEIP • Seek input on revised customer benefit indicators and path forward
Meeting 7	Sept. 13, 2021	• Recap on EAG governance • Shared understanding of PSE's draft CEIP targets, programs, actions, and cost • Engage EAG on their initial impressions, questions, and input
Meeting 8	Sept. 27, 2021	• Share approach for Named Communities and draft principles for implementation • Engage EAG on their initial impressions, questions, and input on approach for Named Communities and program implementation principles. • Seek EAG's input and questions on draft CEIP targets, programs, actions and cost (initially shared at Sept. 13 meeting)

EAG Meeting	Date	Meeting Objectives
Meeting 9	Oct. 4, 2021	• Seek EAG input and questions on program implementation, including EAG's input on guiding principles for implementation
Meeting 10	Nov. 1, 2021	• Seek EAG's input on draft CEIP, outreach and implementation principles • Share about equity considerations for Targeted Distributed Energy Resources (DER) Request for Proposal (RFP) and seek EAG input

Table C-2: Other Advisory Group and Stakeholder Meetings

Advisory Group	Date	Meeting Objectives
IRP Stakeholders Meeting 1	March 5, 2021	• Shared understanding of CEIP process, EAG process, and overview of public participation process • Gathered IRP stakeholder input on engagement with IRP and customers, and questions for the EAG
LIAC Meeting 1	March 9, 2021	• Shared understanding of CEIP process, EAG process, and overview of public participation process • Gathered LIAC stakeholder input on their engagement with the CEIP, methods to engage low-income customers and their understanding of clean energy, and questions for the EAG
CRAG Meeting 1	March 16, 2021	• Shared understanding of CEIP process, EAG process, and overview of public participation process • Gathered CRAG stakeholder input on their engagement with the CEIP, methods to engage with CRAG members' customers and their understanding of clean energy, and questions for EAG
LIAC Meeting 2	May 11, 2021	• Reviewed the new energy planning and CEIP process, and update on EAG and public participation efforts. • Shared understanding of CBIs. • Sought input on problems facing low-income customers and benefits they want to see from the clean energy transition, as well as prioritization of those benefits.
IRP Stakeholders Meeting 2	May 26, 2021	• Reviewed the new energy planning and CEIP process, and update on EAG and public participation efforts. • Shared understanding of CBIs. • Sought input on CBIs related to each CBI category, prioritization of benefits, and potential ways to measure each CBI.

Advisory Group	Date	Meeting Objectives
CRAG Meeting 2	June 2, 2021	• Reviewed the new energy planning and CEIP process, and update on EAG and public participation efforts. • Shared understanding of CBIs. • Sought input on problems facing CRAG members' customers and benefits they want to see from the clean energy transition, as well as prioritization of those benefits.
LIAC Meeting 3	July 27, 2021	• Refreshed on the energy resource planning process, provided an update on CBIs, and previewed potential distributed energy resource concepts under consideration. • Gathered input into CBI metrics, prioritization and scoring. Asked for LIAC members to share DER program concepts they're aware of.
CRAG Meeting 3	July 28, 2021	• Refreshed on the energy resource planning process, provided an update on CBIs, and previewed potential distributed energy resource concepts under consideration. • Gathered input into CBI metrics, prioritization and scoring. Asked for CRAG members to share DER program concepts they're aware of.
IRP Stakeholders Meeting 3	July 29, 2021	• Refreshed on the energy resource planning process, answered IRP/CEIP process questions, provided an update on CBIs, and previewed potential distributed energy resource concepts under consideration. • Gathered input into CBI metrics, prioritization and weighting of CBIs, CBI scoring, and initial impressions of the DER concepts and other references PSE should review.
IRP Stakeholder Meeting 4	Sept. 14, 2021	• Shared updates on the draft CEIP development and what to expect during the CEIP process extension. • Consulted on draft CEIP components specifically, draft programs, actions and cost
LIAC Meeting 4	Sept. 28, 2021	• Briefed on draft CEIP targets, programs, actions and cost • Sought feedback on draft CEIP components and LIAC participation
CRAG Meeting 4	Sept. 29, 2021	• Briefed on draft CEIP targets, programs, actions and cost • Gathered input on draft CEIP components and CRAG participation
IRP Stakeholders Meeting 5	Oct. 6, 2021	• Shared about draft CEIP • Sought input on draft DER concept scorecard and IRP participation
CRAG Meeting 5	Oct. 20, 2021	• Shared about draft CEIP, sought feedback, and encouraged providing comments to PSE via online open house, comment form or email
IRP Stakeholder Meeting 6	Nov. 3, 2021	• Shared about draft CEIP, sought feedback, and encouraged providing comments to PSE via online open house, comment form or email

Advisory Group	Date	Meeting Objectives
LIAC Meeting 5	Nov. 9, 2021	• Shared about draft CEIP, sought feedback, and encouraged providing comments to PSE via online open house, comment form or email

Burdens, barriers and opportunities

A key component of PSE's CEIP public participation process was to understand burdens and barriers facing customers and communities. PSE engaged the LIAC on this topic at its March 9, 2021 meeting and the EAG on this topic during its May 3, 2021 meeting.

Informed by this discussion, we are reviewing our programs to determine the disparity of burdens and benefits between the PSE customer base and named communities, and we are researching best practices to address these discrepancies. Table C-3 outlines the burden and barrier themes shared by the EAG and the LIAC2, and how PSE addressed them in the final CEIP.

Table C-3. How PSE addressed feedback on burdens and barriers

Burdens and barriers	PSE response
Uneven programs benefiting renters versus homeowners	PSE included specific actions intended to better reach renters. Reference Chapter Four: Specific actions. PSE will also consider this feedback in the design of programs. Renter status is also a factor of vulnerability for PSE's vulnerable population definition, as explained in Chapter Three: Highly Impacted Communities, Vulnerable Populations and Customer Benefit Indicators.
Lack of awareness and education on clean energy, including lack of awareness on purpose of programs, personal relevance, and questions on the reliability of green grid	PSE included customer education and engagement as a specific focus area for our work moving forward. Reference Chapter Five: Costs. PSE will also consider this feedback in developing future educational messaging and materials. In addition, PSE worked with the EAG to develop guiding principles to include guidance on education. Reference Chapter Eight: Future Work and Commitments.

[2] While not a specific topic of discussion for the LIAC, during the March 2021 meeting LIAC members shared about barriers facing their communities, so we added the unique feedback to this list.

Burdens and barriers	PSE response
Program access/complexity, including language and cultural barriers, complexity of navigating programs like applications and reimbursement, and lack of options for loans and financing. In addition, EAG members noted the requirement of citizenship/legal status for federally-funded bill assistance programs.	While not a direct outcome of this discussion, PSE included customer benefit indicators to address language barrier and accessibility (see Chapter Three). In addition, PSE is committed to better understanding disparities and will conduct an equity assessment (see Chapter Eight). PSE will take this feedback under advisement in program design.
Return on investment, lack of clarity related to installing solar panels and use of energy efficiency	PSE will take this feedback under advisement in program design for the specific actions outlined in Chapter Four.
Cost of participation and economic barriers, including taxes**,** cost of energy investments (e.g., new water heater) and availability of income, with low-income people have limited cash flow to take advantage of rebate programs, and that sustainable and efficient options seem to be more expensive	PSE included specific actions intended to provide opportunities for low-income customer to participate in clean electricity programs. Reference Chapter Four: Specific actions. PSE will also consider this feedback in the program design.
Trust and politics, like trust with the utility	PSE is committed to building trust with our customers and to create a better understanding of the benefits of clean electricity. PSE will proactively engage customers in the program design and implementation, and provide a high level overview on how customer benefits impact investments.
Other issues like siting infrastructure and disruption of rural areas, and lack of clarity between energy efficiency and generating more clean electricity.	Siting infrastructure is complex. Energy developers and PSE must meet all local, state and federal permitting requirements, including all applicable environmental laws and regulations.

In addition to barriers and burdens, EAG members provided feedback on potential opportunities for the transition. Table C-4 shows how PSE addressed the opportunity themes identified by the EAG.

Table C-4. How PSE addressed feedback on opportunities

Opportunity theme	PSE response
Improving quality of people's lives	A key policy of the Clean Energy Transformation Act (CETA) is to ensure all customers benefit. PSE used this perspective in developing the CEIP, customer benefit indicators, and the EAG guiding principles.

Opportunity theme	PSE response
Program access and simplification, including simplified application process and auto-qualification	PSE will take this feedback under advisement for program design.
Cost reduction tools, such as on-bill financing	
Education, like expanding communication to customers and working with community-based organizations that could reach traditionally-underserved community members.	PSE considered this feedback in development of its public participation plan for 2022-2023, and included customer education and engagement as a specific focus area for our work moving forward. Reference Appendix C, and Chapter 5, respectively.
Workforce development and creating jobs	PSE sees an outcome of the CEIP as being an increase in clean energy jobs. PSE has developed customer benefit indicators to address this, which will be used to evaluate our program decisions and request for proposals (RFP). In addition, PSE worked with the EAG to develop guiding principles for CEIP implementation to help ensure we consider workforce development as part of our effort.
Intersection of affordable housing and clean energy, like multi-family housing that supports clean electricity and saving money	PSE's energy efficiency and distributed energy resources (DER) specific actions include programs intended to support multi-family housing. Reference Chapter Four.
Changing perspectives, like creating a sense of pride, trust and feeling better about energy usage, as well as on gas stove use	PSE sees opportunities for changing perspectives as potential outcomes of outreach and education as well as new programs offerings.

Defining vulnerable populations

In May, June and September 2021, PSE held a series of conversations with our EAG to develop a more comprehensive understanding of vulnerable populations. The EAG expanded the CETA definition of vulnerable populations by

The CETA provides a list of primary attributes to define vulnerable populations divided into two classifications: sensitivity factors and socioeconomic factors. Sensitivity factors represent impacts to populations from adverse conditions and have some overlap with highly impacted community factors. Two examples cited in the legislation are low birth weight and increased rates of hospitalization. Socioeconomic factors are attributed mainly to a lack of resources to meet basic needs such as access to food and health care, and high transportation costs. Table C-5 gives a list of primary factors identified by PSE and a definition of each factor.

The EAG expanded the primary list adding factors informed by their collective experience and explored through interactive sessions with PSE. The gray-shaded factors in the table reflect factors for which PSE is either still investigating data resources that will provide metrics to apply to its customer base; or, in the case of historical red line influence, determine how to apply the available information to the present distribution of vulnerable populations within our service area. For additional details on the vulnerable populations, reference Chapter Three.

Table C-5: Vulnerable Population Factors and Definitions

Sensitive Populations (SP) Socioeconomic (SE)	Factors	Definition
SP	Disability	Percentage of households reporting a member with disability
SP	Cardiovascular Disease	Rate of death from cardiovascular disease
SP	Low Birth Weight Rates	Rate of low birth weight
SP	Higher Rates of Hospitalization	Rate of hospitalization
SP	Heat Islands	TBD
SP	Arrearage/Disconnections	Percentage of customers in arrearage/disconnected per block group
SP	Access to Digital/Internet Resources	Percentage of low digital engagement customers
SE	Access to Food	Low income and low access food flag
SE	Access to Health Care	Percentage of population with a primary care provider
SE	Educational Attainment Level	Percentage of customers with less than or high school education
SE	Estimated Energy Burden	Percentage of energy burdened customers
SE	Historical Red Line Influence	TBD
SE	Home Care	TBD
SE	Housing Burden	Percentage of population paying more than 30% of income for housing
SE	Linguistic Isolation	Percentage of households with limited English proficiency

Sensitive Populations (SP) Socioeconomic (SE)	Factors	Definition
SE	Mental Health/Illness	TBD
SE	Poverty	Percentage of households in Poverty
SE	Race (People of Color/BIPOC)	Percentage of households identifying as BIPOC
SE	Renter vs. Owner	Estimated percentage of customers renting
SE	Seniors with Fixed Income	Estimated percentage of customers over 65 at 80% or lower AMI
SE	Transportation Expense	Percentage of households with greater than a 35-minute commute
SE	Unemployment	Percentage of households experiencing unemployment

Another theme heard from the EAG was the importance of PSE tracking internal data for metrics, like tracking customers that have difficulty paying bills, notifications around disconnections, number of people requesting language assistance, and engagement with customer service representatives. Although some of these items are not directly covered by the scope of the CEIP, these are areas where PSE is reviewing data in an effort to better understand and serve the needs of its customers. Additionally, in response to this and other feedback, PSE included in the final CEIP a table comparing vulnerable populations in PSE's service area to statewide proportions (reference Chapter Three, Table 3-4).

Developing customer benefit indicators

In May and June 2021, PSE engaged with advisory groups and customers to understand the types of benefits they would like to see with the clean electricity transformation. PSE used this input to develop customer benefit indicators (CBIs), which are attributes, either quantitative or qualitative, of resources or related distribution investments associated with customer benefits described in RCW 19.405.040(8). CBIs are a new requirement for electricity planning and decision-making. The CEIP's Chapter Three describes how advisory group input was used for CBI development.

In addition to seeking input on the CBIs, PSE also sought feedback from advisory groups on the metrics. Table C-8 shares the additional feedback themes that were heard and addressed in the CEIP.

Table C-8. How PSE addressed feedback on CBI and metrics

CBIs and metrics to consider	PSE response
EAG: Measure impacts to rural customers for the CBI on decreased frequency and duration of outages	Rural customers are included as part of "all customers" and therefore capture in the CBI.
EAG: Add CBI for fish and wildlife recovery and improved water quality for salmon habitat	PSE has committed to working with stakeholders to identify future customer benefit indicators, including potential for measuring fish and wildlife impacts (reference Chapter Eight).
EAG: Add duration and frequency of service outages for "named communities" as a metric of the CBI on decreased frequency and duration of outages	PSE made this change to the CBI, which is included in Chapter Three.
EAG: Add "seniors' ability to stay in home" as a metric of community health, and community health measurement over time, i.e., 10 year	PSE is working to gather additional data points for the Improved Community Health metric, including these metrics (reference Chapter Three).
EAG: Concerns about how PSE will implement clean jobs and associated programs such as retraining displaced workers and creating apprenticeship programs.	PSE updated the clean energy jobs CBI to include the quantity and quality of clean energy jobs to begin to address this concern. Additionally, PSE collaborated with the EAG on guiding principles for CEIP implementation that includes a principle on job training (reference Chapter Eight).
IRP stakeholders: Add indoor air quality as a separate CBI.	PSE has committed to working with stakeholders to identify future customer benefit indicators, including potential for measuring indoor air quality (reference Chapter Eight).
LIAC: Reduced greenhouse gas emissions needs a more pointed metric like reduced peak demand or overall reduced load. Increased electrification might be another metric.	Based on this feedback and that of the joint advocate group, PSE adjusted the CBI on resilience to address the interest on peak demand (reference Chapter Three).
LIAC and IRP: Metrics should indicate direction and measurement specifics as well as how PSE will be evaluating.	PSE adjusted the CBIs and metrics to indicate a direction (reference Chapter Three).
LIAC: For public health, improving health outcomes might be reduction of hospital admissions for asthma.	PSE is using "total hospital discharges" as a proxy for hospital admissions (reference Chapter Three).
LIAC: For "increase in clean energy jobs" the wording in the metric on "by residents" is confusing	PSE adjusted the metric language, while keeping the focus on residents of highly impacted communities and vulnerable populations (reference Chapter Three).
LIAC: PSE already has metrics for decreasing outages and is required to clean up greenhouse gas emissions, and the	PSE did not change the metrics, as the proposed metrics address the benefit customers want to see. PSE notes emission reduction was a priority heard from IRP

CBIs and metrics to consider	PSE response
commenter noted that the idea behind CBIs was to look deeper.	stakeholders. PSE acknowledges that the CBIs and metrics will continue to evolve as the process continues.
IRP stakeholders: Energy security and resiliency should be separate categories	PSE did separate energy security and resiliency as CBI Categories (reference Chapter Three).
IRP stakeholders: CBI on jobs, consider total income generated from clean energy jobs	PSE addressed this comment in the metrics for the clean energy jobs CBI (reference Chapter Three).
IRP stakeholders: For improved outdoor air quality and greenhouse gas emissions, measure beyond electricity supply	Given the scope of CETA, PSE is measuring its emissions for the electricity supply in the CEIP. PSE anticipates continuing to work with stakeholders on metrics future CEIPs.
IRP stakeholders: Some CBIs are duplicative	PSE made some adjustments to the CBIs for the Final CEIP, while also acknowledging there is some natural overlap between CBIs and the CETA category's, and also with non-energy impacts (NEIs). PSE adds more details in the indicators, including who is affected and metrics. (Reference Chapter Three)
IRP stakeholders: Community and visual impacts of additional transmission lines – relates to home comfort and resiliency	Siting infrastructure is complex. Energy developers and PSE must meet all local, state and federal permitting requirements, including all applicable environmental laws and regulations.
IRP stakeholders: Reducing economic impact of outages maybe another helpful metric	PSE will continue to consider what metrics may be appropriate for measuring access to reliable, clean energy and work with communities to understand the impacts of outages on the local economy.

PSE also received proposed customer benefit indicators from a joint advocate group, which included advisory group members, and some of their suggested indicators and metrics have been incorporated for the Final CEIP (reference Chapter Three). PSE recognizes the customer benefit indicators will continue to evolve in the coming years.

Customer benefit indicator weighting and scoring methodology

In June and July 2021, PSE asked its advisory and stakeholder groups to provide feedback on PSE's proposed scoring and weighting methodology when using CBIs to evaluate potential clean electricity programs. PSE proposed adding a 2x weighting factor to the CBIs that are a high priority, and a score of 0, 1, or 2 corresponding to the degree of influence by each indicator.

PSE received a range of feedback from individual advisory group members on the EAG, LIAC and IRP stakeholder group. The CRAG did not provide specific feedback on this topic. The range of feedback included:

- Maximize benefits for all CBIs by giving them equal priority/weight.
- It is puzzling to weight between CBI categories, though it might work to prioritize between metrics within a category.
- Continue with PSE's suggested method of a 2x weighting factor.
- Question on how to prioritize the CBIs when the benefits conflict.
- Have customers/stakeholders weight the CBIs.
- Consider the potential outcomes of the current method and consult advisory groups again to determine if the method needs to be changed to produce more desired outcomes.
- Consider a more complex (mathematical) weighting method to produce desired outcomes.
- Suggest increasing priority of CBIs related to greenhouse gas emissions, air quality, climate change and economic benefits.
- Mixed feedback on whether to include zero as a score to show negative impacts.

PSE appreciates the time and feedback provided by advisory group members on the weighting methodology, as well as acknowledgement of some of the challenges related to weighting customer benefit indicators.

Ultimately, after considering varied and differing feedback from stakeholders on how weighting of customer benefit indicators should be conducted, and having concerns that using weightings at this time might result in unintended consequences, PSE decided to use unweighted customer benefit indicators in this CEIP. PSE will continue to solicit feedback on how to best prioritize customer benefit indicators as its understanding and application of customer benefit indicators evolves and matures, which is addressed as a commitment in Chapter Eight.

Draft programs and actions

Throughout the CEIP engagement process, PSE heard input from advisory groups on programs to consider, like community solar to reduce energy bills for low-income customers and solar options for renters. This feedback was used in developing PSE's list of distributed energy resources (DER) concepts.

In July and September 2021, PSE began engaging advisory and stakeholder groups on draft programs and actions, including the draft concept mix for DERs. PSE shared its approach for using customer benefit indicators to evaluate DERs and share the results with the advisory and stakeholder groups, with the most dialogue around these in the EAG and IRP stakeholder meetings. Table C-9 outlines the themes heard and how PSE addressed them.

Table C-9. How PSE addressed feedback on draft DER concept mix

Feedback on draft DER concept mix	PSE response
Questions on whether CBIs are only used to evaluate DER concepts	PSE outlined how it will apply CBIs to the different CEIP resources in Chapter Three.
EAG: Comments on addressing impacts to small businesses	In Chapter Three, PSE noted that its proposed DER preferred portfolio is our initial path to meet CEIP targets with a diverse set of distributed energy resource programs. The All-Source and Targeted DER RFPs will provide important data on available resources and programs. Resources we acquire through those processes may vary from what is reflected in the DER preferred portfolio. Options for hybrid or other programs may become available for businesses or income-eligible customers.
EAG and IRP: Suggestion to include the Hybrid Solar and Battery program to named communities and commercial and industrial customers.	
EAG, LIAC, IRP and CRAG: questions or concerns about leasing programs	PSE appreciated the dialogue on concerns around leasing programs and made some clarifications to the naming of those programs so they accurately reflect the intended purpose. Discussion of the DER program concepts, as well as considerations around incentives and program design for income-eligible customers to further reduce or eliminate fees to increase affordability are addressed in Chapters 3 and 4. As noted in these chapters, the final program designs will be based on the results of the Targeted DER RFP and engagement with community members.
IRP stakeholders: Amount of residential batteries for named communities seems small	The estimated MW for residential batteries for named communities is based on the market potential available in Appendix K. Resources we acquire through the Targeted DER RFP process may vary from what is reflected in the DER preferred portfolio shared in the CEIP.
IRP stakeholders: Community solar could make solar accessible to named communities	PSE heard this feedback from multiple advisory groups throughout the CEIP development process and included it in the DER preferred portfolio, including a community solar program expansion (reference Chapter Four).

Feedback on draft DER concept mix	PSE response
IRP stakeholders: Virtual net metering is another program to consider, and increase 4 percent net metering	PSE addressed these comments in Chapter Four. As outlined in Chapter Four, PSE's Net Metering program (Schedule 150) reflects RCW 80.60, WA State's Net Metering law. This law does not allow virtual net metering. Before reaching the 4 percent of 1996 peak load cap on generating capacity under the current kWh credit structure, PSE will work with stakeholders to propose a fair and equitable means of compensating future net metered customers.
IRP stakeholders: Total amount of solar is smaller than what's installed by stakeholder annually	For this initial CEIP, we adopt a sub-target of 80 MW of distributed solar capacity in 2025, which is the same amount from the IRP preferred portfolio. The market potential evaluation, as described in Appendix K, indicates this sub-target reflects a feasible market adoption rate.
IRP stakeholders: Combine opportunities for solar panels when evaluating weatherization (example non-profits in California)	PSE will take this feedback under advisement for program design.
IRP stakeholders: Suggest on-bill financing for low-income customers as alternative to leasing	
IRP stakeholders: Resources could include Orcas Power & Light Cooperative (OPALCO), Energy Trust of Oregon and Van Jones for solar rebate programs	

In addition, in September, October and November 2021, PSE shared about its specific actions outlined in the draft CEIP. In general, feedback on the specific actions was focused primarily on seeking more details. PSE provided more details to the extent known in Chapter Four and Appendix L.

Public participation

In March 2021, PSE sought feedback from the LIAC, CRAG and IRP stakeholders on public participation for the CEIP process. PSE heard feedback from stakeholders on:

- Providing materials in other languages, which the CEIP delivered on through translation of the CEIP website, fact sheets, survey, online open house, and notification materials.
- Engaging with the CEIP team during their regular meetings, which was the approach taken by the CEIP team.

- Providing additional opportunities for highly impacted communities and vulnerable populations to give input into the CEIP process outside of the EAG, which PSE included tactics for doing so in its public participation plan, including "go to you" meetings with community-based organizations and multilingual sessions.

As PSE engaged the EAG, PSE heard significant feedback around the need for more education on and awareness of clean electricity programs, the need for more accessible communications, and suggestions to reach named communities through partnerships with community-based organizations. PSE addressed this feedback in including a specific focus in the CEIP on education and awareness, inclusion of a new CBI on "culturally- and linguistically-accessible program communications," updates to its public participation plan, and guiding principles for CEIP implementation. In addition, the EAG requested to have increased involvement in community engagement planning and activity, which PSE and the EAG are working to formally address in the group's charter.

PSE also heard suggestions from advisory groups regarding opportunities to engage customers on the CEIP:

- Offering live interpretation, which was addressed through PSE's online open house website including translated content.
- Adding an open-ended question at the end of the online open house survey, which PSE included.
- Providing an incentive for participation, which PSE did by offering survey participants a chance to win a gift card.
- Adding a chat platform to the online open house, which PSE did not add for this CEIP but will consider in the future.
- Sharing the partner toolkit, which PSE shared with the EAG.
- Adding an after-hours briefing on the draft CEIP, which PSE addressed by adding an online webinar session for community-based organizations and others interested in the CEIP on November 8, 2021 from 5:00 to 6:00 p.m.

Guiding principles for CEIP implementation

PSE and the EAG collaborated on guiding principles for CEIP implementation during the group's September 27th, October 4th, and November 1st meetings. PSE shared the draft principles at the September 27th meeting and sough EAG feedback on them during that meeting and the October 4 meeting. The revised guiding principles were included in the draft CEIP.

At the November 1 meeting, PSE shared the revised guiding principles and suggested applying the EAG's equity framework of accessibility, affordability, and accountability to them. EAG members provided feedback on the principles and the majority of EAG members agreed that the guiding principles were appropriate to include in the CEIP, with the knowledge that PSE will revise the principles and return with edits and updates for the EAG. The final guiding principles are listed in Chapter Eight.

Feedback on draft CEIP

PSE met with each of the advisory and stakeholder groups to share details about the draft CEIP and seek initial feedback. In general, advisory group members and stakeholders had questions about the draft CEIP and some said they were still reviewing the plan. PSE addressed questions during the advisory group and stakeholder meetings and encouraged advisory group members and stakeholders to comment via the online open house, comment form, and/or email. Table C-10 outlines how PSE addressed the feedback heard during these meetings.

Comments from advisory group members and stakeholders sent via email, comment form, or the online open house survey are summarized and addressed in Appendix C-2.

Table C-10. How PSE addressed feedback on draft CEIP

Feedback on draft CEIP	PSE response
IRP stakeholders: Speed up the clean electricity transition, specifically renewables to address urgency of climate change	PSE agrees we must act urgently on climate change, while also continuing to ensure customers have clean, safe, reliable and affordable electricity. Transitioning to clean electricity will increase customers' bills. PSE balanced the calls for moving faster while maintaining cost increases at just above an average of 2 percent per year, which amounts to an additional ~$6/month per residential customer in 2025.
IRP stakeholders: Cost isn't the only factor for the transition, another factor is climate change	
IRP stakeholders and LIAC: Request for more details on specific actions	In this CEIP, PSE is providing the best information available at this time. The primary specific actions for this CEIP are conducting the All-Source RFP and the Targeted DER RFP process to pursue the specific and interim targets identified in the CEIP. The results of those RFP processes will be reflected in the 2023 biennial CEIP update.
IRP stakeholders: CEIP should be standalone document where you don't have to jump to other reference documents	PSE understands the interest and has made efforts to embed links to Appendices and other areas of the report within the timeframe provided.
IRP stakeholders: Suggestions to update the generic costs in the CEIP, including using National Renewable Energy Laboratory' (NREL) updated Annual Technology Baseline	PSE conducted additional analysis to correct transmission costs, and updated its resource costs by using NREL's 2021 Annual Technology Baseline (ATB) cost data (refer to Chapter Two).

Feedback on draft CEIP	PSE response
IRP stakeholders: PSE should use costs from its All-Source RFP, and share the costs with IRP stakeholders	PSE did not use costs from its All-Source RFP for the reasons outlined below, although we did do some preliminary analysis to compare the NREL ATB costs with the range of bids received in the All-Source RFP. While there are differences, in general, NREL ATB's cost assumptions appeared to be directionally closer to the range of bids received in the All-Source RFP than to the IRP generic resource cost assumptions. For details, refer to Chapter Two. PSE must be careful not to violate the terms of Mutual Confidentiality Agreements (MCAs) with bidders. There are a few reasons why sharing RFP cost information with public stakeholders while the RFP is still in progress would be problematic and of questionable RFP practice: 1. PSE is in the early stages of the RFP. It is premature to draw conclusions about costs while the feasibility of projects is still being evaluated. Doing so would otherwise give rise to misleading information about actual costs, including transmission and integration costs for delivery to PSE's load. 2. Sharing of resource costs, even in aggregated form, can influence bidder behavior in subsequent phases of the RFP, including contract negotiation. This could hamper PSE's ability to achieve the lowest reasonable cost for our customers. 3. Certain resource categories would in any event be impossible to anonymize because of the limited number of bids received. 4. Because of varying terms and costs included in bidder pricing, RFP prices and other sources of price data need to be adjusted to enable comparison on a similar basis. Note that resource costs in an RFP are almost exclusively in the form of power purchase agreements, which are not directly comparable to the capital and Operations and Maintenance (O&M) costs used in the IRP. PSE's Resource Acquisitions team is careful about sharing RFP cost information during the RFP process even within PSE itself, limiting this to the IRP/CEIP planning groups and certain subject matter experts who are involved in the proposal evaluation process. When the RFP has fully concluded, PSE would be able to share aggregated cost information with stakeholders, subject to confidentiality provisions in the MCAs with bidders.

Feedback on draft CEIP	PSE response
IRP stakeholders: Increase implementation of time-varying rates (TVR)	We appreciate and share stakeholders' urgency to accelerate TVR deployment beyond a pilot; however, the Company believes a pilot is necessary to protect customers by allowing the company to evaluate appropriate rate/price signals as it relates to a winter-peaking utility with a more limited set of volunteer participants. The preponderance of evidence regarding TVR rates at large is applicable to summer peaking utilities and considerably less information is available for winter peaking utilities. Once we have a better understanding of what price signals avail customers and the system of meaningful savings opportunities, we'd put forward to the Commission those calibrated rates for an opt-in tariff as soon as practicable. This is addressed in Chapter Four.
IRP stakeholders: Accelerate deployment and increase the amount of DERs, including multi-family and community solar projects	PSE continues to balance deployment of these new DER and integrating them into PSE's system with other factors such as feasibility, costs and regulatory process. PSE will look to the Targeted DER RFP in determining the mix of distributed programs and continues to work with stakeholders in the design and implementation phase of these distributed programs. PSE agrees that DER programs should include those for named communities. Draft program concepts were included in PSE's analysis and in specific actions (reference Chapter Four).
IRP stakeholders: PSE should explore on-bill financing	PSE will take this under advisement for program design.
IRP stakeholders: Demand response should include grid integrated water heaters.	We agree this program has promise; however, demand response water heaters are facing supply chain issues and are still in the early programmatic state. We anticipate these heaters may potentially be ready for consideration in future CEIPs, and we'll know more with the results of the Targeted DER RFP that will be published in the first half of 2022.
IRP stakeholders: Concern about PSEs ability to deliver on amount of renewables and whether utility will need more tools, like eminent domain	PSE has put forth an ambitious, yet it achievable, CEIP. There is a separate statewide CETA Transmission Corridors Workgroup where this topic may be addressed.
LIAC: Lingering concerns about leasing programs and acknowledgement of draft CEIP including this input in program design	PSE has acknowledged these interests in Chapter Four and Appendix D.
LIAC: Suggestions for designing subsidized battery storage programs	

Feedback on draft CEIP	PSE response
for rural, low-income customers in low-reliability areas	
EAG: Suggestion that PSE design DER programs to transfer more control to customers and low-barrier, low/no cost ownership options for DER programs	PSE has acknowledged these interests in Chapter Four and Appendix D.
EAG: Feedback on draft guiding principles for implementation	PSE incorporated the EAG's feedback into the guiding principles shown in Chapter Eight.

Other feedback

PSE also received feedback from advisory group members and stakeholders on other topics, which are summarized below. While not all are addressed or within the CEIP, the feedback has been shared with the relevant project teams at PSE.

- Accelerating equity: PSE and the EAG continued to refine the definition of equity and the EAG suggested the working definition include "accelerate equity," so that PSE is considering equity as accessibility, affordability, accountability that accelerates equity.
- Process adjustments: During advisory group meetings, PSE received feedback on ways to make the CEIP public participation process more helpful to stakeholders. PSE worked to address this feedback in the following ways:
    - Provide more time for stakeholder feedback on CEIP topics: PSE successfully petitioned the UTC to extend the CEIP process to allow more time for advisory group discussions.
    - Add acronym list to presentations: PSE added acronym lists to all CEIP-related presentations.
    - Add breakout group questions to the posted presentation ahead of the meeting: PSE added breakout group questions in the posted presentations.
    - Address feedback heard and how it was used at the start of meetings: PSE has addressed feedback at the start of meetings.
    - Facilitate feedback reports in meeting materials: PSE added links or copies of feedback reports to meeting materials.
    - Interest in cross-advisory group meetings: PSE tailors meeting information based on the advisory group and their role in the CEIP process. For this first CEIP,

there was not a clear opportunity for such a meeting. PSE continues to consider this feedback for opportunities during the implementation process.

  - Request to post final meeting materials earlier: PSE posts materials three business days in advance of the meeting, and we continue to work to hone and address stakeholder feedback up until the meeting time. PSE adjusted the final presentation format to use the "added" and "updated" notes to help identify presentation slides that changed.

- Questions and concerns about the 2021 IRP: Throughout the CEIP development process, IRP stakeholders had questions and concerns about the 2021 IRP, including on analysis of climate change temperatures and load forecasting and effective load carrying capability. PSE responded to questions on the 2021 IRP during briefings with IRP stakeholders and in feedback forms available on the CEIP website. PSE also committed to addressing some of these topics as part of developing its 2023 IRP Progress Report, which is documented in Chapter Eight.

- Questions and concerns about peaking capacity: PSE is currently in an acquisition process with the intent to acquire CETA-compliant resources to address the capacity need identified beginning in 2026, which is outside the scope of this first CEIP. However, we understand customer interest in it and want to provide some clarity on this topic.

  - Generic capacity peaking resource need identified for 2026, outside of CEIP period: The 2021 IRP included a generic peaking plant operating on biodiesel as a CETA-compliant capacity resource and cost-effective means of ensuring reliability. The IRP identified the need for this new resource in 2026, which is outside the 2021 CEIP's implementation plan period of 2022-2025.

  - Priority is a CETA-compliant peaking resource: The 2021 IRP specifically identified the peaking plant's fuel as biodiesel, as it is CETA-compliant. This remains our preference.

  - Reviewing resources now through All-Source RFP: PSE is in the process of evaluating responses to the 2021 All-Source RFP, which requested and prefers CETA-compliant capacity resources. There were biofuel generation options proposed to PSE in response to the All-Source RFP. PSE does not have a self-build option in the RFP, nor does PSE have a peaker plant under development.

  - 2023 biennial CEIP update will include an update on peaking capacity resources: We understand stakeholder interest in peaking capacity resources needed early in the second CEIP implementation cycle (2026-2029). PSE will incorporate the

results of the 2021 All-Source RFP into the 2023 IRP Progress Report and 2023 biennial CEIP update.

- Energy bill assistance is critical to customers: Throughout the CEIP development process, EAG members emphasized the importance of bill assistance to vulnerable customers.

- Arrearages and disconnections: Throughout the CEIP and CBI development, stakeholders emphasized the need to monitor and evaluate PSE's statistics related to arrearages and disconnections, and evaluate programs to mitigate these risks to customers. PSE has an existing process to identify and provide assistance to customers facing these challenges. The process and the reporting for these processes are reported on with the Washington Utilities and Transportation Commission each year. See PSE's reporting on arrearages, disconnections, and bill assistance in Docket UE-190529 pertaining to the COVID19 pandemic, including PSE's Disconnection Reduction Plan.

- Natural gas transition and incentives for fuel switching: PSE heard from advisory group members calls to reduce customer natural gas use and more opportunities and incentives for customers to electrify. Currently, Washington has different regulatory systems for reducing greenhouse gas emissions from different fuels. CETA, passed in 2019, is focused on reducing greenhouse gas emissions from electricity. Reducing emissions from natural gas is covered under Washington's Climate Commitment Act, passed by the 2021 legislature. The process to define that system is just starting. Energy efficiency incentives we offer today are based on energy savings, rather than greenhouse gas emissions reductions. With the addition of greenhouse gas emissions reduction requirements, new programs may emerge that are focused on greenhouse gas emissions and carbon reduction.

This is the first of many CEIPs. PSE appreciates the feedback and engagement by the advisory groups and stakeholders throughout the CEIP development process and looks forward to ongoing engagement on implementation and the forthcoming 2023 biennial CEIP update.

To view advisory group materials, review Appendix C-3.

PUGET SOUND ENERGY

Response to comments on Draft Clean Energy Implementation Plan

Overview

Following filing of the draft Clean Energy Implementation Plan (CEIP) on October 15, 2021, PSE hosted a public comment period through Nov. 12, 2021 (refer to Chapter Six for details). This appendix summarizes the comments received and how PSE addressed them in the final CEIP, filed on December 17, 2021.

We appreciate customer, advisory group, tribal government, and other community members' engagement in the comment period and for their feedback.

Shown below is a list of commonly used acronyms in this appendix. For the broader acronym and definition list, reference the final CEIP.

Acronym	Meaning
BCA	Benefit-cost analysis
BCP	Biennial Conservation Plan
CBI	Customer benefit indicator
CEAP	Clean Energy Action Plan
CEIP	Clean Energy Implementation Plan
CETA	Clean Energy Transformation Act
C&I	Commercial and industrial
CPA	Conservation Potential Assessment
DER	Distributed energy resource
DR	Demand response
EAG	Equity Advisory Group
GRC	General rate case
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)
NEI	Non-energy impacts
NREL ATB	National Renewable Energy Lab's Annual Technology Baseline 2021 Report
NWA	Non-wires alternative
PPA	Power purchase agreement
RFP	Request for proposal
SCT	Societal cost test
SCGHG	Social cost of greenhouse gas emissions
T&D	Transmission and distribution
TVR	Time-varying rates
VP	Vulnerable Populations
WUTC	Washington Utilities and Transportation Commission, which regulates PSE

Washington Utilities and Transportation Commission (WUTC) staff comments

Category	Comment	PSE response
Interim Targets	At the beginning of Chapter Two, PSE describes the utility's current state of CETA compliance. There is a difference between renewable energy generation and the actual energy supplied to meet retail sales. The rulemaking under docket UE-210183 should provide some clarity on what the Commission expects. In the meantime, Staff expects PSE to provide a detailed discussion in the final CEIP about how the current state of CETA implementation could affect the Company's proposed targets and actions.	PSE added some narrative in Chapter Two to better describe the assumptions it made in its CEIP modeling on this issue.
	Conservation / energy efficiency – The "new energy efficiency" row in Table 2-1 includes a footnote specifying that the figures have not been updated, so it is difficult to provide useful feedback. Staff trusts that the figures used for this table in the final CEIP will align with the BCP. Staff encourages PSE to include references or some narrative helping the reader connect the contents and targets proposed in the BCP with the interim targets proposed in Table 2-1.	PSE updated tables and narrative in Chapter Two to reflect alignment between the final CEIP and 2022-2023 Biennial Conservation Plan (BCP). The update shows a connection between the Final BCP total conservation goal and the target for Energy Efficiency in the CEIP period.
	Informed by / consistent with 2021 IRP – Staff understands that the Company recently found that some adjustments to its IRP modeling inputs were necessary, and that making these adjustments has led to some shifts in its CEIP targets and actions when compared to the preferred portfolio in the final 2021 IRP. Staff encourages the Company to clearly describe the modeling issues addressed and describe how the resulting CEIP is informed by and consistent with the core of the 2021 IRP. Additionally, PSE should clearly call out these and any other modeling adjustments in its data support files submitted with the Company's final CEIP	PSE describes the changes that were made in modeling between the 2021 Integrated Resource Plan (IRP) and Clean Energy Action Plan (CEAP) and the Final CEIP. These changes are explained in Chapter Two. PSE provides Figure 2-4 illustrating the steps taken to incorporate updates into the model, as well as a detailed explanation as to why each update was made.
	Impact of median water year – On page 12, PSE reports that 35 percent of PSE's retail sales was supplied by CETA-qualifying resources. We understand this figure to be tabulated using historical data. We recommend that the final CEIP include a calculation for 2020 compliance adjusted for a median water year, with a brief narrative explaining how this adjustment is made.	PSE added a table and narrative to Chapter Two explaining the impact of median water year and how the adjustment was made.
Specific Targets	Quantification of costs and benefits / forecast of distribution of energy and nonenergy impacts – Each specific target area should be accompanied by a forecasted distribution of nonenergy costs and benefits. Staff understands that additional work is underway to make a robust forecasted distribution possible. This analysis must be completed for each target to the degree information is currently available. If a full analysis is unavailable, a full narrative should be provided in the final CEIP explaining what information is still needed, how the information could modify the Company's plans, what next steps to obtain this data will be taken, and when the Company will update its CEIP with the new information.	PSE addresses the equitable distribution of benefits and non-energy benefits at the beginning of Chapter Three. PSE describes a framework from which to evaluate the equitable distribution of benefits, and the gaps to completing this analysis. PSE provides the details needed for the future as well as a commitment with a timeline in Chapter Eight.
Energy efficiency targets	Impact of CBIs: Staff recommends addressing why there is currently no adjustment to the EE target stemming from any additional value as considered through the Company's proposed CBIs. Staff expects that the biennial conservation plan contains significant discussion around EE for Named Communities. We will provide a deeper review of the recently filed BCP through the CRAG's process and through Docket UE-210823. While Staff supports PSE's efforts to form an internal DEI Committee, the description of this effort on pg. 64 seems out of place.	Because of the timing of these two distinct processes, the customer benefit indicators (CBI) developed through the CEIP process were not available in time to influence development of the BCP this year. However, PSE uses non-energy impacts (NEIs) to develop the target and programs in the Final BCP. As discussed in Chapter Three, these NEIs reflect some of the same principles as the customer benefit indicators, and provide a value to the components of each program. In the future PSE will use customer benefit indicators to determine programs for energy efficiency, in line with the ongoing work for NEIs.
	Conservation and Named Communities: Staff expects that the biennial conservation plan contains significant discussion around EE for Named Communities.	PSE acknowledges a need for specific demonstration of how its energy efficiency programs impact low income and named communities and is committed to exploring ways to demonstrate how energy efficiency programs affect low income and named communities in the next BCP planning cycle. New data collection technologies and reporting mechanisms are needed to dissect energy efficiency programs to this level of specificity.

Category	Comment	PSE response
Demand response target	Relatively low targets for this CEIP planning period: Staff struggles to reconcile estimates of DR potential provided by other stakeholders with the cost-effective DR selections in PSE's 2021 IRP. This is an area of ongoing review and discussion.	The conservation potential assessment represents the most up-to-date information regarding assessing demand response potential. Therefore, this target and mix of demand response programs represents what is achievable over the four-year period. However, as PSE receives additional insight from its Targeted Distributed Energy Resource (DER) Request for Proposal (RFP), which includes demand response, this target may be updated.
	Timeline for time-varying rates pilot efforts: While the timeline for rollout of an opt-in customer pilot for time-varying rates does not strike Staff as unreasonable on its face, we wonder whether such efforts could be accelerated. Time-varying rates are not new in the utility space. Staff encourages PSE to consider whether the timeline could be adjusted to shorten the timeline between pilot launch and conclusion. Staff also encourages the Company to provide additional narrative describing a) what knowledge PSE is seeking with this pilot, and b) how that knowledge and experience might inform any system-wide rollout of TVR on a non-pilot basis.	We appreciate and share the Commission's urgency to accelerate time-varying rates (TVR) deployment beyond a pilot; however, the Company believes a pilot is necessary to protect customers by allowing the company to evaluate appropriate rate/price signals as it relates to a winter-peaking utility with a more limited set of volunteer participants. The preponderance of evidence regarding TVR rates at large is applicable to summer peaking utilities and considerably less information is available for winter peaking utilities. Once we have a better understanding of what price signals avail customers and the system of meaningful savings opportunities, we'd put forward to the Commission those calibrated rates for an opt-in tariff as soon as practicable. The design process of the TVR Pilot has been open to multiple stakeholders, including WUTC Staff. PSE is happy to share the materials shared and refined with stakeholders throughout the design process. While the evaluation, measurement and verification process is being finalized, the requested narratives will be detailed in PSE's upcoming General Rate Case (GRC) pre-filed testimony. This is addressed in Chapter Four.
Specific actions	Actions taken during 2022-2025 related to future resources: PSE's preferred portfolio in the 2021 IRP includes the selection of peaking capacity in 2026. Such resources would necessitate taking meaningful action during the 2022-2025 compliance window. To the extent PSE is engaging in activities that are relevant to the resources and programs to be more meaningfully pursued in the next CEIP compliance window, those activities should be described in this CEIP.	PSE is currently in an acquisition process with the intent to acquire Clean Energy Transformation Act (CETA)-compliant resources to address the peaking capacity need identified beginning in 2026, which is outside the scope of this first CEIP. The 2021 IRP included a generic peaking plant operating on biodiesel as a CETA-compliant capacity resource and cost-effective means of ensuring reliability. The IRP identified the need for this new resource as in 2026, which is outside of the 2021 CEIP's implementation plan period of 2022-2025. The 2021 IRP specifically identified the peaking plant's fuel as biodiesel, as it is CETA-compliant. This remains our preference. PSE is in the process of evaluating responses to the 2021 All-Source RFP, which requested and prefers CETA-compliant capacity options resources. There were biofuel generation options proposed to PSE in response to the All-Source RFP. PSE does not have a self-build option in the RFP, nor does PSE have a peaker plant under development. PSE will incorporate the results of the 2021 All-Source RFP into the 2023 IRP Progress Report and 2023 biennial CEIP Update.
	In general, if PSE anticipates requesting cost recovery associated with a specific action or project, then the Company should include sufficient detail in the CEIP submitted for Commission approval explaining – - how the specific action was selected; - how the specific action meets a specific need; - what the specific action is likely to cost; - any additional work to be done before PSE makes acquisition decisions; and - supporting data and analyses that justifies the above, narrative-based assertions.	PSE describes in more detail across Chapter Four and Five the specific actions, what specific need they satisfy, and how they help meet the goals of CETA and the costs associated with them. Supporting data is provided in Appendix E, F and L in the final report.
	Logic model for communicating PSE's decision-making process: Staff notes that a visual representation of how inputs or resources flow through the specific actions and the results of those specific actions provides strong support for the approval of those specific actions. These logic models will provide both a visual and clear demonstration of correlation between the benefits and burdens of specific actions and the outcomes for Named Communities, directly linked to the customer benefit indicators.	PSE refined the detailed narrative in Chapter Four about the burdens and benefits for each specific action. PSE illustrates the flow of information in Chapter Three as a framework for an equity assessment as well. PSE will continue to refine this visual representation as we continue to engage with stakeholders.

Category	Comment	PSE response
	DER solar programs: The many flavors of programmatic DER acquisition are well-described. The forecasted costs and energy associated with the programs are fleshed out in Appendix K. Staff has not had a chance to give the Black & Veatch report a thorough reading. In an initial review, we do not see any consideration of CBIs in the study. We have some lingering questions around PSE's decision-making process for programs that are not selected expressly on the basis of cost-effectiveness. PSE should make the costs and benefits associated with each program variety more comparable, and should clearly describe the Company's proposed acquisition framework. This should be easy to do in the final CEIP, as the DER-focused RFP draft will be filed well before the CEIP deadline.	The decision-making process for selecting a proposed mix of DER programs is described in Chapter Three. In this chapter PSE highlights how PSE took a mix of cost and customer benefits to select a preferred portfolio of DER concepts. The basis for selection of this mix is described in the CEIP as it relates to customer benefits. However, this mix is not definitive, as PSE is undergoing a Targeted DER RFP to get a better understanding of the programs and concepts that PSE could launch. PSE describes how customer benefit indicators will be used in the Targeted DER RFP in Chapter Three and Chapter Four, including the scoring of indicators for each proposal.
	Non-wires alternative actions: The CEIP describes three projects presented in the context of CETA compliance. Staff will withhold assessment of the merits of each project for now. Based on what is presented in this draft, it is not clear whether these projects are driven by CETA compliance needs or by distribution system needs	PSE added language in Chapter Four to underscore the CETA compliance need for these projects. Although these projects are not seen as incremental, they are driven by distribution needs and included because the energy form these projects count towards the CETA target calculated in Chapter Two.
	DER BESS actions: These proposed actions as described in Chapter Four form a reasonable foundation for future, expanded programmatic acquisition of energy storage resources. Given the size of the programs and the relatively new nature of the technologies, we wonder whether these would fairly be described as pilot programs. We encourage the Company to describe why the proposed actions are sized appropriately, and why the costs associated with the programs are preferred to expansion of other proposed specific actions.	Given PSE's limited current experience with battery storage technology, especially behind-the-meter and aggregating for grid-scale use cases, selective pilot of technology will be considered for roll-out to ensure effective utility application and customer experience. Pending results of Targeted DER RFP, program design will clarify which program concepts for pilot roll-out and enrollment. Scale of DER program concepts was provided by a third-party, independent consultant and subject matter expert, Black & Veatch. Refer to Appendix K for details on market potential and basis for modeling. Refer to Appendix D-5 and Appendix D-6 for details for consideration of programs concepts for programs, pilots, etc.
	Enabling technologies and portfolio planning – PSE's draft CEIP dedicates many pages to describing a variety of prerequisite actions and technologies the Company plans on pursuing to enable programmatic DER acquisitions. While the level of detail clearly conveys that this direction is a priority for the Company, it is challenging to assess whether each of these many proposed actions a) is a prudent decision for the Company, and b) must be pursued due to CETA's requirements. For example, "Grid modernization: Grid Enablement" has an estimated cost of $57.5 million, with the CETA-related benefit of increasing circuit hosting capacity by roughly 15 MW (pg 141). If pursued solely for this added hosting capacity, this investment seems very expensive, but perhaps in the context of expected distribution investments and with the inclusion of anticipated benefits associated with CBIs, the decision is straightforward. Appendix G offers a helpful explanation of these many efforts, but does not connect PSE's modernization strategy to the Company's CETA obligations. While the topic is explored somewhat in the CEIP's incremental costs section starting on page 157, Staff encourages PSE to disaggregate the multifaceted benefits of these projects. This would help Staff and stakeholders to better understand PSE's proposed assignment of costs as seen in "Enablement Allocation %" in column H of worksheet "4C. Enablement and Grid Mod Bud" in Appendix E.	PSE outlines the prudency of these investments and the justification for them in more detail in Chapter Four and Chapter Five of the final report. This includes a breakdown of the allocation for each investment.
Customer benefit Indicators (CBIs)	Wherever possible, PSE should provide a goal metric for each CBI more specific than simply directional. To the extent directional estimates are all that can be provided at this time, the CEIP should describe the Company's planned efforts to collect data related to its proposed CBIs.	At this time, PSE can provide qualitatively the benefits customers may receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight.

Category	Comment	PSE response
Methodology	Resource Adequacy – In Chapter Two, PSE describes how it will "maintain resource adequacy" broadly, and points to its 2021 IRP regarding a complete discussion. Further, in Chapter Eight, PSE describes future work and commitments, including implementing climate change analysis, updating resource-specific effective load carrying capabilities (ELCCs), and updating the load forecast and resource adequacy analysis. Staff requests that PSE fully describe how the specific actions in the CEIP are consistent with the utility's resource adequacy requirements in WAC 480-100-640(6)(e), including measurement metrics consistent with RCW 19.405.030 through 19.405.050, and how the specific actions in this plan will allow the Company to meet this standard.	PSE provides details and narrative on how the CEIP meets resource adequacy. These details are in Chapter Two.
Customer benefit Indicators (CBIs)	Assessing possible specific actions with CBIs: As PSE has heard, Staff is puzzled by the 0/1/2 scoring methodology used to assess possible specific actions in terms their impact on the Company's proposed CBIs. An explanation should be provided for this scoring methodology that demonstrates how the commission will be able to assess whether the Company is in compliance given that an equitable distribution of benefits is predicated on the amount of benefits. It is confusing that 0 conveys a negative or neutral impact and that 1 conveys some positive impact or neutral impact. Additionally, PSE should provide rationale for the scores that the Company has assigned to resources and programs.	The methodology of the 0/1/2 rubric used to score the DER program concepts was intended to create a transparent, straight-forward, and comparable framework to evaluate and score each of the CBIs. Refer to Appendix D-3 for details of evaluation and scoring of 0/1/2 rubric as response to metrics established for each of the CBIs. PSE currently has limited data on DER performance, cost, and savings due to limited deployments to date. In addition, the more qualitative / relative nature of some CBIs lends itself to a simplified scoring metric for each indicator. A "0" denotes that a benefit is either not applicable, very limited, or in limited cases, negative in impact. A "1" denotes that the benefit does apply but may not be significant. A "2" denotes that a benefit does apply and that it is more significant. The rubric is adapted to each CBI to best create a measure for each of the DER program concepts that is unbiased and creates comparability across all program concepts, as well as other generation resources.
	Under the Customer Benefits section in Chapter Four, it is not clear what PSE means by, "in line with regional resource adequacy program in development by the Northwest Power Pool." In terms of customer benefits, how does the evaluation of resource-specific contracts relate to, or compare with, the development of regional resource adequacy assessments?	We understand that this content in the draft CEIP was confusing, and as we reviewed we decided to take this statement out.
	PSE should also provide an explanation for why PSE has chosen not to prioritize CBIs	PSE addressed comments on how CBIs will be used to evaluate resources, scoring for DER concepts, rationale for equal weighting, and plans for evolving the weighting methodology in the future in Chapter Three.
	Staff recommends an additional process to finalize the customer benefit indicators (CBIs) involving a discussion based on the quantitative results while considering qualitative and anecdotal feedback as well.	At this time, PSE can provide qualitatively the benefits customers will receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update.
	Proposed CBIs: It is clear that "reduced cost impacts" and "affordability of clean energy" are the same metric, but one applies to all customers, and the other to vulnerable populations and highly impacted communities. Perhaps rename these CBIs "affordability for all customers" and "affordability for named communities," or something more transparent. Additionally, both of these metrics need to distinguish and separately capture any reductions in cost associated with resources and cost reductions associated with bill assistance.	PSE has merged these two indicators into one, and still maintains the need to track and measure affordability for all PSE customers and also specifically for highly impacted communities and vulnerable populations. This combined indicator, "improved affordability of clean energy" measures the percentage of income spent on electricity bills and energy burden for customers.
	Table 3-17: It is not clear to Staff what this table is meant to convey. We'd encourage a clearer explanation of the table's contents and how the analysis contained in the table informed PSE's proposed CBIs or its proposed specific targets and actions.	This table was removed and the section includes some refined language with Table 3-3.

Category	Comment	PSE response
	Weighting and prioritization: -Appendix L: This appendix provides some linkages between specific actions and their possible impacts to CBI categories. The analysis is qualitative, even speculative in nature. It may not be feasible for PSE to quantify these CBI impacts within its current 2021 CEIP development. However, PSE needs to provide a clearer path forward than simply saying, "it will continue to investigate ways to address [such gaps] in its 2023 CEIP update" (pg. 63). Staff recommends that PSE commit to a timetable for augmenting its existing portfolio modeling to incorporate its CBIs. The table organization is well-done, though we hope the amount of "TBD" instances can be reduced in the final CEIP, particularly regarding whether resources will be located in highly impacted communities, will be governed by, serve, or otherwise benefit highly impacted communities or vulnerable populations in part or in whole. We suggest switching CBI categories as column headers with the proposed CBIs themselves. The table could also be adopted to include quantified metrics, when available. As it is, the level of detail provided in Appendix L does not satisfy Staff's understanding of the requirements in WAC 480-100-640(5) and paragraph 64 of General Order R-601. Appendix L should offer more specificity in the final CEIP. PSE must also mitigate risks to highly impacted communities and vulnerable populations. Must discuss how specific actions will specifically consider and mitigate risks to highly impacted communities and vulnerable populations. The list of potential benefits to Named Communities listed after each specific action is not detailed enough.	At this time, PSE can provide qualitatively the benefits customers will receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update. In Appendix L, PSE has also updated categories to match customer benefit indicators.
	Assessment of current benefits and burdens and projected impact of specific actions on distribution of benefits and burdens during implementation period: It appears that PSE attempts to briefly describe potential benefits associated with each specific action. In Staff's view, this does not satisfy the requirement in WAC 480-100-640(6)(b)(i) and (ii). PSE should provide an assessment of current burdens and benefits on customers by population and location. PSE should also provide the projected impact of specific actions on distribution of benefits and burdens during implementation period. The list of potential benefits under specific actions is not sufficient. There is no discussion of burdens	PSE is addressing the equitable distribution of benefits and non-energy benefits at the beginning of Chapter Three. PSE describes a framework from which to evaluate the equitable distribution of benefits, and the gaps to complete this analysis. PSE provides the details needed for the future as well as a commitment with a timeline in Chapter Eight.
	Appendix H – CBI metrics: Staff recommends that the Company separately track and report the participation in programmatic resource acquisition (EE, DR and other DER programs) from participation in Bill Assistance programs. PSE should show both Named Communities and all customers within these two categories.	PSE has updated this customer benefit indicator to specifically track and report within named communities as described in Chapter Three.

Category	Comment	PSE response
	Staff appreciates PSE's efforts to include a significant amount of background materials in its draft CEIP filing. Staff also commends the Company for its helpful use of bookmarks and links within the .PDF files, which makes the draft CEIP much easier to navigate. Staff recognizes the strides that PSE has made, highlighting the "Read Me" tab in Appendix A as an example of the Company's increased attention to this topic. In Staff's view, what appears to be missing is a workbook representation of how PSE analyzed its 2021 IRP data and results to arrive at its various CEIP interim and specific targets. For example, Staff could not locate an underlying workbook representation with actual calculations and/or data links for Tables 2-1, 2-2, 2-4 and Figures 2-2 and 2-3. PSE appears to have provided the underlying 2021 IRP data, and the methodology narrative in Chapter Two helps to explain how the Company arrived at its proposed interim and specific targets, but without the data analysis and connections from IRP inputs to IRP outputs to CEIP analysis to proposed targets, Staff finds it challenging to provide a deeper level of feedback.	PSE has added tables to illustrate the calculations for the interim targets from 2022 - 2045.
	Staff has several recommendations to improve navigation and usability of the information and data conveyed throughout the plan, as intended by CETA and the Commission's electronic file format requirements: - Use active links to supporting data throughout the plan, when available. - Ensure that, wherever possible in the filed workpapers, spreadsheets include specific formulas and cell references.	PSE has made efforts to embed links to Appendices and other areas of the report within the timeframe provided.
Methodology	Provide more granular descriptions explaining, step-by-step, how PSE's underlying modeling and studies (e.g., 2021 IRP, 2022-23 BCP), as well as any updates or corrections to these modeling efforts and studies, inform the Company's lowest reasonable cost analysis and compliance with clean energy transformation standards. This description should reference individual supporting workpapers and including specific components of workpapers (e.g., workbook cells, tabs).	PSE added narrative to Chapter Two to illustrate step-by-step, how assumptions and updates impacted the modeling process and ultimately the preferred portfolio in the CEIP. PSE is including the AURORA file inputs and outputs to accompany this analysis.
	Develop a master file index that lists each filename, a summary of each file's contents, what files or models the given file informs, and a clear illustration of any required folder structure for operation of a given model or nested worksheets. Staff requests that PSE make the following workpapers available as a part of its final CEIP filing: - Aurora modeling environments for both the CEIP and the baseline modeling effort used to determine incremental costs. Appendix A is a great start, though much of the information in the Excel files is hardcoded. - Excel workbooks used to create key tables in Chapter Two. - An Excel version of Appendix L would be helpful. Linking Appendix L to updated IRP analysis filed as workpapers would go a long way toward satisfying WAC 480-100-640(6)(f)(iii). - Excel versions and supporting workpapers for Appendices E and F.	PSE has made each workpaper available in the CEIP appendix for modeling and costs used in the final CEIP.
	Describe the reason for relying on Revenue Requirement as a proxy for "Weather Adjusted Sales Revenue" and any alternatives considered.	PSE uses revenue requirement as with a proxy for weather adjusted sales revenue because it is aligned with assumptions in the GRC and Commission Basis report assumptions.

Category	Comment	PSE response
Incremental Costs	PSE's proposed incremental cost projections will be thoroughly reviewed in the final CEIP. Staff has not performed a deep review of the draft CEIP's incremental cost estimates, partially because PSE's spreadsheet appendices were not provided with all formulas intact. Staff requests that PSE provide Appendices E and F with all formulas intact, and with associated IRP modeling parameters and outputs. For example, worksheet "3. Incremental Resource Cost" in Appendix E references two IRP model runs. It is unclear whether the "No-CETA Portfolio" referenced in this worksheet is directly from the 2021 IRP filed in April, or if it is inclusive of updates made after that filing. Without this level of access to the analysis underpinning PSE's targets and actions, it is challenging to understand how PSE arrived at the incremental cost estimates in the draft CEIP. The Company should provide a detailed explanation supporting each business decision contained in each category of costs as presented in Table 5-1.	PSE has updated the Appendix E and F with formulas and more explanation for each tab used to calculate incremental cost.
Public Participation	Input from multilingual listening sessions: Staff requests that PSE include the input that was provided form the multi-lingual listening sessions. This appears to be missing, or not identified separately.	PSE updated Chapter Six to share the themes heard and included the summary in Appendix C-4.
	Go-to-you meetings: Staff believes that PSE's "go-to-you meetings" are a great model for further engagement with communities. Please consider expanding the number and variety of CBOs that PSE actively engages with through this medium – more ethnic groups, more communities, other underserved non-English speaking communities – and include these efforts in the Company's final CEIP public participation plan.	PSE anticipates expanding engagement with communities during implementation. PSE agrees that "go to you" meetings have been a great tool for reaching community-based organizations. We anticipate engaging with more community-based organizations representing vulnerable populations in 2022-2023. This year we learned that these meetings don't work for all groups, so we anticipate we'll have to be flexible as we go through the implementation period. "Go to you" meetings are one of the tools we plan to use as outlined in our public participation plan.
Company Commitments	Specific items that Staff expects to be included in the company commitments are: -DER assessments beyond EE and DR, as described in WAC 480-100-620(3), including distributed energy programs and mechanisms identified pursuant to RCW 19.405.120 and other DER potential assessments.	The Black and Veatch report in Appendix K follows a similar methodology as used to develop market potential for PSE's Energy Efficiency programs. This methodology will be informed by market information made available through the Targeted DER RFP for future iterations.
	A detailed, comprehensive list of any items, besides those explicit in WAC 480-100-625(4), that the Company has identified to be updated in the 2023 IRP progress. Staff questions whether the items on Pages 23 and 210 are a complete list. The date that an updated workplan covering the development of the 2023 IRP progress report will be provided.	PSE has updated Chapter Eight and its commitments. This includes commitments for the 2023 IRP progress report and an equity assessment.
	Distribution planning – PSE's grid modernization strategy filed as Appendix G should more deeply consider CETA's impact (or lack of impact) on the Company's distribution planning efforts.	PSE provides additional narrative on how CETA impacts Grid Mod in Chapter Four and Chapter Five.
	A modeling workplan for the proposed approach to include named community impacts in its next IRP	PSE has updated Chapter Eight and its commitments. This includes commitments for the 2023 IRP progress report and equity assessment.
	Implement RCW 19.280.030(1).	PSE has updated Chapter Eight and its commitments. This includes commitments for the 2023 IRP progress report and equity assessment.

Washington Clean Energy Coalition (WCEC) and Vashon Climate Action Group (VCAG)

Category	Comment	PSE response
Scoring and weighting Public participation	PSE attempts to account for the relative importance of the metrics by multiplying some of the scores by a factor of two. Table 3-4 shows five metrics that receive this boost. However, applying these weights to two of the metrics won't make any difference in the rankings of 19 DER programs that received identical scores on those metrics. Therefore, only three of the weighted metrics will make any difference in the final rankings (Affordability of clean energy, Reduced cost impacts, and Increased clean energy jobs). Among other surprising effects, this method makes clean energy jobs twice as important as reducing power outages or increasing resiliency during emergencies. Since many of PSE's residential and commercial customers are critically reliant on stable electric service, PSE should provide clear evidence that a preference for clean energy jobs over reliability is backed by advisory groups and the public participation process, as required by WAC 480-100-640 (4) (c).	PSE evaluated the non-weighted CBI scores of all DER program concepts in order to select the preferred portfolio of DER program concepts. Refer to Chapter Three for details on PSE's scoring and use of CBIs, as well as Appendix D-1 for details on the process to select DER program concepts for its preferred portfolio.
Scoring and weighting	The individual scores are not explained. This lack of transparency and accountability makes the CBI scores vulnerable to manipulation that might serve PSE's business interests. For example, PSE gives the Substation Batteries program a relatively low score for decreasing the time and duration of power outages. This is anomalous because the DER programs that promote residential, commercial, and utility-scale batteries all receive the highest score on this metric. Why would locating the batteries partway between homes and larger battery farms be penalized?	Refer to Appendix D-3, tab, "CBI-Score-Summary", and to column, 'Basis/Notes for Scoring' for summary of scores for each DER program concept.
Distributed energy resources Methodology (targets)	Considering the practical example PSE cites for annual savings and investment deferral, it's odd that PSE would assign the lowest possible score to PSE Substation Batteries for the Reduced cost impact metric. Is the Bainbridge Island battery an anomaly, or is it possible that other substations would benefit from co-located batteries?	The Bainbridge Island Capacity Battery Project is a non-wires alternative ("NWA") solution, based on analysis by PSE's Distribution Planning team via locational analyses and valuation of cost and savings. NWA projects are great examples of location-specific application where the benefits of battery storage can outweigh the cost. PSE anticipates additional NWA projects in the coming years as complement to DER targets and actions in the CEIP. The DER team communicates regularly with the Distribution Planning and System Operations teams on locational opportunities for DERs and substation batteries to provide benefits to customers and the grid. As part of system-wide economic modeling and analysis, all DER program concepts, including a substation battery program concept, were evaluated under the societal cost test ("SCT") using system-wide average capacity and transmission and distribution ("T&D") deferral values. Note: the SCT was performed and evaluated based on available benchmarking and PSE reports. The DER team has continued to highlight the need for more data on actual performance, cost, and performance of use cases by battery storage projects and other DERs to more effectively evaluate CBI scoring of DER program concepts moving forward. Where on-site space is available, the DER team does anticipate that substation batteries will continue to be a viable concept for deployment at PSE, whether via grid modernization, non-wires alternatives, or other CEIP strategic initiatives that complement PSE's preferred portfolio of DERs for 2022-2025. Further, refer to Appendix D-1 for the benefit categories included in the benefit-cost analysis (BCA) model.

Category	Comment	PSE response
Distributed energy resources	PSE believes PSE Substation Batteries would play a minor role in reducing the impact and duration of power outages. This is also odd, because batteries located in homes, multi-family units, businesses, and utility-scale battery farms receive the highest score on this metric. Why are batteries in substations so different?	Battery storage has several use cases that can be configured for projects to provide benefits to the grid and customers. Though there are exception projects, the DER team anticipates that the substation battery concept will primarily be configured to address capacity use cases versus reliability (while other customer-sited concepts, as well as the "PSE Utility-scale Distributed Battery Stations," were envisioned to more typically be configured for). As example, the Bainbridge Island Battery Capacity Project is intended to prioritize a capacity function. Note, that capacity use cases can also mitigate or reduce risk of outage, therefore receiving a scoring of "1" (instead of "0") until more direct performance and use case test data is available. PSE's currently active Residential Battery Demonstration project, including five behind-the-meter residential battery storage systems, provides direct observance of back-up power from a customer-sited and/or behind-the-meter deployed distributed battery system. Other planned projects like the Bainbridge Island Capacity Battery Project, Community Battery Demonstration, and Tenino Microgrid will be anticipated to provide more data on use of front-of-meter battery storage deployments for resiliency and microgrids. pse.com/pages/grid-modernization/battery-storage/battery-storage-projects
Distributed energy resources Scoring and weighting	In a similar fashion, substation batteries are judged to be poor for increasing the affordability of clean energy. But most of the other battery DERs provide a "measurable % decrease." We don't understand why putting batteries in substations is plausibly worse for affordability than locating them in homes. The following diagram illustrates how PSE appears to have systematically underestimated the benefits of PSE Substation Batteries compared to other DER programs, twelve of which include batteries in other locations and configurations.	See prior responses to WCEA/VCAG's comments for continued anticipated role of substation batteries at PSE during timeline of its first CEIP.
Scoring and weighting Distributed energy resources	PSE Substation batteries have puzzling and potentially biased scores The cumulative effect of these low scores produced an unweighted final score of 11, the lowest total score of any of the 22 DER programs (table 3-5 in the Draft CEIP). We propose correcting the questionable scores for PSE Substation Batteries as follows: • Affordability of clean energy: 1 (comparable to other battery DERs, although we believe PSE is underestimating the contributions of all batteries in this regard) • Reduced cost impacts: 2 (comparable to other battery DERs) • Increase in clean energy jobs: 1 (comparable to Multi Family Unit Battery Program) • Decrease in time and duration of outages: 2 (comparable to other battery DERs)	See prior responses to WCEA/VCAG's comments for continued anticipated role of substation batteries at PSE during the timeline of its first CEIP. CBIs were evaluated consistently across all DER program concepts and utilized to recommend a diverse portfolio of program concepts for PSE's preferred portfolio of DERs to be included in its first CEIP. CBIs were a metric used in screening and prioritizing DER concepts. While some CBIs are more specific to clean energy generation (e.g., solar), solar and battery storage concepts were selected independently to fulfill the IRP targets for each technology. Battery storage technology and program concepts, including substation batteries, remain available and actively considered by PSE beyond the preferred portfolio of DERs included in the CEIP, which fulfilled a 25 MW peak capacity contribution target defined by the IRP. PSE will continue to support customer investment in battery storage (pse.com/pages/grid-modernization/battery-storage) and conducting non-wires alternative analyses as part of all major transmission and distribution ("T&D") projects moving forward (https://psebainbridge.com/reliability-and-grid-modernization), like with Bainbridge Island's Capacity Battery Project. These two initiatives, along with grid modernization, will continue to complement the distributed battery program concepts recommended for the preferred portfolio of DERs. Behind-the-meter or customer-facing battery storage projects are anticipated to prioritize back-up power as a use case, whereas utility-scale or front-of-meter projects may only indirectly help mitigate or reduce the impacts or occurrence of outages. The DER team has continued to highlight the need for more data on performance, cost, and performance of use cases for battery storage projects and other DERs to more effectively evaluate CBI scoring of DER program concepts moving forward.
Scoring and weighting	These corrections produce a final unweighted score of 16. How does that rank compared to the other DER programs? To find out, it is first necessary to correct PSE's table 3-5, which appears to incorrectly sum the weighted and unweighted scores in table 3-15.	The lowest CBI score for distributed battery program concepts in the preferred portfolio was 17, the "C&I Space Leasing for Batteries" program concept. Refer to Appendix D-3 and tab, "CBI-Scoring" for detail of scoring.

Category	Comment	PSE response
Customer benefit indicators	Was the elimination of PSE Substation Batteries an innocent mistake, or is the company responding to financial incentives that compromise its objectivity in evaluating CBIs?	Refer to Appendix D-1, sections, "Preferred Portfolio and Suite Selection Process," and "Preferred Portfolio Selection Approach," for detail of goals and process, respectively, to select the preferred portfolio of DER program concepts. PSE intended to select a set of program concepts that provides accessibility across all customer groups, and uses a mix of non-utility owned and utility-owned assets to meet the distributed energy resource targets.
Scoring and weighting	To justify the scores PSE assigns to all battery solutions (residential, C&I, and grid-scale), PSE must be transparent about its calculations. For example, how does PSE value the ability to time shift renewable energy and reduce peak loads on the transmission system? How does PSE value the cost of power outages that might be avoided through quick release of stored electricity? How does PSE value the ability to stabilize frequency and voltage during periods of grid instability? How does PSE value the flexibility of "just in time" infrastructure investments – just the amount of investment necessary to serve demand close to its source? How does PSE value deferral of investments in transmission and distribution systems?	The selection process for the preferred portfolio of DER program concepts included the evaluation of the societal cost test ("SCT"), which was based on a range of cost and benefits. Please refer to Appendix D-1 for additional details of different use cases and benefits for customers, society, and PSE used to evaluate each of the DER program concepts. Further, PSE is currently evaluating several different deployments of battery storage, including both behind-the-meter and front-of-meter, with varying configurations and use cases for customer and grid benefits, including the stacking and/or prioritization of different use cases. Results and cross-functional learning from these demonstration and pilot projects are intended to help PSE continue to modernize its grid and seek further opportunities to scale battery storage and other DER technology as part of its CEIP, NWA, and other customer-focused initiatives. pse.com/pages/grid-modernization/battery-storage/battery-storage-projects PSE provides documentation regarding the avoided costs used in our analysis in the CEIP. These avoided costs include an avoided transmission value. Refer to Appendix D-1 for details of selection of DER program concepts for the preferred portfolio.
	Although PSE may have included "associated weighting factors" for its CBIs, it seems contrary to the intent of this WAC that only 3 of the 11 possible weights would have any practical impact on the outcome of the analysis. Also, applying an identical "multiply by two" weight to different indicators is overly simplistic and not likely to produce the most beneficial and cost-effective solutions for customers.	PSE addressed comments on how CBIs will be used to evaluate resources, scoring for DER concepts, rationale for equal weighting, and plans for evolving the weighting methodology in the future in Chapter Three.
	The WAC implies that weighting factors must be consistent with feedback provided by advisory groups and the public. PSE has not encouraged feedback from the IRP Advisory Group regarding the weighting factors and has explicitly ignored the feedback we attempted to provide. Washington Clean Energy Coalition members Kevin Jones and Don Marsh patiently explained a better method for developing weighting factors. PSE employees politely listened to the feedback and, it seems, ignored it.	PSE sought feedback from the IRP stakeholder group in July and October, as well as an individual meeting with Mr. Marsh and Mr. Jones, on the weighting methodology and scorecard. We appreciated the ideas expressed, and considered those as well as comments and questions from PSE's three other advisory groups. PSE addressed comments on how CBIs will be used to evaluate resources, scoring for DER concepts, rationale for equal weighting, and plans for evolving the weighting methodology in the future in Chapter Three. In addition, PSE is committed to continuing to work on methodology for scoring and weighting customer benefit indicators for the next CEIP (reference Chapter Eight).

Front and Centered

Category	Comment	PSE response
Customer benefit indicators Highly impacted and vulnerable populations	The final CEIP PSE needs to include baselines, details on applying the CBIs and securing the equitable distribution outcomes for named communities, and a framework for program design that goes beyond principles and includes structural components and performance metrics. There is more that PSE can do with this plan to be transparent in your reasoning and demonstrate a commitment to equity, even with constraints around the unknowns of RFP results, design and future public participation inputs.	PSE addresses the equitable distribution of benefits and non-energy benefits at the beginning of Chapter Three. PSE describes a framework from which to evaluate the equitable distribution of benefits, and the gaps to complete this analysis. At this time, PSE can provide qualitatively the benefits customers will receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update.
Customer benefit indicators Highly impacted and vulnerable populations Distributed energy resources	The CBIs have been in development at least since PSE's Integrated Resource Plan filed earlier this year, and they remain largely the same with additional detail around metrics and applications. Yet the CEIP does not sufficiently speak to the reasoning and structure of the proposed mechanisms to secure the equity objectives. For example, the draft CEIP offers distributed energy resource planning as an approach to benefitting customers in named communities through localized generation and economic opportunities; but there is little discussion of how battery leasing and rooftop solar programs will result in improved participation, jobs creation, home comfort, affordability, emissions reduction, demand response, pollution reduction, improved community health, fewer outages, and greater customer access to emergency power.	Customer benefit indicators are new – to PSE, customers, advisory groups and others. PSE spent time this year seeking feedback from customers, advisory groups and others on the CBIs and their metrics. PSE has updated the CBIs and metrics based on feedback on the draft CEIP, which are shown in Chapter Three. PSE revised and updated the narrative in each specific action in Chapter Four to share how these actions are expected to create benefit.
Customer benefit indicators Highly impacted and vulnerable populations	By not including baselines and critical design elements for the proposed applications of the CBIs, PSE's plan by and large fails to account for how the company will manage the benefits and mitigate the burdens of the transition to communities at large. Attributes of named communities are discussed extensively, demonstrating PSE's recognition of the diverse characteristics of customers sensitive to the material risks and harmful impacts of poorly planned services and programming. The final CEIP must name clear elements of an equitable distribution process to reach these customers and highly impacted communities and produce measurable beneficial outcomes. As the largest energy utility in Washington, PSE's operations significantly impact health, wealth, comfort and security within and beyond their customer base. The company must set a higher bar with this CEIP and plan to reach and exceed it to secure a just transition to 100% clean energy Washington.	At this time, PSE can provide qualitatively the benefits customers will receive based on specific actions. PSE has added baseline data for several of the CBIs, as well as identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this in Chapter Eight. Quantitative results may be available for discussion for the 2023 CEIP update.
	Name communities first and then explain how the Customer Benefit Indicator list and its application as an evaluation tool will provide benefits and reduce burdens for those named	PSE addressed this in Chapter Three.
Methodology (targets)	Include baselines and narrative and analysis for how they are determined and will be tracked over the course of the compliance period	PSE addressed this in Chapter Three.
Interim targets	Refine the CBIs to include a greater depth of understanding about what they mean, and to which populations, as well as a wider breadth of energy and non-energy impacts with clear long and interim term targets	PSE addressed this in Chapter Three.
Implementation – resource acquisition/supplier	Provide greater clarity around the methodology for applying the CBIs to investment and resource decisions	PSE provided more context on its CBI methodology in Chapter Three, including sharing the evaluation criteria and scoring rubrics for the DER RFP, which uses CBIs to help evaluate the responses.
Highly impacted and vulnerable populations	Adopt principles for an equitable distribution of benefits and reduction of burdens applicable to utility energy operations broadly	For this first CEIP, energy operations was not been addressed. We anticipate this will continue to be a topic of discussion as the CEIP process continues to evolve.
	Address how Specific Actions adopted to attain equity targets will be designed with an actionable accountability framework	For this first CEIP, equity targets have not been addressed. We anticipate this will be a topic of discussion as the CEIP process continues to evolve

Category	Comment	PSE response
Public participation	Participation opportunities in planning are frequent but consideration varies The CEIP references how input from customer surveys, advisory group consultation, and direct engagement with key customer and sector stakeholders influence planning decisions. As a member of the PSE Equity Advisory Group, Front and Centered participated in planning 3 discussions, particularly around customer benefits and harms and risks they face. We also jointly with other concerned groups submitted a list of recommended CBIs and metrics to offer guidance on indicator elements and outcomes to consider. Front and Centered member organizations received regular updates on the planning process and information about opportunities to participate for those in the PSE customer base. PSE is hearing from many interested parties with customer experience, sector knowledge, community familiarity and other unique expertise in the actual and potential reach of PSE's operational decisions. Yet it has been challenging to participate meaningfully in planning when questions and recommendations are not directly responded to, input is filtered through consultation processes that are not results-oriented, the logical flow between the input and utility takeaways for application to planning is not clear, and participants are not receiving complete information around value calculations related to customer benefits and impacts on communities. For future planning, PSE needs to be more responsive to participant contributions that include alternative perspectives and recommendations to the scenarios that PSE has presents. PSE needs to hear what is challenging and grapple with it directly in order to meaningfully incorporate critical insights from diverse contributors into the planning process. And the learning from public participation processes needs to feed into the company's culture and not be limited to a small team's time bound work output.	PSE is committed to a planning process that is results oriented. We value and appreciate the feedback received from the EAG, the other advisory groups and stakeholders engaged in the review of the CEIP. We acknowledge and support the unique challenges facing underserved communities. We are working to provide an open, inclusive, and responsive planning process. It's important to us to ensure that the input we receive is appropriately factored into our decision making. Throughout this inaugural process, PSE has adjusted the EAG meeting formats to address member comments and concerns by incorporating feedback reports that directly address members' questions and starting meetings with dialogue on how PSE uses EAG input. This feedback indicates we still have further adjustments to make and we will work with the EAG to do so. We agree that our learnings from this year's public participation effort should extend beyond a single plan like the CEIP. We are sharing our learnings across teams, as the clean energy transition itself is changing how we do our work.
Highly impacted and vulnerable populations Customer benefit indicators	Front and Centered recommends that PSE place the definitions of highly impacted communities and vulnerable populations at the forefront of its discussion of customer benefit indicators to keep with the intent of CETA. Though the definitions included in Chapter Three for highly impacted communities and vulnerable populations are robust, they are placed at the tail-end of the discussion of how customer benefit indicators were selected. The definitions should be placed at the forefront of the conversation, both to set context and to mirror the intentions of CETA to emphasize the consideration of utilities' effects on named communities. In CETA and the regulations utilities are called to identify and distribute benefits and reduce burdens for named communities in their service area [RCW 19.45.040(8), WAC 480-100-640(4)(a-b)]. These definitional requirements come before the requirement that utilities identify and explain their selected mechanism for distributive equity. Placing the definitions of highly impacted communities and vulnerable populations before discussion of customer benefit indicators helps to (1) center focus on named communities and (2) contextualize discussion of customer benefit indicators. Readers would be able to understand exactly PSE what the company means when they use those terms in discussions of named communities. Further, the positioning of the definitions first would place predominant focus on those terms as they are used throughout the discussion of customer benefit indicators. PSE adequately explains how it came up with attributes used to define the term "vulnerable populations," but the repetition of statements about PSE's work with EAG on the definitions and 4 duplicative table material are distracting. In particular, Tables 3-13, 3-14, and 3-16 could be combined into one larger and more comprehensive table. PSE needs to go further in describing, and preferably showing through visual representation, how the defined named communities will be reached in - including an opportunity to map where vulnerable populations are and how they experience their particular sensitivity attributes, in overlay and complement with the assessment of highly impacted communities.	PSE reorganized Chapter Three and the placement of the discussion of highly impacted communities and vulnerable populations. For the future, PSE is working on all of the vulnerable population criteria using a clustering algorithm to see clusters of vulnerability, with plans to layer that onto the highly impacted communities map. We also combined the tables mentioned and streamlined in the content.

Category	Comment	PSE response
Customer benefit indicators Scoring and weighting	Customer Benefit Indicators need justification and refinement There is a notable lack of baseline data and narrative description of individual CBIs included in the draft CEIP. This makes it very difficult for the public to comment on the substantive choices that PSE has highlighted in both its identification of CBIs and, as a result, the expected efficacy of the specific actions proposed. While PSE does note that baseline data will be addressed in the 2021 Final CEIP, the lack of inclusion in the draft does not allow for as much public feedback in the development process. As PSE plans to include baseline data in its Final CEIP, Front and Centered urges PSE to better represent baseline data in an easily accessible format. In particular, PSE should use graphics and detailed narrative descriptions for each individual CBI in a manner that is non-technical and easily comprehended in the body of the plan.	At this time, PSE can provide qualitatively the benefits customers will receive based on specific actions. PSE has added baseline data for several of the CBIs, as well as identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update.
	PSE has chosen to focus predominantly on describing the process by which it selected the proposed CBIs. The lack of substantive discussion around each CBI in PSE's draft CEIP means that the public cannot understand how PSE actually interprets the CBIs to function. Even with further discussion of the CBIs in Appendix H, there are few details about how named communities in particular will be served by the indicators, as a planning scheme, scoring mechanism or performance evaluation tool. PSE must develop the narrative and substantive discussion of each individual CBI proposed, including baseline and target figures, as well as a substantive description of the CBI and how PSE understands it to fit into CETAs equity mandate.	PSE agrees we need to outline how highly impacted communities and vulnerable populations will benefit through the clean electricity transition. We've updated Chapters Three and Four to better describe how CBIs and specific actions will reduce burdens and create benefits. PSE plans to address the direct engagement need through education and awareness, as well as program design. There's more work to be done to better understand existing disparities, root cause of burdens and opportunities for improved participation in PSE's programs. For details on PSE's next steps, refer to Chapter Eight.
	Similarly, the methodology for applying CBIs to options for the portfolio of clean energy solutions appears arbitrary and will need to be refined for application to utility investment planning. The draft shows that the CBI assessment of equity values for different options result in some rising to the top, but without any real discussion of how that assessment takes place. The value of customer participation in programs, clean energy jobs, home comfort, affordability of clean energy, emissions, climate impacts, air quality, community health, outages and emergency power access is barely discussed before the prioritization and DER scorecard are presented, with scores determined through an opaque internal process. How does the weighting work?	See PSE's prior response to NWEC's comments regarding methodology used by PSE to prioritize DER program concepts for developing cost and market potential, as well as applying CBI scoring methodology. No weighting of CBIs was used for final scoring of each of the DER program concepts. All DER program concepts were collectively evaluated by their non-weighted CBI score. Note, subsequently, PSE also evaluated a weighted scoring that resulted in the same available options for selecting preferred portfolio of DERs. Refer to Appendix D-3 file and tab, "CBI-Scoring" for detail of scoring, including 'Basis/Notes for Scoring' that provides more specific assumptions by DER team. In the absence of actual project data and performance, the DER team implemented a direct, consistent, and transparent scoring of each program concept for each CBI (i.e., scoring of 0/1/2). The DER team has cited the need for more project and performance data in order to continue to improve approach to scoring CBIs for future iterations of the preferred portfolio, including update for Progress Report anticipated in 2023.
	It is not clear that there are values assigned to reaching the highest number of named community customers, or diverse geographic areas, or customers with a mix of particular vulnerability or high-risk attributes, or whether and for how long the benefits distributed will be sustained. PSE needs to connect the value assigned to local generation, education, storage, workforce, contracting, siting, and other areas of investment to measurable, discernible outcomes that are maximally beneficial to named communities in particular and minimally burdensome to customers at large.	PSE agrees we need to outline how highly impacted communities and vulnerable populations will benefit through the clean electricity transition. We've updated Chapters Three and Four to better describe how CBIs and specific actions will reduce burdens and create benefits. PSE plans to address the direct engagement need through education and awareness, as well as program design. There's more work to be done to better understand existing disparities, root cause of burdens and opportunities for improved participation in PSE's programs. For details on PSE's next steps, refer to Chapter Eight.

Category	Comment	PSE response
Customer benefit indicators Highly impacted and vulnerable populations	PSE's CBIs do not go far enough and can be refined, and the list expanded, to encompass a greater reach of equity performance measures. In addition to setting aspirational targets for generally good and lasting outcomes that PSE would like customers to experience, PSE needs to embed measures to proactively notice and address disparities in program reach in the program design. PSE's approach to data collection and analysis needs to be laid out alongside the forthcoming baseline measurements, within an iterative process to track and understand persistent barriers to access and participation in benefits. The potential non-energy impacts (NEI) listed in the draft should be incorporated into the CBI list in the CEIP in conjunction with a dedicated cost-benefit valuation through participatory planning and learning and leading on industry-wide standards. The Joint Advocates' recommended list of CBIs offers a number of indicators and metrics associated with an equitable transition that are within PSE's ability to track and improve but are not in the draft, including: • Arrearages, bills, collections, disconnections, credit scores • Translation services and improved outreach • Vehicle and transit electrification Front and Centered recommends that PSE better define and detail the CBIs to draw a clear connection to the outcomes sought, consider additional metrics for their customer benefit indicator framework, and build into their CEIP benchmarks and related accountability mechanisms to set a clear direction for making progress on an equitable transition.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. As noted in Chapter Three, PSE illustrated the overlap between CBI's and NEIs. PSE will continue to explore future opportunity areas to better align NEI and CBIs These updates are shown in Chapter Three. PSE will continue to develop the CBIs and understand how equity performance measures may help. There is a lot of concurrent working going on in this field from groups, like Energy Equity Project and American Council for an Energy-Efficiency Economy, which can provide further insights as we continue to evolve our efforts.
	• Reduced Cost Impacts - Energy burden (not just electricity costs) • Reduced Emissions - Continuous reduction of localized emissions and •Outdoor Air Quality - Absences due to related illness, asthma admissions, wood use for heat • Access to Reliable, Clean Energy - increased distributed energy as a metric, going beyond PSE's Improved participation CBI	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. These updates are shown in Chapter Three. PSE measures wood smoke reduction impacts via a study done by ABT Associates, which used an EPA model, the Co-Benefits Risk Assessment (COBRA) model to produce year-by year reductions in ambient PM 2.5 concentrations and the estimate reductions in human health risks and the economic value of those risk reductions. We do not measure wood use specifically nor ascribe any benefit to reduced wood use, but rather the estimated economic value of reduced health risks. This benefit is included in our cost-effectiveness calculations as a non-energy impact for Energy Efficiency programs.
	• Efficiency - As a CBI metric, not just a part of the Improved participation assessment	PSE will continue to explore additional indicators and metrics in working with stakeholders, which is noted in Chapter Eight.
	• Arrearages, bills, collections, disconnections, credit	PSE appreciates the interest in arrearages, bills, collections, disconnections, and credits, and we collect this data through Docket UE-190529 pertaining to the COVID19 Pandemic, including PSE's Disconnection Reduction Plan. While out of scope for the CEIP itself, we understand the value of these metrics.
	• Translation services and improved outreach	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders, which includes adding a CBI and metric on "improved culturally- and linguistically-accessible program communications for named communities. These updates are shown in Chapter Three.

Category	Comment	PSE response
	•Vehicle and transit electrification	Transportation electrification is a critical part of PSE's Beyond Net Zero Carbon goal and plays an important role in reducing the state's transportation emissions; however, it is outside the scope of the CEIP. PSE has a five-year Transportation Electrification Plan acting as a strategy framework for how we're approaching transportation electrification. PSE's Transportation Electrification Plan Addendum includes metrics the program will measure and track, including the following. The TEP Program first summary report is planned for Q4 2022. • Population served due to expansion of electric mobility services to highly impacted communities, vulnerable populations, and their service providers • Awareness and/or adoption levels of EVs due to increased EV education and outreach to highly impacted communities, vulnerable populations, and their service providers • EVs served in highly impacted communities • Additional non-quantifiable benefits for highly impacted communities, vulnerable populations, and their service providers To view the Transportation Electrification Plan and Addendum, review WUTC Docket UE-210191.
Rates Specific actions Highly impacted and vulnerable populations	A number of other specific actions proposed by PSE in its draft CEIP lack substantive descriptions of how those programs would actually take shape. For instance, in the discussion of the "Time-varying Rates Pilot Program" on pages 70-72 of the draft CEIP, the language used is particularly abstract ("design and offer rates and programs that consider needs and effects on low-income and vulnerable populations"). While PSE acknowledges that it is still in discussion with stakeholders in order to develop the program further, the lack of substantive description of how the utility actually plans to design and offer programs renders the ability of the public to comment on such programs through administrative methods nonexistent. At best, the language used parrots that of CETA and UTC regulations but adds nothing more. The CEIP draft proposes specific actions, including a DER solar program, linked to an assessment of Customer Benefits or direct CBI evaluation. But the analyses are underwhelming. How did PSE come up with one program over another? The beneficial character of the proposed 6 actions appears conclusive without sufficient substantiation. Front and Centered is concerned that the impact on communities - both benefits and burdens - are not discussed in enough depth to conclude that these actions are an effective approach to an equitable transition. While we acknowledge that PSE will know more in the future about costs and program design once they go through RFPs and solicit additional community input, the company should plan for programming that is more clearly oriented to reaching equitable outcomes aligned with all of the proposed CBIs. The logical thread between proposed actions and outcomes is missing and needs to be supplemented with baselines, targets, and reasoning.	PSE revised and updated the narrative in each specific action in Chapter Four to share how these actions are expected to create benefit.

Category	Comment	PSE response
Distributed energy resources Highly impacted and vulnerable populations	PSE should detail in the planning stage how they will offer programs (eg DER build out) that privileges: • near and long term ownership by community institutions and community solar programs, • far reaching battery storage solutions at no cost or with deep discounts for named community customers in particularly energy insecure areas, • program and asset governance mechanisms that are community-led, • more frequent and public calculations of company-wide emissions and local air quality monitoring data and funding local pollution reduction strategies, • resources for home comfort inputs directly targeted to the highest impacts and most vulnerable community customers, • minimum thresholds for employing workers from named communities, • generating data on customer usage and need with respect to efficiency and assistance measures that facilitates stronger standards and actions to support energy and security and resilience, • and other mechanisms to secure an equitable distribution of benefits and reduction of burdens. PSE should adopt more explicit commitments to an equitable transition and include more substantive descriptions of its proposed projects in the final CEIP so that members of the public may offer meaningful feedback and all customers benefit from the transition. Front and Centered is grateful for the opportunity to comment on this matter and looks forward to further opportunities to engage on this docket.	PSE appreciates the detailed feedback on how Front and Centered sees different programs facilitating the equitable transition. PSE addresses the equitable distribution of benefits and non-energy benefits at the beginning of Chapter Three. PSE describes a framework from which to evaluate the equitable distribution of benefits, and the gaps to complete this analysis. At this time, PSE can provide qualitatively the benefits customers will receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update.

NW Energy Coalition (NWEC)

Category	Comment	PSE response
Methodology (targets)	We recommend that significant changes be made to the document to ensure that the information is clearly presented and supported by analysis, and that the Final CEIP meets the requirements of WAC 480-100-640 and RCW 19.405.060. The rules at 480-100-640 are very clear as to what must be included in a CEIP. There are significant shortcomings in the draft CEIP relative to the contents. Most notably: • resource costs are unreasonably high. PSE did not update its resource cost assumptions for the CEIP. Reasonable resource cost assumptions are necessary in order to ensure that the CEIP contains a least reasonable cost portfolio (WAC 480- 100-650(6)(f) and (7)). See the technical memorandum from Moment Energy Insights attached to our comments for further explanation of this issue.	In response to the stakeholder feedback we heard, PSE corrected its transmission costs and resource costs with the most recent National Renewable Energy Lab's Annual Technology Baseline 2021 Report (NREL ATB) costs. The results and the modeling methodology used are illustrated in Chapter Two.
	The Social Cost of Greenhouse Gas ("SCGHG") calculation methodology used for the CEIP is flawed. NWEC has submitted multiple rounds of comments explaining why the SCGHG should be applied to resource dispatch in the model. See the technical memorandum from Moment Energy Insights attached to our comments for further explanation of this issue.	PSE addresses its social cost of greenhouse gas emissions (SCGHG) methodology with updated narrative in Chapter Two and Chapter Five.
Demand response Large-scale renewable energy	The CEIP lacks specific actions for Energy Efficiency ('EE"), Demand Response ("DR") and Renewable Energy ("RE") resources, as required by WAC 480-100- 650(5) and (6). Only general categories of kinds of actions are provided, resulting in Appendix L CEIP Programs and Actions Master Table lacking significant required data. PSE has explained that it cannot complete the tables and narratives required by WAC 480-100-640(5) and (6) until the results of the various RFPs have been finalized in mid-2022. This trade-off between submitting a complete plan and waiting for RFP cycles to complete is simply a false choice, and should be remedied in the Final CEIP. The lack of complete information is inconsistent with the intent and purpose of the CEIP, and has the effect of delaying PSE's implementation of CETA for more than another year. Further, this choice by PSE places the Commission in the impossible position of reviewing a plan without a thorough understanding of those specific actions that should comprise the plan.	In this CEIP, PSE is providing the best information available at this time. The primary specific actions for this CEIP are conducting the All-Source RFP and the Targeted DER RFP process to pursue the specific and interim targets identified in the CEIP. The results of those RFP processes will be reflected in the 2023 biennial CEIP update.
Incremental cost	Estimated incremental costs cannot be accurately calculated without the specific action and resource cost updates (WAC 480-100-640(7)). This information is particularly important if a utility intends to meet the compliance by relying on the 2% incremental cost compliance option at RCW 19.405.060(3)(a), because the Commission will ultimately decide whether the actions taken to comply with the standards in sections 4(1) and 5(1) allow the utility to rely on the 2% incremental cost. This alone will require a thorough understanding of each action, the underlying business case and financial aspects of the action. Instead, it would be appropriate for the first CEIP to include the best information available to PSE for the Commission to consider at the time it is submitted, with the caveat that specific actions can be updated as the various RFP cycles are completed	In this CEIP, PSE is providing the best information available at this time. The primary specific actions for this CEIP are conducting the All-Source RFP and the Targeted DER RFP process to pursue the specific and interim targets identified in the CEIP. The results of those RFP processes will be reflected in the 2023 biennial CEIP update. PSE also updated the narrative regarding how incremental costs were calculated and attributed to CETA. This narrative is shown in Chapter Five.
Customer benefit indicators	Customer Benefit Indicators (CBIs) need improvement. PSE applies CBIs in a restricted and convoluted manner, resulting in misleading comparisons and applications that seem to undercut the purpose of those indicators (WAC 480-100- 640(4))	PSE addressed comments on how CBIs will be used to evaluate resources, scoring for DER concepts, rationale for equal weighting, and plans for evolving the weighting methodology in the future in Chapter Three. Additionally, PSE acknowledges that the CBIs will continue to evolve and has committed to ongoing work as noted in Chapter Eight.
Implementation – resource acquisition/supplier	CETA's resource prioritization is not clearly represented. RCW 19.405.040(6)(ii) and (iii) clearly identify the order of resource acquisition required of utilities under CETA. First, utilities are required to pursue all cost effective, reliable and feasible conservation and efficiency resources and demand response, then existing renewable resources, then renewable resources and energy storage before acquiring new resources per RCW 19.405.040(6)(ii) and (iii). PSE's implementation of this provision is not clearly mapped out in its CEIP	PSE agrees energy efficiency is important. The modeling process for the Final CEIP has identified all cost effective energy efficiency and cost effective demand response consistent with RCW 19.405.040(6).

Category	Comment	PSE response
Incremental cost	MEI also found the impact of the SCGHG depends strongly on resource costs, and that understanding this relationship of excessively high costs to resource selection is critical for calculating accurate incremental costs associated with CETA. MEI's Technical Memo explains that, because of the unreasonably high resource costs, it doesn't matter what methodology PSE uses to apply the SCGHG, the analyses counterintuitively result in no impact on the level renewable resource acquisition, because the price signal is removed by the high resource costs. Since a full accounting of the impact of PSE's approach is impossible outside of PSE's model, we strongly support the recommended actions presented in the Technical Memo - that PSE re-run their CEIP models to better align planning with market realities and fully account for the SCGHG in resource planning and CETA incremental cost calculations, and that these changes be incorporated in the Final CEIP.	In response to stakeholder feedback we heard, PSE corrected its transmission costs and updated resource costs with the most recent NREL ATB costs. Results and modeling methodology are illustrated in Chapter Two. PSE addresses its SCGHG methodology with updated narrative in Chapter Two and Chapter Five.
	We recommend that PSE: • Update resource costs to align with more recent overnight capital cost estimates and fix the variable transmission cost and fixed transmission cost errors identified in this report. • Re-run the CEIP Preferred Portfolio and No-CETA portfolio with these cost updates. • Identify whether the SCGHG treatment materially impacts incremental costs by testing the No-CETA portfolio under the alternative SCGHG treatments employed in the IRP (Scenario I and Scenario J). • If the SCGHG treatment is found to materially impact the amount of near-term renewables added in the No-CETA portfolio, calculate and report out incremental costs for all three SCGHG treatments. Specifically, compare the following portfolios • Based on these updates and a more thorough investigation of the impact of the SCGHG on resource selection and incremental costs, provide updated incremental cost estimates and modify the interim CETA target and resource acquisition targets accordingly.	PSE addresses its SCGHG methodology with updated narrative in Chapter Two and Chapter Five.
Methodology (targets)	There are a number of assumptions carried over from the CEAP into the RFP, such as the large decrease in market reliance from 1500 MW to 500 MW over five years and the inability of the models to choose from a full suite of storage resources in place of "flexible capacity" that skew the resource choice portfolio outcomes. PSE proposed the reduction in market reliance very late in the IRP process, long after NWEC had pointed out that the volume of transactions for the Mid-C trading hub has fallen by about half in the last five years, due to the effect of the Western Energy Imbalance Market and other factors. While PSE's over-reliance on the market for many years is close to a consensus finding, the abrupt shift has not been fully justified, though recent increases in price spikes, general volatility and the recent upward shift in commodity natural gas prices support at least a moderate reduction in the expectation of what the market can deliver, especially during peak periods. But PSE has offered only very limited analysis supporting a two-thirds reduction in the market limit for planning purposes, and the draft CEIP only makes general reference to the IRP finding. Likewise, the market limits adopted in the IRP led to undervaluation of storage resources in the IRP (and therefore the draft CEIP) which in turn affected valuation for the All-Source RFP, a topic that received extensive discussion and a special technical workshop. NWEC participated with other organizations in a technical analysis and provided several rounds of informal and written comments1. While the issue was not entirely resolved, PSE's consultant, E3, provided several suggestions for improving the analysis that should also be incorporated in the Final CEIP.	PSE addresses updates to market reliance as part of the 2023 IRP Progress Report.

Category	Comment	PSE response
Methodology (targets)	Recommendations on ELCC and Market Assumptions • We urge that the methodological corrections to the Effective Load Carrying Capacity (ELCC) calculations being addressed in All-Source RFP (UE-210220) be incorporated into the Final CEIP as well. • We suggest that PSE include a more thorough summary of its analysis of market constraints and propose a plan of action for further review of this issue during the CEIP period.	PSE addresses ELCC calculations in its commitments in Chapter Eight. These commitments include a timeline for this work. Any updates to market reliance will be included in the 2023 IRP Progress Report and reflected either in the 2023 biennial CEIP update or the next CEIP.
Energy efficiency	Recommendations on Conservation and Energy Efficiency • PSE should fully complete the required tabular summary and narratives for each and every program that will be used for compliance under 19.405.040(1). The narrative should clearly explain what "new energy efficiency" is and how that differs from the specific actions and programs in the updated BCP. • The narrative should clearly explain the projected large increase in "new energy efficiency" which nearly doubles between 2023 and 2024 and then increases again by more than 45% between 2024 and 2025. • While there are category costs listed in Appendix L, there is not a summary of all the costs for conservation/EE. • PSE should more clearly specify which actions or portions of actions are strictly due to CETA and would not have been undertaken if not for CETA.	PSE has made the necessary updates to the naming and connection between the energy efficiency targets in the Final BCP and the Final CEIP. These updates are shown in Chapter Two as well as Appendix L. PSE proposes additional energy efficiency actions beyond the No-CETA portfolio and increases the target over the CEIP period.

Category	Comment	PSE response
Demand response	Recommendations on Demand Response • PSE should prepare and include a program around the CTA-2045 water heaters as part of their residential water heater program. • PSE needs to clarify exactly which venue they discuss DR programming with stakeholders. It is important to consider all customer side resources together, and ensure wide review of DR by all stakeholders. • PSE should accelerate the TVR/TOU pilots. It is not clear why PSE would derate TOU/TVR by 50 percent; TOU/TVR is valuable year-round. Many utilities have long experience with these programs and PSE should be able to incorporate that learning to move the program forward.	The modeling process used in the CEIP has identified all cost effective energy efficiency and cost-effective demand response consistent with applicable statute and rule. Demand response (DR) is being maximized based on the current Conservation Potential Assessment (CPA). We will look to do additional demand response based on a future CPA. We agree the CTA-2045 water heater program has promise; however, demand response water heaters are facing supply chain issues and are still in the early programmatic state. We anticipate these heaters may potentially be ready for consideration in future CEIPs, and we'll know more with the results of the Targeted DER RFP. As it relates to TVR, and that being a single part under the DR umbrella; PSE's intent is that TVR will be made available for all residential customers once the WUTC has the opportunity to review and rule on the evaluation, measurement and verification report from the TVR Pilot. We are working to understand how to expand any resultant tariffs as smoothly as possible for class-wide deployment. We appreciate and share NWEC's urgency on further development in this space, but feel a pilot is necessary to protect customers by allowing the company to evaluate appropriate rate/price signals as it relates to a winter-peaking utility with a more limited set of volunteer participants. Once we have a better understanding of what price signals avail customers and the system of meaningful savings opportunities, we will put forward to the WUTC those calibrated rates for an opt-in tariff as soon as practical. In addition, PSE added a footnote in Chapter Four to clarify the derating. PSE has worked with The Brattle Group to develop the experimental design and time-varying rate for the TVR Pilot. In Brattle's experience, there is a more limited body of evidence on customer response when winter-peaking utilities deploy TVRs versus that of summer-peaking utilities. Brattle conservatively applied a 50 percent derating (or adjustment) factor to adjust for potential lower customer response that a winter-peaking utility like PSE might experience. The 50 percent derate isn't meant to calculate the system's demand response potential; instead the derate adjustment was applied to inform sample size calculations for the TVR Pilot. The TVR Pilot will help us understand how time-varying rates can minimize system costs, increase customer choice, enhance equity and accessibility, and expand renewables integration for PSE customers. It is essential to design the pilot so that it has every chance of success.
.	As we have stated multiple times, the CEIP was intended to be a stand-alone document, that any reader could pick up and understand. The explanation of incremental costs in PSE's draft CEIP illustrates how important it is for the necessary data to be compiled in the CEIP itself, in a smart and clear manner, per WAC 480-100-640. It is not clear or helpful to refer readers (on page 156) to Appendix FI-EE costs, which contains nothing but a reference to BCP details in Appendix B, which in turn only states that the BCP will be filed on November 1, 2021, with no links to the filed report. The same daisy chain of references happens with Demand Response (page 156) which points to details in Appendix J, but Appendix J just links to the 2021 IRP Appendix E; the poorly formatted summary of costs in Appendix F-2 shows only six programs, two of which have not even been authorized yet, with no explanation of the terms.	PSE has made efforts to embed links to Appendices and other areas of the report within the timeframe provided.

Category	Comment	PSE response
Incremental cost	Recommendations on the incremental cost analysis and narrative • Rerun the incremental cost calculations after all resource cost corrections have been made, as recommended above. • Make clearer which actions would not have been done if not for CETA. • Review grid costs attributed solely to CETA. • Change narrative to make clear that the two percent cost cap is not "guidance" or the driver of CETA action.	PSE is aiming to make reasonable progress in this first CEIP. Early action is necessary and reasonable. PSE addresses this in Chapter Two. PSE updated the language in the final CEIP on how incremental costs were calculated and attributed to CETA. This narrative is included in Chapter Five.
Methodology (targets)	Recommendation on Climate Change assumptions • We repeat the same recommendations we provided in the IRP process and in response to PSE's Petition for exemption from WAC 480-100-640(1): updates to the load forecast and associated proposed targets and actions must incorporate reasonable consideration of the costs and risks of climate change (an environmental effect of carbon emissions) consistent with the definition of "lowest reasonable cost" in RCW 19.280.020. • ELCC and loss-of-load studies should be based on climate datasets from 1980 onward to ensure that the effects of climate change on load and temperatures are clearly analyzed and evaluated.	PSE includes commitments to making updates in the climate change analysis for the 2023 IRP progress report. These commitments are in Chapter Eight.
Customer benefit indicators Distributed energy resources	Within the Draft CEIP, PSE applied the CBIs only to Distributed Energy Resources ("DERs") options, not to any other specific actions, so our comments here are limited to that narrow actual application. In the Final CEIP PSE should clearly explain how the CBIs will be considered in the selection of all EE, DR and RE specific actions. This clarification should not wait until 2023, but be clearly explained in the Final CEIP.	PSE describes how customer benefit indicators will be applied in Chapter Three.
	In this first application of CBIs, it is not clear just how the CBIs influenced the DER choices. It seems some of the choices were determined prior to any application of a CBI. For example, PSE selected twelve battery and ten distributed solar options, without explaining the reasoning behind the choices, for their contractor, Black & Veatch ("B&V") to analyze for programmatic and resource costs (Appendix K). B&V also analyzed the achievable market potential for each option, except for three concepts, "PSE Mobile Batteries", "PSE Substation Batteries" and" PSE Utility Scale batteries". We have yet to find an explanation of what impact that lack of market potential had on the final rankings, but it must have had some impact, as neither the "mobile batteries" concept or the "Utility scale battery substation" concept were placed in any of the DER "Suites" for consideration (Table D-2) for the CEIP.	The list of 22 DER program concepts was prepared prior to CBI scoring. Refer to Appendix D-5 and Appendix D-6 for details on the original list of DER program concepts produced by PSE. A cross-functional process of prioritization utilizing internal subject matter experts to assess feasibility and strategic fit of original list of DER program concepts was performed in order to prioritize a list of 22 program concepts for procuring cost and market potential from a third-party service provider. Note: industry benchmarks were also referenced in the origination of DER program concepts, as well as helping to support with prioritization. Refer to work paper Appendix D-4 for details. As discussed in Appendix K (refer to section, '3.0 Achievable Market Potential'), there was no achievable market potential for the three cited concepts on the assumption that concepts are driven by utility-led and utility-owned efforts versus limited to customer economics. Therefore, PSE could build annually based on analysis of need, such as via non-wires analysis, grid modernization, All Source RFP and/or Targeted DER RFP, or other strategic initiatives. Capacity built would be limited by PSE's technical capability and availability of resources then. Since these three concepts are utility-driven concepts, rather than customer driven, the lack of market did not have negative impact on cited concepts consideration for preferred portfolio of DER program concepts.
Distributed energy resources	Two new programs, "multi-family unit battery" and "C&I rooftop solar leasing" were added "based on stakeholder feedback" (CEIP page 41). In fact, PSE received feedback from several of the advisory committees that stakeholders had concerns about "leasing" programs, particularly those aimed at named communities, yet those programs remain on the options list. Advisory groups repeatedly supported reliable renewable resources to named communities, with control of those resources in the community, a very different proposition from a leasing approach, which is not included here.	PSE appreciated the dialogue with advisory groups on concerns around leasing programs and made some clarifications to the naming of those programs so they accurately reflect the intended purpose. PSE's DER program concept mix includes residential solar and battery storage programs. Discussion of the DER program concepts, as well as considerations around incentives and program design for income-eligible programs, are addressed in Chapters Three and Four. As noted in these chapters, the final program designs will be based on the results of the Targeted DER RFP and engagement with community members. .

Category	Comment	PSE response
Scoring and weighting	PSE's weighting system for CBIs is difficult to understand. As far as we can tell, twenty-two DER options were "scored" in Table 3-15, but Table 3-5 presents the summarized scores incorrectly. Corrected or uncorrected, it is hard to figure out why options that have identical or nearly identical scores as other options were dropped for further consideration – for example, "PSE substation batteries" and "Mobile Batteries" have identical scores, yet the "Substation batteries" option is dropped from further consideration. "C&I battery install incentive" scores a bit higher than "Mobile batteries", "third party utility scale distributed battery PPA" or "Battery stations", yet "C&I battery install incentive" is also dropped from further consideration.	Refer to Appendix D-1 for a detailed narrative walkthrough and basis of PSE's selection of DER program concepts for the preferred portfolio. Appendix D-2 details step-by-step process of selection. Refer to Appendix D-3, tab, 'CBI-Score-Summary', for summary of scores for each DER program concept. The DER team evaluated the non-weighted CBI score of all DER program concepts. Per the approach defined for selecting the preferred portfolio of DERs, PSE set a threshold of the average, rounded down, non-weighted CBI score for all DER program concepts (excluding NEM Solar program concepts) as an initial threshold for consideration. Program concepts with a score below the threshold, like "Substation Batteries" or "Mobile Batteries" did not receive further consideration for the preferred portfolio. Subsequent steps of the approach then followed with consideration of each DER program concept's portfolio cost ($/W per AURORA), societal cost test, and market potential. The DER team notes that while some program concepts were not recommended for the preferred portfolio of DER program concepts, like substation batteries, this does not exclude their consideration or deployment through either the pending All-Source RFP, the Targeted DER RFP, or other grid modernization, non-wires alternatives, or other T&D projects at PSE.
Scoring and weighting	There is no explanation as to how the level of scoring was determined or applied. For example, under the CBI labeled decrease in time and duration of outages, how was it decided the "PSE Substation batteries" option might decrease the number and/or duration of outages (score 1), but the "3rd party customer-sited distributed Battery PPA" option would directly decrease the number or duration of outages (score 2)? The difference is not explained and the result is confusing.	Refer to Appendix D-3, tab "CBI-Scoring," for detailed responses to each CBI and PSE's basis for scoring. Front-of-meter, utility-sited battery storage program concepts, like "Substation Batteries," were assumed to prioritize capacity use cases versus directly providing back-up power. PSE proceeded with a general assumption that DER program concepts not including customer-facing or enrollment, like substation batteries, will prioritize grid-scale use cases to limit cost, optimize benefits, and therefore maximize savings. Behind-the-meter battery storage program concepts, like the "3rd Party Customer-sited Distribution Battery PPA," are assumed to include customer-facing or enrollment, and therefore will prioritize back-up power as a use case for customers. Note that since reduced capacity constraints may help prevent future/additional outages or repairs, and thereby increase resiliency, the substation battery program concept received a score of "1" instead of "0".
Customer benefit indicators	Recommendations on CBIs and DERs • PSE must revise the current scoring system of CBIs to better distinguish between options and explain how particular options received particular scores. • PSE needs to explain in the Final how the CBIs will influence, if at all, the selection of other resources.	Refer to Appendix D-3, tab "CBI-Scoring," for CBI scoring applied to all DER program concepts and the basis for applying scores to each DER program concept, respectively. Refer to Chapter Two and Chapter Four for a detailed description of how PSE will utilize CBIs to select vendors and services from the Targeted DER RFP to fulfill targets for preferred portfolio of DERs. PSE will work to continue to evolving the CBI weighting and scoring methodology for use in the next CEIP (reference Chapter Eight).
Implementation – resource acquisition/supplier	Recommendations for Order of Resource Acquisition • PSE should explain how it determined new renewable resources and thermal builds were more appropriate choices than acquiring additional conservation or demand response.	The modeling process undertaken for the CEIP has identified all cost effective energy efficiency and cost-effective demand response consistent with applicable statute and rule.

Renewable Northwest

Category	Comment	PSE response
Specific actions	Renewable Northwest appreciates the efforts of PSE's CEIP team to find small gains from its 2021 IRP, setting targets that reflect more clean energy procurements than manifested in the IRP preferred portfolio. And again, we acknowledge this first CEIP process will be a learning experience. However, we urge PSE to reflect on the last year of stakeholder feedback imploring PSE to be more transparent and proactive in its effort to transform its energy mix to comply with state policy. With this public comment deadline falling so close to the filing date of PSE's final CEIP, we already anticipate the company's response that there is too little time to make changes to the substance of the plan. But the recommendations made in these comments stem from concerns that, if not addressed, will lead stakeholders to request that the Commission impose more stringent targets or otherwise use its authority under RCW 19.405.060(1)(c) to ensure PSE achieves CETA's binding clean electricity standards. And as the company enters its next planning cycle, it should revise its overarching strategy of holding firm to its stale data and outdated planning methods and instead keep pace with this fast-evolving sector, as required by CETA.	PSE addresses this topic in Chapter Two and Chapter Eight by updating its resource cost assumptions.
Methodology (targets)	1. PSE should revise resource cost inputs to the AURORA portfolio model to incorporate the latest National Renewable Energy Laboratory ("NREL") Annual Technology Baseline ("ATB") data, or anonymized information gathered from the 2021 All-Source RFP respondents.	Because of the stakeholder feedback we heard, PSE did correct its transmission costs, and also updated resource costs to reflect the most recent NREL ATB costs. Results and modeling methodology are illustrated in Chapter Two.
Incremental cost	2. PSE should refine the "Resource Enablement and Delivery" section in the Incremental Cost chapter to describe how the company determined what grid modernization costs are relevant to compliance with CETA and not needed otherwise.	PSE addresses this area with an updated Grid Mod section and costs in Chapters 4 and 5 and Appendix E.
Integrated resource plan (IRP)	3. PSE should explain its planning process leading up to the company's projected 2026 procurements of two new biodiesel-fired peaker plants, as the identified capacity need falls directly after this CEIP planning period (i.e., the company must be planning to fill this capacity deficit within this CEIP compliance period).	PSE is currently in an acquisition process with the intent to acquire CETA-compliant resources to address the peaking capacity need identified beginning in 2026, which is outside the scope of this first CEIP. The 2021 IRP included a generic peaking plant operating on biodiesel as a CETA-compliant capacity resource and cost-effective means of ensuring reliability. The IRP identified the need for this new resource in 2026, which is outside of the 2021 CEIP's implementation plan period of 2022-2025. The 2021 IRP specifically identified the peaking plant's fuel as biodiesel, as it is CETA-compliant. This remains our preference. PSE is in the process of evaluating responses to the 2021 All-Source RFP, which requested and prefers CETA-compliant capacity options resources. There were biofuel generation options proposed to PSE in response to the All-Source RFP. PSE does not have a self-build option in the RFP, nor does PSE have a peaker plant under development. PSE will incorporate the results of the 2021 All-Source RFP into the 2023 IRP Progress Report and 2023 biennial CEIP Update.
	As noted in multiple previous comment submissions to PSE in the IRP, RFP, and CEIP processes, Renewable Northwest maintains that PSE's consideration of resource adequacy and resource capacity contributions is flawed: 1) the company is disadvantaging storage resources, as supported by E3's near-term recommendation that PSE revise its effective load carrying capability ("ELCC") methodology for storage resources;6 2) the company is drastically reducing market availability in its Resource Adequacy Model (RAM), ignoring that the most current data shows there will be sufficient Mid-C availability during particular hours and a minimal regional loss of load probability ("LOLP");7 and the company's preferred portfolio from the 2021 IRP assumes that the volume of biodiesel required will be available at the lowest reasonable cost considering WAC 480-100-620(11)(e). And not only are the specific assumptions identified above problematic, but the self-imposed reduction in market reliance similarly has a direct bearing on the size and timing of PSE's capacity need. We recommend PSE address in the final CEIP the steps it will take to better understand its capacity needs beyond this compliance period, considering E3's key findings from its review of PSE's ELCC methodology and considering that PSE's constrained modeling of market availability is not supported by the most recent analysis.	PSE addresses this in our commitments in Chapter Eight, which outlines a timeline for future work.

Washington Solar Energy Industries Association (WASEIA)

Category	Comment	PSE response
Distributed energy resources	More aggressive rollout of DERs , including demonstration projects of microgrids to utilize their value for grid resilience and demand smoothing and management. Adding distributed renewables early in the CETA compliance process brings zero carbon electricity to the grid immediately and brings cumulative benefits that ease compliance burdens later in the cycle.	Refer to Appendix K for details of cost and market potential study of all DER program concepts considered for the preferred portfolio. Pending responses to the Targeted DER RFP, PSE will seek to move forward with program design of DER program concepts in order to begin to meet CETA obligations. Program design will be critical to meeting targets established for distributed renewables and distributed battery storage in the IRP, as well as adhering to 2% incremental cost of compliance. PSE is currently evaluating several different options for deployment of battery storage, including both behind-the-meter and front-of-meter, with varying configurations and use cases for customer and grid benefits, including the stacking and/or prioritization of different use cases. Results and cross-functional learning from these demonstration and pilot projects are intended to help PSE continue to modernize its grid and seek further opportunities to scale battery storage and other DER technology as part of its CEIP, NWA, and other customer-focused initiatives. pse.com/pages/grid-modernization/battery-storage/battery-storage-projects
	Develop more partnerships to grow and sustain local solar jobs and bring solar industry expertise that ensure feasible, cost-effective deployment of DERs that both benefit PSE and minimize rate shock. These partnerships should include significant deployment of community solar projects that can rapidly bring zero carbon electricity to renters, many of whom are energy-burdened.	Refer to Chapter Three and the discussion of customer benefit indicators, including increase of clean energy jobs and affordability of clean energy. Also, refer to Appendix D-1 for details of the preferred portfolio of DER program concepts, including community solar and multifamily solar partnerships.
	Re-examine deployment schemes that stress leasing. Consider stakeholder engagement received in this process and build programs in collaboration with the distributed solar rooftop industry. Private ownership leverages private investment, tax credits, and spurs local employment in PSE's service area. "Direct pay" provisions of the federal Investment Tax Credit now before Congress will greatly increase rooftop solar+storage investments by a much bigger pool of property owners.	PSE notes that there are inherent upfront and lifetime costs of owning a distributed battery and/or other DERs, which PSE seeks to significantly reduce and/or discount for vulnerable populations and income-eligible customers. PSE aims to offset these costs with the benefits from DER program designs by PSE that does not create a cost burden. For some distributed battery program concepts, PSE will utilize a utility-ownership approach in order to assume these costs and match against grid use cases and benefits that it can realize on behalf of customers. The PSE-owned, customer-leased approach is intended to increase accessibility to distributed batteries and backup power to vulnerable populations and income-eligible customers with PSE being responsible for, at least, a majority of the cost for installing, owning, and maintaining the battery system, as well as any other costs, throughout the program life. Ownership ensures that PSE can have access to the distributed battery system during peak grid events to realize grid value and/or cost savings that can be netted against total inherent costs taken on by PSE. As with PSE's Residential Demo, a share of the battery system's energy will always be available for backup power to ensure the program concept can prioritize service to customer and thereby reduce burden (please see expanded Customer Benefits section in Chapter Four, Battery Energy Storage Programs). Pending responses to the Targeted DER RFP, PSE will proceed to specific and detailed program design to leverage the use cases for distributed battery systems noted above in order to offset costs of implementing and maintaining the technology, as well as maximizing accessibility for income-eligible and vulnerable populations. See Chapter Four Actions for Distributed Solar Programs and Battery Energy Storage Programs for more details on stakeholder collaboration for the design of these programs.
	Net metering has been one of the most important drivers of PV solar deployment in Washington. PSE should pledge to retain retail net metering past the 4 percent threshold and expand and extend that cap.	PSE addresses this topic in Chapter Four under the Net Metering section. As outlined in Chapter Four, PSE's Net Metering program (Schedule 150) reflects RCW 80.60, WA State's Net Metering law. Before reaching the 4 percent of 1996 peak load cap on generating capacity under the current kWh credit structure, PSE will work with stakeholders to propose a fair and equitable means of compensating future net metered customers.

Sierra Club

Category	Comment	PSE response
Methodology (targets) Integrated resource plan (IRP)	The resource costs for renewables were not updated for the CEIP to ensure the lowest reasonable cost portfolio under Wash. Admin. Code §§ 480-100-640(6)(f), (7) and 480-100-650(3)(1). Additionally, the Social Cost of Greenhouse Gas ("SCGHG") calculations methodology used in the draft CEIP is flawed. NWEC's comments attach a detailed technical analysis from Moment Energy Insights that highlights these deficiencies and proposed ways to fix them. Sierra Club also highlighted the problem about using older renewable energy costs, which have gotten lower, in our PSE Draft Integrated Resource Plan ("IRP") comments and report from Grid Strategies, attached hereto as Attachment 1.3 It is also not clear whether PSE factored in tax credits for renewable energy projects particularly over the 2022-2025 timeframe.	PSE addresses SCGHG in Chapter Two and Chapter Five.
Energy efficiency Demand response	Contrary to the requirements outlined in Wash. Admin. Code §§ 480-100-640(5) and (6), the draft CEIP lacks specific actions for Energy Efficiency ("EE"), Demand Response ("DR") and Renewable Energy ("RE") resources. The draft CEIP only provides general categories of actions. Appendix L CEIP Programs and Actions Master Table also lacks significant amounts of required data. PSE has argued that it cannot complete the tables and narratives required by Wash. Admin. Code §§ 480-100-640(5) and (6) until the results of the various RFPs have been finalized in mid-2022, but this delays implementation of CETA for more than another year. The Commission will also be in the position of reviewing a plan that lacks data and is incomplete in early 2022.	The final CEIP provides more details, where available on specific actions. PSE will provide more details on how it will meet the targets as part of its 2023 biennial CEP update once the RFP processes have been completed and the results can be incorporated.
Specific actions	The timing of this RFP is disappointing as it does not allow this CEIP to include the cost estimates from it in the final CEIP draft. Sierra Club suggests an immediate update to the CEIP once the RFP numbers are available, and in the interim, PSE must use more recent data on renewables and battery storage in the CEIPs while it awaits RFP results. The current Draft CEIP does not contain sufficient or accurate information which is problematic.	PSE also finds the timing of the RFP and CEIP deadlines is challenging for this first CEIP. PSE will include updates from the 2023 IRP progress report and results of the 2021 All-Source RFP and Targeted DER/DR RFP in its 2023 biennial CEIP update.
Future need	Sierra Club is concerned about the mention of a peaker plant coming online in 2026. According to the PSE IRP, this could be a 255 MW resource slated to come online in 2026.9 While there is some talk of biodiesel as the fuel for this peaker plant, there is also concern that this could be an additional gas plant. Certainly, any new resource coming online in 2026 would need to commence construction during the first CEIP time period (2022-2025) and should be a topic of discussion within the CEIP. Sierra Club does not believe that any new gas resources are justified or needed, and gas certainly does not meet Washington's climate goals. In addition to not adding more gas to the system, PSE should discuss a timetable for shutting down existing gas and coal plants as quickly as possible and developing clean energy alternatives. Increasing battery storage would be a way to eliminate a need for peaker plants and could serve as flexible capacity.	PSE is currently in an acquisition process with the intent to acquire CETA-compliant resources to address the peaking capacity need identified for beginning in 2026, which is outside the scope of this first CEIP. The 2021 IRP included a generic peaking plant operating on biodiesel as a CETA-compliant capacity resource and cost-effective means of ensuring reliability. The IRP identified the need for this new resource as in 2026, which is outside of the 2021 CEIP's implementation plan period of 2022-2025.The 2021 IRP specifically identified the peaking plant's fuel as biodiesel, as it is CETA-compliant. This remains our preference. PSE is in the process of evaluating responses to the 2021 All-Source RFP, which requested and prefers CETA-compliant capacity options resources. There were biofuel generation options proposed to PSE in response to the All-Source RFP. PSE does not have a self-build option in the RFP, nor does PSE have a peaker plant under development. PSE will incorporate the results of the 2021 All-Source RFP into the 2023 IRP Progress Report and 2023 biennial CEIP Update (reference Chapter Eight).

Category	Comment	PSE response
Interim targets Distributed energy resources	The interim target the PSE sets for clean energy sources in the CEIP is 59% by 2025, moving from 43% in 2022.10 PSE notes that these targets are a slight acceleration from their targets in the 2021 IRP which was 39% renewable energy in 2022, and 56% by 2025.11 While Sierra Club supports this as a move in the right direction, it is unclear why the target is not more ambitious in the 2022-2025 timeframe, especially given the urgency of our rapidly changing climate. For example, PSE proposes no new wind resources in 2022 or 2023.12 Battery storage is also only 25 MW in this time period and could easily be increased and implemented on a faster timeline.13 Similar, Distributed Energy Resources ("DERs"), here solar, could be elevated beyond the 80MW currently proposed. NWEC's comments and report from Moment Energy Insights make this point as well. PSE's clean energy targets can be updated to at least 66% by 2025 for similar costs. Even with conservative updates to PSE's resource costs, increasing the 2025 renewable acquisition target from 500 MW to 900 MW (to 66% of PSE's CETA interim target) would yield similar incremental costs to those that PSE has deemed acceptable in their draft plan.	In response to stakeholder feedback we received, PSE did correct its transmission costs and update its resource costs with the most recent NREL ATB costs. Results and modeling methodology are illustrated in Chapter Two.
Customer benefit indicators Scoring and weighting Public participation	First, the application of the CBIs in PSE's CEIP is difficult to understand. While this is a new metric, some basic flaws exist that should be corrected in the final CEIP. There is no explanation of how the scoring for the CBIs was determined or applied. Clean energy options that scored similarly seem to be dropped from further consideration without any explanation. For example, NWEC's comments highlight that "PSE substation batteries" and "Mobile Batteries" are identically scored but the "Substation batteries" option is dropped without explanation. Other examples of inconsistencies exist as well. As another example, "C&I battery install incentive" scores a bit higher than "[m]obile batteries", "third party utility scale distributed battery PPA" or "[b]attery stations", but yet the "C&I battery install incentive" is also dropped from further consideration. The Washington Clean Energy Coalition also discusses these issues in their extensive comments on the topics. The CBI metrics are hard to understand and do not seem to follow any particular logic. PSE needs to improve the CBIs so public commenters, PSE, and the Commission can have a shared understanding of the metrics and how they are used. Second, it appears that in the Draft CEIP, PSE applied the CBIs only to DERs options. As NWEC also notes, this application of CBIs is too narrow and the Final CEIP should clearly explain how the CBIs are considered in the selection of all EE, RE, and DR specific actions. The Final CEIP must clearly explain how CBIs are taken into account for all CEIP actions and this must not wait until later years. Third, there is a question about whether the CBIs capture the notion of creating high-quality family wage jobs. In implementing CETA, the law indicates that "the state must prioritize the maximization of family wage job creation, seek to ensure that all customers are benefiting from the transition to a clean energy economy, and provide safeguards to ensure that the achievement of this policy does not impair the reliability of the electricity system or impose unreasonable costs on utility customers."16 Blue Green Alliance offers several suggestions about ways to improve the CBIs to encourage sustainable, family-wage, high-quality jobs. Fourth, Sierra Club encourages PSE to pay close attention to NWEC, The Energy Project ("TEP"), Public Counsel, and Front and Centered's Joint Proposal on Customer Benefit Indicators, filed July 30, 2021 and again on November 5, 2021. These comments give specific suggestions for clear metrics as opposed to the confusing weighted system the PSE employs in the draft CEIP. PSE should consider revising the draft CBIs along these lines.	See prior PSE responses to WCEC/VCAG and NWEC's comments for CBIs and scoring, including consideration of substation batteries, mobile batteries, etc. Refer to Chapter Three for details on the application of CBIs beyond the DER program concepts, including energy efficiency, demand response, and renewable energy. PSE added "job quality" to the Customer Benefit Indicator on clean energy jobs and further defined the metrics in response to these comments. Specifically, PSE updated the Customer Benefit Indicator on clean energy jobs to "Increase in quality and quantity of clean energy jobs" and added metrics to include number of local workers for jobs, range of wages paid to workers, and additional benefits offered, as well as some examples of the kinds of information that might be collected. For details, refer to Chapter Three.
Scoring and weighting	The draft CEIP uses outdated weather and climate data. Data that dates back to the 1930s does not reflect the current realities of climate change. Using more recent climate data will provide a more accurate picture of temperatures moving forward, including for the winter peak forecasts. As written, the CEIP overestimates winter peak needs. Winters are no longer as cold as they once were, and summers are getting hotter. The effects of climate change on load and temperatures need to be clearly analyzed and evaluated, and must go into the Final CEIP.	PSE addresses this topic in Chapter Eight Commitments - ELCC, Climate change analysis.

Category	Comment	PSE response
Demand response Distributed energy resources	The draft CEIP specifies a DR target of 23.7 MW through 2025.17 This number is low and fails to qualify as an aggressive Demand Response investment prior to acquiring new resources, such as the distributed solar, battery DERs, or the need to add peaker capacity. The amount of DR that PSE proposes is significantly smaller than what has been proposed by other utilities with fewer customers. Additionally, PSE's DR programs are not slated to commence until 2023, which is too far down the road. The DR and Time Varying Rates pilots are also four years long, which is far too long when PSE can learn from other successful utility DR pilots. Pilots should be shortened and large-scale implementation of DR encouraged sooner. It is also unclear why there is a 50% reduction for winter peak in the Time Varying Rates pilot.18 This assumption needs to be further explained by PSE and its consultant and is likely too high. PSE needs to do more to implement larger amounts of DR more quickly in order to comply with the CEIP.	PSE acknowledges stakeholder calls for increasing demand response (DR) programs in this CEIP; however, for this CEIP, PSE is keeping the DR specific targets at the level anticipated by the 2021 IRP and CEAP. These DR targets define our minimum of what we intend to achieve in this first CEIP. The modeling process used in the CEIP has identified all cost effective energy efficiency and cost-effective demand response consistent with applicable statute and rule. Demand response is being maximized based on the current CPA. We will look to do additional demand response based on a future CPA. As it relates to TVR, and that being a single part under the DR umbrella; PSE's intent is that TVR will be made available for all residential customers once the WUTC has the opportunity to review and rule on the evaluation, measurement and verification report from the TVR Pilot. We are working to understand how to expand any resultant tariffs as smoothly as possible for class-wide deployment. We appreciate and share Sierra Club's urgency on further development in this space, but feel a pilot is necessary to protect customers by allowing the company to evaluate appropriate rate/price signals as it relates to a winter-peaking utility with a more limited set of volunteer participants. Once we have a better understanding of what price signals avail customers and the system of meaningful savings opportunities, we will put forward to the WUTC those calibrated rates for an opt-in tariff as soon as practical. The timelines and milestones for DR and time varying rates are addressed in Chapter Four. In addition, PSE added a footnote in Chapter Four to clarify the derating. PSE has worked with The Brattle Group to develop the experimental design and time-varying rate for the TVR Pilot. In Brattle's experience, there is a more limited body of evidence on customer response when winter-peaking utilities deploy TVRs versus that of summer-peaking utilities. Brattle conservatively applied a 50 percent derating (or adjustment) factor to adjust for potential lower customer response that a winter-peaking utility like PSE might experience. The 50 percent derate isn't meant to calculate the system's demand response potential; instead the derate adjustment was applied to inform sample size calculations for the TVR Pilot. The TVR Pilot will help us understand how time-varying rates can minimize system costs, increase customer choice, enhance equity and accessibility, and expand renewables integration for PSE customers. It is essential to design the pilot so that it has every chance of success.
Incremental cost	There appears to be some confusion over what costs that PSE claims are related to CEIP implementation and are not simply costs incurred by a utility in the ordinary course of business. The two percent figure referenced in the CEIP-related code refers only to costs "directly attributable to the actions necessary to comply with the requirements of RCW 19.405.040 and 19.405.050."19 The final CEIP must also make cost data accessible. In current form, the broken links and incomplete references do not suffice. As NWEC discusses in its comments, ensuring that PSE would only take actions but for CETA is an important test to make sure that CETA costs are effectively accounted for and that other routine utility costs are not inaccurately attributed to the law.	PSE has made efforts to embed links to Appendices and other areas of the report within the timeframe provided. PSE updated the language on how incremental costs were calculated and attributed to CETA. This narrative is shown in Chapter Five.

Category	Comment	PSE response
Public participation	This is the first time that Washington utilities have developed CEIPs. As such, Sierra Club expects that the stakeholders will continue to refine and improve this CEIP process. In Sierra Club's view, the CEIP should be a document that stands alone and defines specific actions a utility will take over the next four years to incorporate CETA goals. It is a process distinct from the Integrated Resource Plan, which merely presents a variety of options to weigh. The CEIP document should be clear and concise. The CEIP document should also not require cross-reference to other documents, like the IRP and its appendices, in order to understand the CEIP. The other sources can be included as an appendix if relevant, or reiterated in the main text of the document itself as a linked cross reference. This will make the document more accessible to everyone wishing to review it and engage in the CEIP process. Finally, it would be appropriate in the future to allow discovery to commence between the Draft and Final CEIP, rather than waiting until after the Final CEIP is filed. Allowing discovery earlier in the process allows for more meaningful stakeholder engagement, and room for the draft plan to meaningfully change before the Final CEIP. The current process does not seem to be unfolding in this fashion and leaves the main action for the period of time between the Final CEIP and the UTC comment deadline. This process change should be considered in the future.	PSE filed the Draft CEIP consistent with the process the WUTC outlined in its CEIP rules. PSE agrees that the CEIP process likely will be refined and will improve over time. PSE shared components of the Draft CEIP in September of 2021 to get feedback from advisory groups, which informed the development of the final CEIP.

BlueGreen Alliance et al.

Category	Comment	PSE response
Customer benefit indicators	It is with this intent that the Washington BlueGreen Alliance strongly recommends the following changes to the utility's draft Clean Energy Implementation Plan: 1. Puget Sound Energy should collaborate with impacted building and construction trades and independent economic development experts to revise the customer benefit indicator metric for clean energy job creation to consider job quality in addition to job quantity. For example, this could include tracking 1) hours done by local workers, by members of named populations, and by registered apprentices; 2) combined wages and benefits; 3) occupation classification; and 4) where aapplicable, the share of Puget Sound Energy projects eligible for the incentives in RCW 82.08.962(1)(c) and RCW 82.12.962(1)(c). 2. Puget Sound Energy should invest in and require certified payroll reporting. Even a perfect metric is of little use without reliable data. Certified payroll reporting guarantees access to the necessary demographic information and high-quality data on hours worked, wages, and benefits, while maintaining every individual worker's privacy.	PSE added "job quality" to the Customer Benefit Indicator on clean energy jobs and further defined the metrics in response to these comments. Specifically, PSE updated the Customer Benefit Indicator on clean energy jobs to "Increase in quality and quantity of clean energy jobs" and added metrics to include number of local workers for jobs, range of wages paid to workers, and additional benefits offered, as well as some examples of the kinds of information that might be collected. For details, refer to Chapter Three.
Implementation – program design Customer benefit indicators	3. PSE indicates in Chapter Three that it intends to perform an in-depth qualitative assessment of the customer benefits indicators for Phase 2 of the All-Source RFP evaluation.2 To operationalize the clean energy job creation community benefit indicator for this purpose, the Washington BlueGreen Alliance recommends that Puget Sound Energy preference projects that include union provisions or, where applicable, expect to be eligible for the incentives in RCW 82.08.962(1)(c)(iii) and RCW 82.12.962(1)(c)(iii). This will prioritize projects that utilize a Project Labor Agreement or Community Workforce Agreement and is consistent with Puget Sound Energy's stated intent in Chapter Four to require that future Green Direct Projects include union provisions in their agreements. Opponents of requiring high-labor standards for clean energy development often point to cost as a barrier. However, recent research from Princeton University's ZERO on wind and solar development shows that increasing wages has very little cost impact. Any increase in cost is offset by an increase in productivity. States that have prevailing wage laws enjoy 14 to 33 percent higher worksite productivity, such as more efficient use of labor, materials, and fuel.3 Additionally, high-road labor standards, including prevailing wage standards, maximize the indirect benefits associated with the clean energy transition. Higher wages and improved job security mean more money flowing into local economies and greater community resilience. States with strong labor protections have lower taxpayer burdens and less work done by out-of-state contractors than states that permit low-road contracting.4 Finally, high-road labor standards are vital for protecting worker safety. As we have seen with previous Puget Sound Energy clean energy projects, like the Skookumchuck Wind Farm, the absence of these protections can lead to tragic results.	The All-Source RFP evaluation process gives preference to projects with high-labor standards, like utilizing a Project Labor Agreement or Community Workforce Agreement. This is also consistent with Puget Sound Energy's stated intent in Chapter Four to require that future Green Direct Projects include union provisions in their agreements.
Public participation	4. The Washington BlueGreen Alliance strongly urges Puget Sound Energy to actively engage impacted workers and labor unions in future stakeholder engagement. Available records suggest that the utility did not actively engage labor in drafting its Clean Energy Implementation Plan, and there is no labor representative on the Equity Advisory Committee. Puget Sound Energy has also indicated no intent to engage workers in the public participation plan outlined in Chapter Six. Workers and labor unions have valuable expertise in how to ensure high-road job creation and will be an invaluable resource in further refining Puget Sound Energy's proposed community benefit indicators metrics and the utility's ongoing research to develop strategies for tracking turnover and operations and maintenance jobs.	PSE has added Labor and trade allies as part of our audience in the updated Public participation plan. PSE reached out to BlueGreen Alliance in March 2021 to seek ideas for potential labor-related representatives for the Equity Advisory Group and no candidates were identified. PSE acknowledges the public participation plan did not include labor as a specific audience, and we've updated our 2022-2023 public participation plan to reflect this audience.

The Energy Project

Category	Comment	PSE response
Customer benefit indicators	The Energy Project recommends that the PSE CEIP give greater consideration to the approach reflected in the July 30 Joint Advocate CBIs. Since WAC 480-100-640(4)(c) requires 2 that each utility must include, at a minimum, at least one CBI for each statutory element, the JA CBI recommendations are organized around the benefit areas identified in the statute and rule, with specific CBIs identified for each element, along with suggested metrics for each CBI. This approach is depicted in Attachment A submitted with these comments. In addition, Attachment A compares PSE's draft CBIs with the JA CBIs, indicating whether or not there is overlap between the two. The Energy Project's analysis finds that only a little over one third of the JA recommendations are addressed or partially addressed in the Draft CEIP. The Energy Project recommends additions or modifications to the Draft CEIP in order to improve the effectiveness of the final product.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. These updates are shown in Chapter Three.
	…that each utility must include, at a minimum, at least one CBI for each statutory element, the JA CBI recommendations are organized around the benefit areas identified in the statute and rule, with specific CBIs identified for each element, along with suggested metrics for each CBI. This approach is depicted in Attachment A submitted with these comments. In addition, Attachment A compares PSE's draft CBIs with the JA CBIs, indicating whether or not there is overlap between the two. The Energy Project's analysis finds that only a little over one third of the JA recommendations are addressed or partially addressed in the Draft CEIP. The Energy Project recommends additions or modifications to the Draft CEIP in order to improve the effectiveness of the final product. As Attachment A shows, there are some areas of agreement between the PSE Draft CEIP CBIs and the JA CBIs. On the other hand, PSE's CBIs are not as extensive or detailed as the JA recommendations. PSE's CBIs in a number of cases are quite general and high level, and may not satisfy the definition of a CBI in WAC 480-100-605. Overall, TEP believes there is a need for more specificity in the draft CBIs, and the metrics used to measure progress. In addition, as discussed below, several important areas are not addressed in the PSE draft CBIs. The JA CBIs goal is to add some more completeness and practical specificity measuring improvement in particular tangible areas that reflect whether or not direct benefits are being experienced by customers.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. These updates are shown in Chapter Three.
	An overarching concern based on TEP's review so far is a clear understanding of how PSE's planned activities will impact their CBIs, especially in areas that are critical for vulnerable populations and highly impacted communities, including low-income customers. WAC 480-100-640(5) requires the utility to present in tabular form certain information about CBIs in connection with its "specific actions" to meet CETA requirements. It is TEP's understanding this information is presented in Appendix L to the Draft CEIP, labeled CEIP Programs and Actions Master Table. Reviewing the Appendix, it appears that specific actions are not listed or described for several important statutory elements and related CBIs, including Reduction of Burdens, Reduction in Cost, and Reduction of Risk. The Energy Project would like to see this addressed in the final CEIP.	At this time, PSE can provide qualitatively the benefits customers may receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update. PSE has also updated categories to match customer benefit indicators.
	Another general comment is that the PSE framework is somewhat confusing. The Draft CEIP list the proposed CBIs and metrics in Appendix H, Figure H-13, linking CBIs and metrics to multiple statutory elements. The overlap and redundancy make it more difficult to track which CBI and which metrics are related to a given statutory element. While there is certainly some potential overlap, TEP recommends an approach that minimizes duplication and makes decisions about where CBIs and metrics fit in the framework, so as to give adequate weight to each discrete statutory element. This is addressed in more detail in the next section.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions made by stakeholders. These updates are shown in Chapter Three.

Category	Comment	PSE response
	The Draft CEIP states that "PSE will continue to work with stakeholders in identifying and developing future customer benefit indicators and data sources for CBI metrics, and reporting on these sources and baseline data in 2022."4 The Energy Project agrees this is a long-term process and this commitment is welcome. At the same time there is still a need for more work on the current CEIP, and time to make improvements within the current schedule. With regard to data sources, the draft CEIP seems to set up barriers to adoption of metrics based on various concerns about privacy requirements and whether reports are "in common use", as well as availability and relevancy of data. While there may be some validity to these concerns as a general matter, TEP believes there are substantial sources of publicly available data, or data currently available to PSE, sufficient to develop robust metrics for the initial CEIP. The focus at this stage should be on designing metrics for the current plan based on this available data, avoiding reliance on data that has privacy concerns or is not in common use. This CEIP will be in place for four years, and requires best efforts for a strong initial framework, rather than a minimalist approach, with a promise of future CBIs to be developed after this plan is final.	At this time, PSE can provide qualitatively the benefits customers may receive based on specific actions. PSE has identified the gaps in areas to develop baseline data and forecasting of benefits to customers. These gaps and the effort to collect this data are highlighted in Chapter Three, and PSE makes commitments to perform this work in Chapter Eight. Quantitative results may be available for discussion for the 2023 biennial CEIP update.
	The Energy Project continues to recommend inclusion of all the CBIs listed in the Joint Advocate recommendations in July, as reflected in Attachment A. Areas of heightened concern for TEP, in terms of some of the salient issues and metrics not reflected in the CBIs of the Draft CEIP, are described below. As a framework for identifying TEP's concerns, this discussion looks at the relevant statutory elements, focusing on the presentation of CBIs and related metrics by PSE in its Appendix H, as summarized in Figure H-1 (Draft customer benefit indicators and metrics).5	PSE appreciates the Joint Advocates sharing proposed customer benefit indicators and metrics that could be applicable to all utilities across the state. PSE reviewed the suggestions and has used a number of these suggested metrics. These updates are shown in Chapter Three.
	In Figure H-1, the Draft CEIP identifies only one CBI for this statutory element: "Improved participation from named communities." The related metric is the "count and participation" within named communities. As an initial matter, this indicator seems to be more appropriately linked to another statutory element, Reduction of Burdens, which the Figure H-1 table acknowledges, or to Reduction of Cost. 6 Participation in bill assistance programs is a financial benefit related to burden reduction or cost reduction and is not primarily energy related. If this "improved participation" indicator is tied to a more appropriate element of the statute, this leaves the Draft CEIP with no other identified indicator in the Energy Benefit category.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions made by stakeholders. The improved participation indicator now includes the burden reduction category along with energy and non-energy benefits. These updates are shown in Chapter Three.
	The Energy Project also questions whether this single "participation" indicator and metric is the best choice to address the broad range of matters covered by the concept of "energy benefits," particularly clean "energy benefits." The Energy Project recommends that PSE instead consider for this element, adoption of the two JA CBIs which more directly focus on energy benefits, as reflected in: (1) improved efficiency of housing stock; and (2) low-income and vulnerable population access to an increasing number of renewable resources and non-emitting DER.7	PSE has updated some of the customer benefit indicators and metrics to align with suggestions made by stakeholders. PSE has included increasing number of distributed and community renewable projects and increased percentage of electricity generated by distributed renewable energy projects. These updates are shown in Chapter Three.
	The Energy Project is concerned that PSE's CBIs for these two categories are virtually identical, and essentially just paraphrase the statutory element itself. The metrics proposed for both, i.e., "percentage of income spent," are also the same, except that one metric is broadly applicable to all customers, while the other specifies vulnerable populations and highly impacted communities. As a result, it is not clear if the rule requirement for "at a minimum, one or more customer benefit indicators associated with" each statutory element is actually met.8 The Energy Project encourages PSE to reach further than the bare minimum in developing unique CBIs and metrics for these and for all the statutory elements. The wording of the rule itself seems to suggest a utility may seek to do more than the minimum.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions made by stakeholders. PSE has combined the indicators on affordability into one indicator that measures affordability for all PSE customers, including highly impacted communities and vulnerable populations. These updates are shown in Chapter Three.

Category	Comment	PSE response
Customer benefit indicators Highly impacted and vulnerable populations	The Joint Advocates include two CBIs for the Reduction of Cost statutory element: • Expand Bill Assistance Programs - The JA list includes four recommended metrics for this CBI, of which only one (increase program participation rates) is reflected in the Draft CEIP. Additional metrics not reflected in the Draft CEIP include: o Increase penetration rates overall and among highly Impacted communities and vulnerable populations; o Increase annual program budget showing increases over prior years; Increase in customers avoiding disconnection. • Reductions in Number and Amounts of Arrearages – This JA CBI includes a metric regarding reductions in number and percentages of residential customers with arrearages 90+ days, with breakout for customers by zip code/census tract, renter, highly impacted communities, vulnerable populations, known low income, and BIPOC communities. The Draft CEIP does not include any CBIs or metrics regarding arrearages. Omitting this measurement of reduced energy costs for customers would be a missed opportunity.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions made by stakeholders. These updates are shown in Chapter Three. Thes bill assistance and arrearage metrics are important and are measured outside of the CEIP in other WUTC's proceedings. See PSE's reporting on arrearages, disconnections, and bill assistance in Docket UE-190529 pertaining to the Covid-19 Pandemic, including PSE's Disconnection Reduction Plan.
Customer benefit indicators	C. Resiliency/Energy Security The approach to the statutory elements of Resiliency and Energy Security again reflects some redundance. The Draft CEIP proposes to use the same two CBIs for these two statutory elements: (1) increased resiliency; and (2) decreased frequency and duration of outages. In TEP's view, identifying "increased resiliency" as a CBI for the Resiliency element is not particularly useful, since it is simply restating the statutory element itself. This may not meet the definition of a CBI in WAC 480-100-605. In a similar vein, identifying "increased resiliency" as a CBI for Energy Security in effect simply inserts the statutory element "Resiliency" as a CBI for another listed statutory element "Energy Security." Ultimately this type of overlap and redundancy weakens the importance of each of the discrete statutory elements, reduces the tools to advance those elements, and narrows the scope of CETA implementation. The Energy Project agrees that decreasing the number and duration of outages is a reasonable CBI for resiliency. However, TEP recommends that this CBI and related metrics be focused on geographic areas with vulnerable populations and highly impacted communities. As noted, PSE also lists decreased outages as a CBI for Energy Security. A more creative approach seems called for, identifying one or more different CBIs for this element. PSE already reports SAIDI/SAIFI information, so this is hardly a stretch goal for the Company. Joint Advocates recommend two CBIs for Energy Security which are more focused on the customer experience of maintaining the security of connection to essential energy services: (1) reduced residential disconnections); and (2) improved access to reliable clean energy. None of PSE's draft CBIs include measurement or tracking of residential disconnections, another key area of concern for TEP, or of access to renewable energy.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions made by stakeholders. PSE has added additional metrics including increased participation in targeted demand response to reduce peak demand, and increase number of customers who have access to emergency power. These updates are shown in Chapter Three.
	D. Omissions From The PSE Draft CBIs The following issue areas addressed in the JA CBIs were not reflected in PSE's draft CBIs.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. These updates are shown in Chapter Three.
	• Arrearages, bills and credit scores	These are important metrics that are measured outside of the CEIP in other WUTC proceedings. See PSE's reporting on arrearages and bill assistance in Docket UE-190529 pertaining to the Covid-19 Pandemic.
	• Indoor air quality	PSE will work with stakeholders in 2022 to potentially develop a CBI related to indoor air quality (refer to Chapter Eight).
	• Energy efficiency • Distributed Generation and Renewables	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. These updates are shown in Chapter Three.
	• Residential Disconnections	These are important metrics that are measured outside of the CEIP in other WUTC proceedings. See PSE's reporting on arrearages, disconnections, and bill assistance in Docket UE-190529 pertaining to the COVID19 Pandemic, including PSE's Disconnection Reduction Plan.

Category	Comment	PSE response
	The Draft CEIP addresses some of these items in other sections of the Draft CEIP, sometimes at length. It is notable, however, that none were included in the CBIs. This is important because the CBIs are the chief mechanism for tracking progress toward implementation of the CETA goal of equitable distribution of customer benefits from the transition to clean energy. These types of key indicators are necessary to ensure that the PSE CEIP is a meaningful document.	PSE has updated some of the customer benefit indicators and metrics to align with suggestions by stakeholders. These updates are shown in Chapter Three.
Distributed energy resources	III. LEASING FOR BATTERY STORAGE AND SOLAR A. Draft CEIP Proposals for Battery Storage As noted above, while Demand Response and DER were addressed in some detail in the Draft CEIP, they are notably not included in any of the CBIs. However, the Draft CEIP describes two Distributed Energy Resources programs for vulnerable populations – leasing for battery storage, and leasing of solar PVs. While energy storage and solar power can definitely provide benefits for low-income communities, TEP has significant concerns with both of these programs as proposed. Some of the specific details, and customer costs, for the programs are not fully clear. Programs intended to benefit highly impacted communities and vulnerable populations should contribute to reduced energy burden, a centerpiece of CETA. Yet, it's not at all apparent that would occur from these programs, particularly the battery storage programs.	See PSE's response to comments on battery storage and leasing programs below.
Distributed energy resources Highly impacted and vulnerable populations	B. Battery Energy Storage Programs for Vulnerable Populations PSE's plans to launch a battery energy storage leasing program, including programs for vulnerable populations, is described in Chapter Four of the Draft CEIP.9 PSE describes the battery programs for vulnerable populations as follows: "PSE will launch a program that leases battery energy storage systems to residential customers that incorporates a focus on vulnerable populations, including income-eligible residents. Customers will pay a small monthly fee for backup power services. PSE will also use batteries to manage system and local peaks."10 Residential customers, including customers from vulnerable populations, will pay a monthly fee for the battery storage equipment located at their premise. In contrast, for commercial and industrial (C & I) customers, PSE will "lease space" from customers with an option to provide backup power to the customer "for a small fee."11 For both the Residential and C & I programs, PSE intends to use the battery storage equipment to help manage system and local peaks. However, only C & I customers would be compensated with payments from PSE. The rationale for this difference in program design is not discussed in the draft CEIP. • The estimated costs of the battery storage programs is substantial, at $51.79M (utility owned assets, non-utility owned assets, and programs for vulnerable populations).	For "C&I Space Leasing for Batteries" program concept, there is no customer use case intended, unless a fee is paid for backup power configuration to be added. These PSE-owned, front-of-meter batteries will be deployed on customer premises in order to serve grid functions and deliver benefits to all customers. Therefore, DER program concept intends to compensate C&I customers for the opportunity cost. PSE anticipates the scale of battery storage system deployed to be larger than would otherwise be designed to serve customer needs at their premises. "PSE Battery Leasing" program concept will be behind-the-meter and installed at residences. Backup power use case included in configuration of anticipated turn-key consumer-scale battery storage system. Refer to Chapter Two for detail and background of DER program concepts considered for preferred portfolio. See PSE's response to comments on battery storage below as well.

Category	Comment	PSE response
Distributed energy resources Highly impacted and vulnerable populations	The Energy Project has the following concerns with the battery energy storage program concept for vulnerable populations: • Programs that require additional costs and fees to be paid by customers in vulnerable populations and highly impacted communities (as mentioned above), such as the battery storage programs, would increase energy burden. This is explicitly contradictory to the goals of CETA and highly problematic for inclusion in a CEIP. • Battery storage should be provided to income eligible customers, highly impacted communities and vulnerable populations at no extra cost. PSE should focus efforts on areas with income eligible customers, vulnerable populations and highly impacted communities with a history of outages and low reliability. • As a source of backup power, some of the anticipated benefits from the battery storage program for vulnerable populations are described in the draft CEIP as follows: In addition to delivering grid benefits during peak events, a battery energy storage system increases resiliency because customers can use their systems for backup power. As a result, this storage program will decrease the time and duration of outages for participating customers. This can increase home comfort and improve community health as an alternative to a diesel generator.12 Notably, and of serious concern, the discussion of customer benefits from these programs does not include reduction of burden. Additionally, it seems unlikely that many customers with low incomes have resources to invest in diesel generators for their home as a backup power source, as a practical matter making the "generator use avoidance" benefit unavailable. Certainly, battery storage can potentially play a significant role in expanding DER capacity, including for income-eligible and vulnerable populations. However, TEP recommends that such efforts be provided at no cost to customers, with a focus and priority on areas with lower reliability.	PSE appreciates the dialogue on concerns around leasing programs and has made some clarifications to the naming of those programs so they accurately reflect the intended purpose. PSE notes that there are inherent upfront and lifetime costs of owning a distributed battery and/or other DERs, which PSE seeks to significantly reduce and/or discount for vulnerable populations and income-eligible customers. PSE aims to offset these costs with the benefits from DER program designs by PSE that does not create a cost burden. For some distributed battery program concepts, PSE will utilize a utility-ownership approach in order to assume these costs and match them against grid use cases and benefits that it can realize on behalf of customers. The PSE-owned, customer-leased approach is intended to increase accessibility to distributed batteries and backup power to vulnerable populations and income-eligible customers with PSE being responsible for, at least, a majority of the cost for installing, owning, and maintaining the battery system, as well as any other costs, throughout the program life. Ownership ensures that PSE can have access to the distributed battery system during peak grid events to realize grid value and/or cost savings that can be netted against total inherent costs taken on by PSE. As with PSE's Residential Demo, a share of the battery system's energy will always be available for backup power to ensure the program concept can prioritize service to customer and thereby reduce burden (please see expanded Customer Benefits section in Chapter Four, Battery Energy Storage Programs). Pending responses to the Targeted DER RFP, PSE will proceed to specific and detailed program design to leverage the use cases for distributed battery systems noted above in order to offset costs of implementing and maintaining the technology, as well as maximizing accessibility for income-eligible and vulnerable populations. See Chapter Four Actions for Distributed Solar Programs and Battery Energy Storage Programs for more details on stakeholder collaboration for the design of these programs.
Distributed energy resources Highly impacted and vulnerable populations	C. Distributed Solar Programs for Residential and Vulnerable Populations The distributed solar program for vulnerable populations is also described as a "leasing" program, similar to the battery storage program.14 The distributed solar program for vulnerable populations would be one component of a broader program strategy that also includes residential, commercial and industrial rooftop solar leasing of solar photovoltaic assets owned either by PSE or a third-party, at a total cost of $82.79M.15 The Energy Project has significant concerns and questions with this program, particularly if any additional costs are borne by income eligible and vulnerable populations, which would directly contradict the goals of CETA. By contrast, the Community Solar program would provide benefits o income-eligible and vulnerable populations, apparently at no added cost and with a much larger nameplate capacity.16 Below we discuss the residential program (benefits are expected to extend to Named Communities) and the program for vulnerable populations.	See PSE's prior response to TEP's comments on leasing programs.

Category	Comment	PSE response
Distributed energy resources Highly impacted and vulnerable populations	1. Residential Rooftop Solar Leasing The flow of payments and credits for this distributed solar leasing program, and potential net costs to customers, both for residential and income-eligible residential (vulnerable populations), is not fully clear based on the descriptions in Chapter Four of the Draft CEIP. The residential program is contemplated to include utility owned assets (solar PVs), and PSE would lease rooftop space from residential customers in exchange for installation of the solar PV. The CEIP states, "[Residential c]ustomers will receive a monthly lease payment, and PSE will generate renewable energy to supply the grid. This DER approach enables customers to participate and benefit from clean energy generation without any upfront investment."17 While residential customers may receive credits for leasing of their rooftop, it also seems implied that while they would not incur "upfront investment" in solar, enrolled customers would be required to make payments for the solar generation. The draft CEIP refers to the "complex billing" systems needed for these programs. The expected customer benefits of the residential program reference inclusion of "named communities" but does not mention reduction of energy burden as a program benefit. Instead, the following customer benefits of the residential program are identified: non-energy, environment, and health.19 There is mention of the credit applied to the customer's utility bill, presumably for the rooftop lease, but again, it seems likely that customers would still face a net cost under the program, for the solar PV. The customer benefits of the residential program are further described in this way: "The installation of these solar PV systems will support an increase in clean energy jobs. By taking these specific actions, customers, including named communities, will face decreasing health and environmental burdens. See Table 3-1 for PSE's customer benefit indicators."20 Notably, reductions of cost and reductions of burden are not identified as customer benefits. In contrast, the Community Solar program does identify "burden reduction" as a customer benefit.	The rooftop solar leasing program concept does not add or intend to add cost to customers. There is no payment by the customer for participation in this program concept. The customer will receive a lease payment from PSE, in the form of a bill credit, for access to their rooftop. PSE will then install a utility-owned, front-of-meter solar PV system that it will be responsible for maintaining. PSE will then generate renewable energy from the front-of-meter rooftop solar PV, which is then injected directly to PSE's energy supply and thereby further decarbonizing the energy supply servicing all customers. In addition to the enrolled customers who will benefit from payments from PSE in exchange for leasing their rooftops, all customers are anticipated to benefit from clean energy generated and supplied to the grid.
Distributed energy resources	2. Distributed Rooftop Solar Leasing for Vulnerable Populations The distributed solar program for vulnerable populations is described as an extension of the other programs (PSE-owned, customer-owned, third-party owned solar), as an effort to "reduce barriers for vulnerable populations to access and benefit from DERs."22 Again, however, what is not clearly explained, is whether customers would face net costs from the program, despite a possible rooftop lease credit. The program is expected to include single family residences as well as multi-family buildings. As with the residential program discussed above, there may be two leases under the program. PSE may lease rooftop space, providing a credit to customers, but then in turn the enrolled customers may also lease the solar PV. Similar to the residential program, the distributed solar program for vulnerable populations would necessitate complex billing system upgrades. The Draft CEIP description of the vulnerable population program states that in 2023, "PSE will also scope billing system changes to reflect monthly lease payments on customers' bills and begin complex billing enhancements as needed (see DER Enablers—Customer Enablement)."23 The reference here to "monthly lease payments on customers' bills," as opposed to monthly credits, suggests that customers of the program for vulnerable populations may still be faced with a net increase in costs rather than a reduction of costs. The costs associated with the required billing system upgrades may be rather large. Appendix L mentions "DER work enablement work streams, strategic procurement, customer, and operations" at a cost of $32.7 million. There is no further explanation or description of attributes associated with this expense, however.24	See PSE's prior response to TEP's comments on leasing programs.

Category	Comment	PSE response
Distributed energy resources Highly impacted and vulnerable populations	The distributed solar program for vulnerable populations is expected to include multifamily buildings and residences as well, through a range of different program components. The draft CEIP describes the multifamily solar offerings in this way: PSE will support the adoption of solar PV at multi-family unit buildings through partnerships and incentives for multi-family customers. PSE will facilitate solar PV installation on multi-family buildings by connecting with technology providers and billing support systems to share production across units. PSE will also offer multi-family unit building owners incentives to reduce their upfront cost to install and own solar in PSE's service territory.25 Again, however, what is not fully clear based upon this description, is what costs are expected to be borne by residential customers themselves in multi-family housing. Any added costs passed on to directly or indirectly to residential customers living in multi-family housing would be of concern. The Draft CEIP identifies the same customer benefits for the solar program for vulnerable populations as the residential program: non-energy, environment, and health.26 Once again, reductions of cost and reduction of burden are not clearly identified as customer benefits. Contributing to the confusion, the discussion of customer benefits for the distributed solar program for vulnerable populations also refers to "community solar," but that is a different programmatic effort, described in the subsequent section of the draft CEIP. The complete discussion of customer benefits for the distributed solar leasing program for vulnerable populations is provided below: These programs provide customer benefits in non-energy, environmental, and health. The Community Solar and Residential Rooftop Solar Leasing programs will improve participation from named communities and reduce the energy burden for income-eligible customers through monthly credits at no cost to the consumer. The multi-family programs help broaden access and improve the affordability of clean energy. These programs contribute to reduced greenhouse gas emissions by allowing PSE to install solar for clean energy generation, which contributes to improved air quality. Finally, the installation of these solar PV systems will support an increase in clean energy jobs. See Table 3-1 for PSE's customer benefit indicators.	Refer to Chapter Two for details of DER program concepts considered for the preferred portfolio, including program concepts intended to increase accessibility to renewable energy for multi-family unit building residents. Pending responses to Targeted DER RFP, and subsequently, detailed program design, PSE anticipates the "Multi-family Community Solar" program concept may resemble a successive iteration of its existing "PSE Community Solar" and "PSE Community Solar - Income Eligible Option" programs. In addition to income-eligible customers, PSE is planning for dedicated enrollment for multi-family unit residents. Links are provided below to each current program, including eligibility, enrollment, and benefits. Refer to Appendix K for details of programs and assumptions on cost used to evaluate all DER program concepts for consideration in its preferred portfolio. PSE's Community Solar Program: pse.com/en/green-options/Renewable-Energy-Programs/Community-Solar PSE's Community Solar Program - Income Eligible Option: pse.com/green-options/Renewable-Energy-Programs/Community-Solar-IE
Distributed energy resources Highly impacted and vulnerable populations	While this customer benefit section mentions "no cost to the consumer," that may apply to the Community Solar program, described later in the Draft CEIP, which would offer credits to customers. Again, although there may be some credits to customers for the rooftop lease, the reference to "improving affordability of clean energy," and the description of the program suggest customers may also be required to make lease payments to PSE for the solar PV.	See PSE's prior responses to comments on leasing programs. Unlike PSE's Community Solar program, the bill credits associated with the "PSE Roof-top Solar Leasing" program concept are related to lease payments from PSE to enrolled customers in order to install PSE-owned, front-of-meter solar PV panels that generate renewable energy that is injected directly to PSE's energy supply.
Distributed energy resources Highly impacted and vulnerable populations	To the extent any of these programs would require customers to make an additional payment to the utility (or third-party entity), possibly including interest, would seem to directly contradict CETA's goals to reduce energy burden for these customers. Instead, such a program concept would increase the energy costs and burdens of the very populations CETA is seeking to ensure are not harmed as a result of the transition to clean energy. As already noted, the Master Table of CEIP Programs and Actions in Appendix L does not include reference to the following three statutory elements: Reduction of Burdens, Reduction in Cost, Reduction in Risk. This absence contributes to the confusion and lack of clarity surrounding the potential impacts, benefits, and costs of the distributed solar leasing programs. We hope these statutory elements are included in the final list of CEIP Programs and Actions.	The rooftop solar leasing program concepts is intended for customers to receive lease payments from PSE for access to their rooftop. PSE will install, own, and maintain the PSE-owned, front-of-meter, rooftop solar PV panels. There are no additional payments anticipated for or by the customer related to the rooftop solar PV panels. The lease payments by PSE to customer are intended to directly reduce burden and cost for customers, with indirect reduction in risk possible. The PSE Battery Leasing Program is intended to increase accessibility to vulnerable populations and income-eligible customers by significantly reducing the cost of battery systems. PSE will take, at least, a significant share of upfront and lifetime cost of the battery to install, own, and maintain the system, thereby shielding the enrolled customer from unforeseen or additional costs inherent to ownership. PSE will balance availability of the battery system for back-up power, in the event of a local circuit outage, while using it to help manage grid peak events and realize cost savings from grid use cases that can be netted against the cost of battery system taken on by PSE. This is intended to net or limit cost recovery otherwise needed. The program is intended to reduce burden to customers, as well as risk of outages, with the potential for reduction in cost based on further study of grid peak management and other use cases. Reference Chapter Four.

Category	Comment	PSE response
Distributed energy resources Highly impacted and vulnerable populations	A final point regarding the proposed battery storage and solar DER leasing programs for vulnerable populations, TEP recognizes that these programs are anticipated by PSE to contribute to managing local and system peaks and to meeting peak capacity. The Energy Project recommends that PSE consider whether direct load control (DLC) programs might represent a more straightforward and cost-effective means of achieving those goals. We observe that Appendix L does include five DLC programs as part of its Demand Response target, with a total expected cost of $5.3 million.28 Perhaps some of these DLC programs can be expanded. In addition, none of the DLC programs appear to mention inclusion of income-eligible or vulnerable populations, another potential area for further consideration.	PSE acknowledges the DLCs suggested. The intent of the leasing programs is to improve the cost effectiveness of program design intended to increase accessibility of battery storage and solar DER technology to vulnerable and income-eligible populations. Refer to PSE's prior response to TEP's comments regarding distributed battery energy storage program concepts for vulnerable populations. The upfront cost of installing rooftop solar photovoltaic (PV) panels can also remain expensive. By leasing rooftop space from customers to site distributed solar, customers will be able to participate at no-cost and receive a bill credit from PSE while also benefiting from a cleaner electricity supply. PSE can leverage its cost of capital and installer network to more rapidly deploy distributed solar assets and help to deploy more local solar to reduce greenhouse gas emissions and the economic burden on customers.
Customer benefit indicators	The Commission's CEIP rules create an expectation of significant consultation by the Company with its Advisory Groups, which would include the PSE's Energy Efficiency and Low-Income Advisory Groups in the development of the CEIP.29 The Energy Project's experience and perception to date is that consultation with these Advisory Groups has been relatively limited. Consistent with the rule, TEP is hopeful that the recommendations which the Advisory Group members have submitted, including the Joint Advocate CBI recommendations, will receive further discussion in the Advisory Groups and serious consideration for inclusion in the final CEIP. As these comments suggest, TEP sees significant gaps in the Draft CEIP CBIs in addressing the statutory elements that have particular significance for low-income, vulnerable populations and highly impacted communities. These should be better addressed in order to develop a comprehensive and effective set of CBIs. The Energy Project also has concerns with the proposed leasing programs for battery storage and solar for vulnerable populations, particularly to the extent these programs result in net additional costs to customers. The Energy Project recommends more emphasis be given to Community Solar and to direct load control alternatives. The Energy Project looks forward to working with the Company and with other member of PSE's Energy Efficiency (CRAG) and Low-Income Advisory Groups, as well as the Equity Advisory Group to try to reach consensus on the final set of CBIs for measuring equitable transition to clean energy under CETA.	PSE's DER program concept mix includes residential solar and battery storage programs. For income-eligible customers, PSE will look to further reduce or eliminate fees to increase affordability and will also identify customers located in areas with higher outages and lower reliability. Discussion of the DER program concepts, as well as considerations around incentives and program design for income-eligible programs, are addressed in Chapters Three and Four. As noted in these chapters, the final program designs will be based on the results of the Targeted DER RFP and engagement with community members.

Washington Department of Fish and Wildlife (WDFW)

Category	Comment	PSE response
Large-scale renewables	WDFW recommends that the Plan acknowledge that while building new renewable energy is an urgent matter, so is assuring that it is sited in a manner that protects sensitive ecosystems like shrub steppe. Specifically, the Plan should focus solar development consistent with least conflict siting practices and by developing resources and supporting incentives for siting on brownfields, parking lots, the land of willing farmers, and rooftops, including large industrial rooftops common in the Columbia Basin (e.g., cold storage facilities, server farms, warehouses, and schools). WDFW would be eager to be a resource for PSE as it considers locations for the development of solar infrastructure.	PSE appreciates WDFW's participation in the CEIP public comment period and offer to be a resource. PSE has committed to continuing to work with stakeholders to identify and develop future customer benefit indicators, including potential for measuring fish and wildlife impacts (reference Chapter Eight).

Washington Clean Energy Coalition / Sierra Club committee

Category	Comment	PSE response
Demand Response target	The Clean Energy Transformation Act has apparently compelled PSE to think differently about TVRs [Time-Varying Rates]. In the Draft CEIP, PSE states, "This program reduces load required to meet peak capacity need and enables greater integration of renewables bringing PSE closer to 80 percent CETA compliance." We applaud PSE's change of heart, but some of the company's previous ambivalence toward TVRs is still evident. For example, Table 4-2 includes a "50% derate for a winter-peaking system." This puzzling handicap is explained in footnote 33: "The estimated peak reduction is cut in half because PSE's system is a winter peaking system." No other detail or clarification of this consequential claim is offered. Let's take a closer look. In the first row of Table 4-2 (shown on the next page), the third column shows an estimated 10.9% reduction for winter peaks. Why would that number be cut in half because peak demand is higher in winter than summer (the definition of a "winter peaking system")? It is hard to understand.	PSE added a footnote to clarify this in Chapter Four. To clarify, PSE has worked with The Brattle Group to develop the experimental design and TVR for the TVR Pilot. In Brattle's experience, there is a more limited body of evidence on customer response when winter-peaking utilities deploy TVRs versus that of summer-peaking utilities. Brattle conservatively applied a 50 percent derating (or adjustment) factor to adjust for potential lower customer response that a winter-peaking utility like PSE might experience. The 50 percent derate isn't meant to calculate the system's demand response potential; instead the derate adjustment was applied to inform sample size calculations for the TVR Pilot. The TVR Pilot will help us understand how time-varying rates can minimize system costs, increase customer choice, enhance equity and accessibility, and expand renewables integration for PSE customers. It is essential to design the pilot so that it has every chance of success.

Summarized comments from individuals

Comment theme	PSE response
Interim targets	
Many respondents were pleased to know their utility was taking action to reduce greenhouse gas emissions on the proposed schedule. Some respondents wanted to understand the challenges and resources necessary to reduce greenhouse gas emissions on a faster timeline, siting the urgent need to act on climate change.	Based on customer, advisory group and stakeholder feedback, PSE conducted additional analyses that resulted a faster ramp-up rate for renewable energy. Our new interim target moves PSE forward to 63 percent clean electricity by end of 2025. Refer to Chapter Two to learn about this change. As for a faster timeline, PSE is making significant progress in reaching CETA's 2025, 2030 and 2045 standards while balancing the ongoing need to maintain reliability and affordability. Refer to Chapter 1 Executive Summary for a summary on balancing urgency on climate change with reliability and affordability.
Specific comments said the specific targets for demand response and distributed energy resources should be increased for the current CEIP timeframe. These commenters sited the specific benefits these programs would provide customers in the form of energy bill savings and avoiding the siting impacts of larger centralized infrastructure projects. A few commenters were concerned DER and DR technologies are not yet cost effective for broad implementation.	PSE acknowledges stakeholder calls for increasing demand response and distributed energy resources (DER) programs in this CEIP; however, for this CEIP, PSE is keeping the DR and DER specific targets at the level anticipated by the 2021 Integrated Resource Plan (IRP) and Clean Energy Implementation Plan (CEAP). These DER and DR targets define our minimum of what we intend to achieve in this first CEIP. In addition, the Targeted DER RFP will provide important data on available resources and programs, while program design and market demand may provide additional opportunities. PSE will continue to deploy non-wire alternative projects and grid modernization initiatives where DERs can be deployed beyond the CEIP's DER preferred portfolio.
Methodology	
A few comments requested PSE account for the expected effects of climate change in customer energy use forecasts.	PSE will include in the 2023 IRP Progress Report the load forecast that includes temperature data that reflects climate change, with the temperature data expected to be shared with stakeholders in early 2022. For details, refer to Chapter Eight.
Customer Benefit Indicators (CBI)	
Commenters described environmental benefits they would like to see during the clean energy transition. These comments asked PSE to conduct an analysis of the environmental impacts of different kinds of clean energy and choose actions that have smaller siting impacts and create fewer overall environmental impacts in the supply chain and lifecycle of the technology. Many of these comments suggested DER actions like rooftop solar and batteries would have fewer environmental impacts and more customer benefits compared to large scale wind facilities.	The supply chain analysis of clean electricity resources are outside the scope of this CEIP's analysis, but energy developers are expected to meet all local, state and federal siting and permitting requirements, including all applicable environmental laws and regulations.
Commenters were interested in the local economic benefits that could be generated by the clean electricity transition, especially if labor and manufacturing was sourced locally, and asked that "job quality" be added to the list of CBIs.	With investment in energy efficiency, local rooftop and ground solar, and battery storage, PSE anticipates local economic benefits with the clean electricity transition. PSE added "job quality" to the Customer Benefit Indicator on clean energy jobs and further defined the metrics to address these comments. Specifically, PSE addressed this input through updating the Customer Benefit Indicator on clean energy jobs to "Increase in *quality* and quantity of clean energy jobs" and added metrics to include number of local workers for jobs, range of wages paid to workers, and additional benefits offered. For details, refer Chapter Three.
Commenters also emphasized the importance of benefits included in the CEIP's list of CBIs, including improved air quality, improved community health, affordable clean energy and increased resiliency.	PSE outlined the customer benefits indicators and metrics in Chapter Three.
A few respondents wanted more information about how PSE used the CBIs in the CEIP and asked for a rationale to be included with CBI scores for potential actions. These comments questioned the choice to give all CBIs equal weighting and advocated for a wider scoring scale.	PSE addressed comments on how CBIs will be used to evaluate resources, scoring for DER concepts and rationale for equal weighting in Chapter Three. In addition, PSE added a commitment to continuing to evolve its weighting methodology, which is described in Chapter Eight.
Highly Impacted Communities and Vulnerable Populations	
Many respondents supported addressing specific needs of vulnerable populations and highly impacted communities through clean electricity benefits and emphasized the need to name the ways specific communities will benefit. Some of these commenters pointed out that PSE needs to actively engage communities that have less time and fewer resources to empower them to participate in clean electricity programs.	PSE agrees we need to outline how highly impacted communities and vulnerable populations will benefit through the clean electricity transition. Chapters Three and Four describe how CBIs and specific actions will reduce burdens and create benefit. PSE plans to address the direct engagement need through education and awareness, as well as program design. There's more work to be done to better understand existing disparities, root cause of burdens and opportunities for improved participation in PSE's programs. For details on PSE's next steps, refer to Chapter Eight.

Comment theme	PSE response
A few commenters wanted to be sure that all customers will experience clean electricity benefits and cautioned that the cost of the transition should not be over burdensome to any customers.	PSE agrees that we must balance the urgency of the clean electricity transition, the need to ensure all customers benefit, and maintain affordability. Customer benefits are addressed in Chapter Three. While not part of the CEIP, PSE has a variety of programs designed to help customers reduce their energy burden and provide energy security through bill assistance and payment arrangement plans. To learn more about these programs, visit pse.com/help.
Actions - general	
It was important to many respondents that PSE take actions to remove fossil fuels from the electricity supply as quickly as possible, expressing concerns about climate change related impacts.	PSE agrees we must act urgently on climate change, while also continuing to ensure customers have clean, safe, reliable and affordable electricity. PSE is moving to reduce fossil fuels – PSE will be coal free by end of 2025 and we will need to reduce our use of natural gas in our electricity generation to achieve the goals of CETA. Based on stakeholder feedback, PSE conducted additional analyses that resulted in a faster ramp-up rate for renewable energy. Our new interim target moves PSE forward to 63 percent clean electricity by end of 2025. Refer to Chapter Two to learn about this change. PSE has, and will continue to, offer options for customers who want to go even faster. To learn more about PSE's voluntary renewable energy programs available today, visit pse.com/renewables.
Energy efficiency actions	
Respondents who commented on energy efficiency actions emphasized the potential for energy efficiency to reduce the amount of income vulnerable populations spend on electricity costs. Some respondents asked PSE to share more information about upcoming plans for residential energy efficiency actions.	PSE agrees that energy efficiency has a major role to play to help customers save money and reduce their carbon footprints. PSE's energy efficiency team has developed a Diversity Equity and Inclusion (DEI) Committee to develop a more comprehensive understanding of vulnerable populations, highly impacted communities, high energy burden, and emerging factors generated by the EAG. For more details, refer to Chapter Four. For details on PSE's energy efficiency programs, refer to Appendix B, 2022-2023 Biennial Conservation Plan. For details on expected benefits of programs, refer to Appendix L.
Large-scale renewable energy actions	
Many respondents were pleased to see that PSE is planning to increase use of large-scale wind and solar in its non-emitting electricity supply as described in the draft CEIP. Some respondents expressed concerns about the reliability of solar as an intermittent electricity resource, particularly in western Washington. A few respondents also shared concerns about the environmental hazards associated with wind and solar resources, specifically highlighting impacts to wildlife and the waste produced during manufacturing and disposal of materials.	PSE must consider reliability of both the electric supply resources and infrastructure, referred to as resource adequacy, as part of electric resource planning for the CEIP. Refer to Chapter Two for more details. The supply chain analysis of clean electricity resources are outside the scope of this CEIP's analysis, but energy developers are expected to meet all local, state and federal siting and permitting requirements, including all applicable environmental laws and regulations. Protecting wildlife and habitat issues have been and will continue to be a key part of legal requirements associated with new energy development, though it is outside the scope of the CEIP. Habitat considerations are part of permitting processes. When effects cannot be avoided government agencies require appropriate restoration and mitigation. Energy developers must meet all local, state and federal permitting requirements, including all applicable environmental laws and regulations.
Some commenters requested PSE discuss the role or future potential of resources that were not included in the draft CEIP, including hydroelectric power, nuclear power, geothermal power and tidal power.	PSE's first CEIP includes use of hydroelectric power as explained in Chapter Four: Specific Actions. PSE needs additional resources to meet its CETA requirements and is seeking those resources from an open bidding process and will evaluate those based on customer benefit indicators and other requirements. In June 2021, PSE issued its 2021 All-Source Request for Proposals, for resources to meet all or part of PSE's capacity and CETA needs at the lowest reasonable cost to customers. While the RFP process is ongoing, PSE received a total of 95 proposals from bidders. The proposals include resources from hydroelectric power, off-shore wind and geothermal. At this time, nuclear power and tidal power were not included in bidder responses; however, that could change in future RFPs and CEIPs. Details on the All-Source RFP and renewable resources being considered are include in Chapter Four and pse.com/rfp.

Comment theme	PSE response
Demand response actions	
Some respondents specifically recommended that PSE consider implementing demand response programs with varying rates.	PSE has included demand response and Time Varying Rate (TVR) pilot programs in the CEIP as part of the specific actions. For details, review Chapter Four.
Distributed energy resources actions	
Many respondents expressed support and excitement about the prospect of accessing community and residential solar and battery storage programs and were interested in potential affordability benefits. Some requested more information about incentives or leasing programs. Other commenters wanted to see more emphasis on distributed energy resources, in many cases siting the potential benefits they could bring vulnerable populations in the form of reduced energy bills and improved self-sufficiency.	PSE's distributed energy resources (DER) program concept mix includes residential solar and battery storage programs. Discussion of the DER program concepts, as well as considerations around income-eligible programs, are addressed in Chapters Three and Four. As noted in these chapters, the final program designs will be based on the results of the Targeted DER RFP and engagement with community members.
Similar to concerns associated with large-scale renewable resources, a few respondents questioned the reliability and environmental benefits of solar panels, specifically related to the waste produced during manufacturing and disposal of materials. Some comments suggested including residential wind as an additional resource.	PSE must consider reliability of both the electric supply resources and infrastructure, referred to as resource adequacy, as part of electric resource planning for the CEIP. Refer to Chapter Two for more details. The supply chain analysis of clean electricity resources are outside the scope of this CEIP's analysis, but energy developers are expected to meet all local, state and federal siting and permitting requirements, including all applicable environmental laws and regulations. At this time, residential wind is not a distributed energy resource under consideration; however, with future CEIPs we expect the resources could evolve and change over time.
Specific comments suggested that PSE design solar/wind programs to include installation and maintenance services as part of their electricity bill.	This is not included in the CEIP, but as we consider future program design, we'll take this under advisement.
New/other action suggestions	
Commenters asked PSE to consider actions not included in the draft CEIP, naming nuclear facilities, hydroelectric projects, waste-to-fuel thermal plants and carbon-capture technology.	Refer to the previous responses on large-scale renewable energy actions.
Many commenters emphasized the importance of considering impacts to the environment and wildlife when considering clean electricity resources like hydroelectric or nuclear power.	Protecting wildlife and habitat issues have been and will continue to be a key part of legal requirements associated with new energy development, though it is outside the scope of the CEIP. Habitat considerations are part of permitting processes. When effects cannot be avoided government agencies require appropriate restoration and mitigation. Energy developers must meet all local, state and federal permitting requirements, including all applicable environmental laws and regulations.
Incremental cost and rates	
People who commented on the cost of actions in the draft CEIP worried the cost for ratepayers may be too high, particularly for people with fixed income and low-income communities. Some commenters suggested the cost be mitigated through rate design, or through clean energy actions like net-metering benefits or energy efficiency.	PSE agrees that we must balance the urgency of the clean electricity transition, the need to ensure all customers benefit, and maintain affordability. PSE has worked to keep costs near the state's 2 percent incremental cost of compliance (reference Chapter Five). While not part of the CEIP, PSE has a variety of programs designed to help customers reduce their energy burden and provide energy security through bill assistance and payment arrangement plans. To learn more about these programs, visit pse.com/help.
Many commenters expressed that access and cost of clean electricity programs should be equitable and fair to all customers. Some commenters suggested that utility bills could be scaled based on household income to support equity.	PSE has specific customer benefit indicators developed to address affordability (refer to Chapter Three). PSE is using CBIs to help evaluate its program and investment decisions. Outside of the CEIP itself, PSE has worked this year to develop a new "Bill Discount Rate" program, which it will file for approval with the WUTC next year. If approved, the bill discount rate would help low-income customers.
A few commenters suggested all clean electricity programs should be elective and only affect rates of participants.	Under Washington's Clean Energy Transformation Act (CETA), PSE must move to clean electricity rather than simply rely on customers to opt into participating in renewable programs like Solar Choice and Green Power and pay the extra cost on their bill.

Comment theme	PSE response
Some commenters said energy affordability was more important than clean electricity goals.	PSE must meet CETA clean electricity standards and ensure all customers benefit from the transition to clean electricity. PSE is working to balance clean, safe, affordable and reliable electricity for customers. Specifically, PSE's RFPs allow for open bidding on resources so that we're better able to acquire new resources at the most competitive prices, while striving to ensure that all customers are benefiting from the transition to clean electricity. In addition, PSE has worked to keep costs near the state's 2 percent incremental cost of compliance. To learn more about the incremental cost, reference Chapter Five.
Public participation	
Commenters made suggestions for how to share information and involve communities in the clean electricity transition. They gave examples like working with local faith communities, food banks and labor organizations in addition to community-based organizations.	PSE has updated its public participation plan to broaden its reach to community-based organizations and labor organizations. To learn about PSE's public participation efforts, reference Chapter Six: Public Participation.
Commenters said more outreach and education was needed to help seniors, low-income and immigrant communities understand how they could benefit from clean electricity. They suggested PSE provide tours of clean electricity facilities to help people see and understand the benefits.	Based on input from the Equity Advisory Group and others, PSE has included customer education and outreach as a component of this first CEIP. For reference, review Chapters Three, Five, Six and Eight.
A few commenters asked PSE to make as much data available and easily accessible as possible to promote transparency and accountability.	PSE has made workpapers and tables available as part of its filing (see appendices). PSE is committed to transparency and accountability, while continuing to follow all state and federal regulations.
Integrated resource plan (IRP)	
Several comments included concerns about the possibility of PSE's investment in a new natural gas speaker plant as a part of the integrated resource planning process.	PSE is currently in an acquisition process with the intent to acquire CETA-compliant resources to address the peaking capacity need identified for beginning in 2026, which is outside the scope of this first CEIP. The 2021 IRP included a generic peaking plant operating on biodiesel as a CETA-compliant capacity resource and cost-effective means of ensuring reliability. The IRP identified the need for this new resource as in 2026, which is outside of the 2021 CEIP's implementation plan period of 2022-2025. The 2021 IRP specifically identified the peaking plant's fuel as biodiesel, as it is CETA-compliant. This remains our preference. PSE is in the process of evaluating responses to the 2021 All-Source RFP, which requested and prefers CETA-compliant capacity options resources. There were biofuel generation options proposed to PSE in response to the All-Source RFP. PSE does not have a self-build option in the RFP, nor does PSE have a peaker plant under development. PSE will incorporate the results of the 2021 All-Source RFP into the 2023 IRP Progress Report and 2023 biennial CEIP Update (reference Chapter Eight).
Program implementation	
Specific comments suggested PSE act as a clearing house of customer resources for clean electricity installations.	PSE's goal is to be our customers clean energy partner of choice. Acting as an information resource provider, providing education and making our programs more accessible are critical. For the CEIP, PSE has outline specific plans for market places for distributed energy resources (e.g., rooftop solar, battery storage, etc). These are described in Chapter Four: Specific Actions. Today, PSE has Energy Advisors that act as resources for our energy efficiency and renewable energy programs. They help customers understand their energy use and assist them in using PSE's programs that are best suited for the customer's individual circumstances. To contact an Energy Advisor, visit pse.com/rebates/ask-advisor-form
Implementation – resource acquisition/supplier	
Some respondents requested that PSE prioritize acquiring diverse clean electricity resources. They also shared that PSE should encourage customers to personally invest and utilize residential clean electricity facilities that could contribute to the power supply.	As for diversity of resources, PSE needs additional resources to meet its CETA requirements and is seeking those resources from an open bidding process and will evaluate those based on customer benefit indicators and other requirements. In June 2021, PSE issued its 2021 All-Source Request for Proposals, for resources to meet all or part of PSE's capacity and CETA needs at the lowest reasonable cost to customers. While the RFP process is ongoing, PSE received a total of 95 proposals from bidders. The proposals include resources from hydroelectric power, off-shore wind and geothermal. At this time, nuclear power and tidal power were not included in bidder responses; however, that could change in future RFPs and CEIPs. Details on the All-Source RFP and renewable resources being considered are include in Chapter Four and pse.com/rfp. PSE has, and will continue to, offer options for customers who want to go even faster. To learn more about PSE's voluntary renewable energy programs available today, visit pse.com/renewables.

Comment theme	PSE response
Natural gas and electrification	
Many respondents wanted to understand how PSE's natural gas rebates cofunction with the carbon reduction emissions goals of the draft CEIP. Some respondents suggested that electrification of facilities and vehicles that use fossil fuels be incorporated in the CEIP and contribute to the carbon reduction emissions goal.	Under CETA, clean electricity resources can include renewable energy, energy efficiency, and demand response, and non-emitting electric generation, such as nuclear. Natural gas does not qualify as clean electricity under CETA. PSE will need to reduce our use of natural gas in our electricity generation to achieve the goals of CETA. The CEIP transitions our electric energy supply and does not include considerations to decrease our customers' natural gas use. Currently, Washington has different regulatory systems for reducing greenhouse gas emissions from different fuels. CETA, passed in 2019, is focused on reducing greenhouse gas emissions from electricity. Reducing emissions from natural gas is covered under Washington's Climate Commitment Act, passed by the 2021 legislature. The process to define that system is just starting. Energy efficiency incentives we offer today are based on energy savings, rather than greenhouse gas emissions reductions. With the addition of greenhouse gas emissions reduction requirements, new programs may emerge that are focused on greenhouse gas emissions and carbon reduction. In addition, PSE is partnering with customers on transportation electrification – PSE Up & Go Electric wants to make it as easy as possible for our customers to save money and help the environment by electrifying their transportation. To learn more about PSE's transportation electrification plan, visit the WUTC Docket UE-210191.
Project need	
A few respondents questioned the need for a transition to clean electricity. They shared a belief that climate change is not a priority and that existing electricity resources resulted in more affordable rates and reliable electricity for customers.	We appreciate commenters sharing this feedback; however, PSE is required to meet CETA clean electricity standards and ensure all customers benefit from the transition to clean electricity.
Short duration of comment period	
PSE also heard from stakeholders and tribal governments that PSE's comment period was too short, especially given staff capacity and competing demands to review other plans.	PSE acknowledges that the regulatory timeline for this first CEIP has been compressed – both in time for engaging with stakeholders and tribal governments on an all-new regulatory construct and a short comment period. This year, we've learned that strict and short engagement processes can be a barrier to equity and meaningful participation from tribal governments, and we will use this understanding to inform future engagement and the timing needed to provide equitable access.