



**2022-2023 Biennial Conservation Report**  
for Electric and Natural Gas Programs

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## **Exhibits**

**Exhibit 1:** 2022-2023 Electric and Natural Gas Savings and Expenses

Supplement 1: BCAR Final Report

Supplement 2: 2022 HER Evaluation

Supplement 3: 2023 HER Evaluation

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Supplement 5: Commerce EIA Conservation Report

**Exhibit 2:** 2022-2023 Electric and Natural Gas Cost-Effectiveness Results

**Exhibit 7:** Requirements Compliance Checklist

## Executive Summary

Puget Sound Energy (PSE or the Company) presents this 2022-2023 electric and natural gas Biennial Conservation Report (Report) to the Washington Utilities and Transportation Commission (UTC or Commission), consistent with WAC 480-109-120(4) and UG-210823 – Order 01 Attachment A, Sec. 5)c).

### A. 2022-2023 Electric Conservation Achievements

PSE did not meet its Energy Independence Act (EIA) electric conservation penalty target of 469,182 Megawatt-hours (MWhs) nor its additional decoupling penalty target of 24,878 MWh set in docket UE-210822. PSE actually achieved 467,933 MWh toward its total penalty target of 494,060 MWh, as demonstrated in Table 0-1 2022-2023 Electric Portfolio Conservation Results.

PSE worked with its Conservation Research Advisory Group (CRAG) and adaptively managed its programs (view Chapter I. Adaptive Management) throughout the biennium to attempt to achieve the electric conservation target. However, lingering COVID-19 economic impacts including inflation, rising interest rates, and skilled labor shortages resulted in limited customer participation and unmet savings targets.

In an effort to make up for and exceed the amount of unattained electric savings in the 2022-2023 biennium, PSE added 70,000 MWh to a variety of programs in its 2024-2025 biennial portfolio. This was made possible by the momentum generated from customer participation in late 2023 that is attributed to effective adaptive management techniques, more favorable economic conditions, and the support of PSE's advisory group.

Following the 2020-2021 biennium that included lockdowns and significant supply chain disruptions, the 2022-2023 biennium saw reduced social safety precautions but continued the pattern of significant economic impacts that constrained customer demand for efficient products. Throughout the biennium, PSE implemented many adaptive management efforts in coordination with its conservation advisory group and started to see positive results toward the end of 2023; however, PSE was unable to meet its 2022-2023 electric biennial conservation target. PSE requests that the commission issue an order determining that it is in compliance with its biennial electric acquisition target for cost-effective conservation. Based on the provisions in RCW 19.285.040 (1)(e)<sup>1</sup> and RCW

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<sup>1</sup> (e) A qualifying utility is considered in compliance with its biennial acquisition target for cost-effective conservation in (b) of this subsection if events beyond the reasonable control of the utility that could not have been reasonably anticipated or ameliorated prevented it from meeting the conservation target. Events that a qualifying utility may demonstrate were beyond its reasonable control, that could not have reasonably been anticipated or ameliorated, and that prevented it from meeting the conservation target include: (i) Natural disasters resulting in the issuance of extended emergency declarations; (ii) the cancellation of significant conservation projects; and (iii) actions of a governmental authority that adversely affects the acquisition of cost-effective conservation by the qualifying utility.

19.285.060 (2),<sup>2</sup> a qualifying utility is “considered in compliance” with biennial acquisition targets for cost-effective conservation and “exempt from the administrative penalty” if events “beyond its reasonable control, that could not have reasonably been anticipated or ameliorated” prevented it from meeting the conservation target.

**Table 0-1 2022-2023 Electric Portfolio Conservation Results**

2022-2023 Electric Total and Penalty Verified Conservation Savings				
Conservation Savings				
Description	MWh Target	MWh Actual (Verified)	Percent	MWh Shortfall
<b>Total Verified Conservation Savings</b>	<b>536,717</b>	<b>515,443</b>	<b>96.0%</b>	<b>21,274</b>
<b>Total Verified Penalty Savings</b>	<b>494,060</b>	<b>467,933</b>	<b>94.7%</b>	<b>26,127</b>
Conservation Expenditures				
	Budget	Actual	Percent	
<b>Total Conservation Expenditures</b>	\$234,863,870	\$ 209,500,467	89%	
Cost-Effectiveness				
	Total Resource Cost Test	Utility Cost Test		
<b>Benefit-to-Cost Ratios</b>	1.96	2.36		

As indicated in Table 0-1, the 2022-2023 electric portfolio conservation-specific expenditures were 89 percent of anticipated spending: \$209.50 million versus a budget of \$234.86 million. The biggest portion of the underspend was in the 2022 commercial sector, as building owners hesitated to invest in underutilized facilities. The portfolio-level (not including Low Income Weatherization) biennial electric Total Resource Cost (TRC) Test benefit-to-cost ratio was 1.96, and the Utility Cost (UC) Test benefit-to-cost ratio was 2.36.

### B. 2022-2023 Natural Gas Conservation Achievements

PSE did meet its 2002 Conservation Settlement (PSE General Rate Case UG-011571) natural gas conservation penalty target of 9,262,931 therms but did not meet its additional decoupling penalty target of 463,147 therms set in docket UG-210823. PSE actually achieved 9,327,416 therms toward its total penalty target of 9,726,077 therms as demonstrated in Table 0-2.

PSE worked with its CRAG and adaptively managed its programs (view Chapter I. Adaptive Management) throughout the biennium to attempt to achieve the natural gas conservation target. However, lingering COVID-19 economic impacts including inflation, rising interest rates, and skilled labor shortages resulted in limited customer participation and unmet savings targets.

<sup>2</sup> (2) A qualifying utility that does not meet an annual renewable energy target established in RCW 19.285.040(2) or biennial acquisition target for cost-effective conservation in RCW 19.285.040(1) is exempt from the administrative penalty in subsection (1) of this section for that year if the commission for investor-owned utilities or the auditor for all other qualifying utilities determines that the utility complied with RCW 19.285.040 (1)(e) or (2) (d) or (i) or 19.285.050(1).

In an effort to make up for and exceed the amount of unattained natural gas savings in the 2022-2023 biennium, PSE added 640,000 therms to a variety of programs in its 2024-2025 biennial portfolio. This was made possible by the momentum generated from customer participation in late 2023 that is attributed to effective adaptive management techniques, more favorable economic conditions, and the support of PSE’s advisory group.

Despite lifted pandemic restrictions in the 2022-2023 biennium, PSE experienced limited uptake of natural gas energy efficient products due to ongoing economic difficulties. Pursuant to the 2002 Conservation Settlement, Docket UG-011571, Sec. 42,<sup>3</sup> PSE requests that the commission issue an order determining that PSE is in compliance with its biennial acquisition target for cost-effective conservation because the COVID-19 pandemic was a natural disaster that resulted in extended emergency declarations that continued to cause economic repercussions in the 2022-2023 biennium beyond the reasonable control of the utility and prevented it from meeting its biennial conservation target.

**Table 0-2 2022-2023 Natural Gas Portfolio Conservation Results**

2022-2023 Natural Gas Total and Penalty Verified Conservation Savings				
Conservation Savings				
Description	Therms Target	Therms Actual (Verified)	Percent	Therms Shortfall
<b>Total Conservation Savings</b>	<b>9,791,327</b>	<b>9,327,416</b>	<b>95.3%</b>	<b>463,911</b>
<b>Total Verified Penalty Savings</b>	<b>9,726,077</b>	<b>9,327,416</b>	<b>95.9%</b>	<b>398,661</b>
Conservation Expenditures				
	Budget	Actual	Percent	
<b>Total Conservation Expenditures</b>	\$48,263,531	\$ 52,301,663	108%	
Cost-Effectiveness				
	Total Resource Cost Test	Utility Cost Test		
<b>Benefit-to-Cost Ratios</b>	1.48	1.57		

As indicated in Table 0-2, the 2022-2023 natural gas portfolio conservation-specific expenditures were 108 percent of anticipated spending: \$52.30 million versus a budget of \$48.26 million. The portfolio-level (not including Low Income Weatherization) biennial electric TRC Test benefit-to-cost ratio was 1.48, and the UC Test benefit-to-cost ratio was 1.57.

### C. Regulatory Compliance

This report complies with WAC 480-109-120(4) that requires utilities to report by June 1 of each even-numbered year on its progress in meeting the electric conservation target. This report also complies with Natural Gas Conservation conditions set forth in Order 01 of Docket UG-210823, Accepting 2022-

<sup>3</sup> The Company may seek mitigation before the Commission of the penalty for failure to meet the conservation savings target, if the Company can demonstrate that factors occurred, after the annual targets were established, beyond the Company’s control that negatively impact customer participation in its programs such as a significant local economic recession or major natural disaster. The Company may address factors in its petition, including but not limited to the following: whether the Company is paying a penalty under the Equity Growth tracker.

2023 Biennial Acquisition Target, Attachment A, Section 5)c)i.), which requires PSE to report on or before June 15 of each even-numbered year on its progress in meeting its conservation target during the preceding two years.

PSE will post the Report contemporaneously on PSE.com, as required by WAC 480-109-120(6) and by Order 01 of Docket UG-210823, Accepting 2022-2023 Biennial Acquisition Target, Attachment A, Section 5)e), following the Commission's ruling on PSE's 2022-2023 electric and natural gas conservation achievements.

WAC 480-109-120

**(4) Biennial conservation report.**

- (a) On or before June 1 of each even-numbered year, a utility must file with the commission, in the same docket as its current biennial conservation plan, a biennial conservation report regarding its progress in meeting its conservation target during the preceding two years.
- (b) The biennial conservation report must include:
  - (i) The biennial conservation target;
  - (ii) Planned and claimed electricity savings from conservation;
  - (iii) Budgeted and actual expenditures made to acquire conservation;
  - (iv) The portfolio-level cost-effectiveness of the actual electricity savings from conservation;
  - (v) An independent third-party evaluation of portfolio-level biennial conservation savings achievement;
  - (vi) A summary of the steps taken to adaptively manage conservation programs throughout the preceding two years; and
  - (vii) Any other information needed to justify the conservation savings achievement.
- (c) A utility must provide a summary of the biennial conservation report to its customers by bill insert or other suitable method within 90 days of the commission's final action on the report.



UG-210823 – Order 01 Attachment A

c) Biennial conservation report

- i.) Beginning in 2024, on or before June 15 of each even-numbered year, PSE must file with the Commission, in the same docket as its current biennial conservation plan, a biennial conservation report regarding its progress in meeting its conservation target during the preceding two years.
- ii.) The biennial conservation report must include:
  - (1) The biennial conservation target.
  - (2) Planned and claimed gas savings from conservation.
  - (3) Budgeted and actual expenditures made to acquire conservation.
  - (4) The portfolio-level cost-effectiveness of the actual gas savings from conservation.
  - (5) An independent third-party evaluation of portfolio-level biennial conservation savings achievement.
  - (6) A summary of the steps taken to adaptively manage conservation programs throughout the preceding two years; and
  - (7) Any other information needed to justify the conservation savings achievement.
- iii.) PSE must provide a summary of the biennial conservation report to its customers by bill insert or other suitable method within 90 days of the Commission's final action on the report.
- iv.) PSE may file the annual conservation report and the biennial conservation report together as one report, provided that the report includes all the information required in subsections (c) and (d) of this condition and states that it serves as both the annual conservation report and the biennial conservation report.

d) Plan and report review

- i.) Interested persons may file written comments regarding the biennial conservation plan and biennial conservation report within 30 days of PSE's filing.
- ii.) Upon conclusion of the Commission review of PSE's biennial report or plan, the Commission will issue a decision accepting or rejecting the calculation of PSE's conservation target; or determining whether PSE has acquired enough conservation resources to comply with its conservation target. If PSE does not meet its biennial conservation target described in Condition 1(a), the Commission will determine the amount in therms by which PSE was deficient.
- iii.) Biennial plans and reports may be reviewed through the Commission's open meeting process, as described in chapter 480-07 WAC.

e) Publication of reports. Beginning with the 2022-2023 BCP, all conservation plans and reports required by Commission order as well as a summary of planned and actual savings and expenditures reflected in the plans and reports, must be posted and maintained on PSE's website. Plans and reports must be posted on PSE's website within 30 days of Commission acknowledgment of the plan or order approving the report. A copy of any such plan, report, or summary must be provided to any person upon request.

Additionally, PSE presents its 2022-2023 condition compliance status in Exhibit 7: *Requirements Compliance Checklist*.

## D. Supporting Documentation

PSE presents all program result details for the 2022-2023 biennium in its Annual Reports of Energy Conservation Achievements, with copies provided to the CRAG, and is subject to Commission staff review and follow-up. The 2022-2023 Biennial Conservation Plan (BCP) and 2023 Annual Conservation Plan update (ACP), developed with comprehensive CRAG engagement and subject to a 30-day UTC review, are also filed in Docket UE-210822 and UG-210823.

In addition to already-filed detailed information, readers may also refer to the following included in this Report:

- Exhibit 1: 2022-2023 Electric and Natural Gas Savings and Expenses,
- Exhibit 2: 2022-2023 Electric and Natural Gas Cost-Effectiveness Results, and
- Exhibit 7: Requirements Compliance Checklist for additional 2022-2023 biennial details.

For this report, PSE includes additional documents that do not align with its standard "Exhibit" nomenclature, primarily due to their specific nature and timing:

- Supplement 1: NMR Group's "Puget Sound Energy 2022-23 Biennial Conservation Achievement Review (BCAR) Final Report,"
- Supplement 2: DNV's 2022 Home Energy Reports (HER) Impact Evaluation,
- Supplement 3: DNV's 2023 Home Energy Reports (HER) Impact Evaluation,
- Supplement 4: 2022-2023 BCP Building the Biennial Target Tables, and
- Supplement 5: The Washington Department of Commerce's Microsoft® Excel™ workbook that addresses conservation. PSE provided this document with the WA Department of Commerce concurrent with this report.

## I. Adaptive Management

The lingering economic effects of the COVID-19 pandemic continued to make a significant impact on energy efficiency operations in the 2022-2023 biennium. In 2022, inflation, rising interest rates, skilled labor shortages, supply chain disruptions, and code changes<sup>4</sup> were the key issues that affected customer participation and PSE's ability to meet savings targets. In order to mitigate and adaptively manage these challenges, PSE implemented a variety of techniques like limited-time offers (LTOs), targeted marketing, larger incentives, increased distributor outreach, and personalized customer training. The CRAG was made aware of the challenges throughout the biennium and worked with PSE to develop adaptive management strategies.

In 2023, while supply chain disruptions were no longer as pressing of a concern for businesses, the other economic issues seen in 2022 persisted. However, there was a noticeable increase in customer program participation as PSE continued to implement and further refine its existing adaptive management efforts from 2022. Particularly in the last quarter of 2023, program participation increased to such a degree that PSE was able to not only meet but surpass savings targets set in the 2023 Annual Conservation Plan (ACP) for both electric and natural gas. PSE is hopeful that 2023's especially strong end-of-year performance signifies continued customer participation performance in the next biennium.

Throughout the 2022-2023 biennium, equity was also a primary focus. In 2022, in alignment with the goals in the Clean Energy Transformation Act (CETA), PSE reexamined its approach to equitable program design and delivery and hired a full-time equity product manager to develop the strategy, framework, and operational tools to distribute more energy efficiency benefits (savings and incentives) into Named Communities. The manager also improved an internal data dashboard that assesses customer participation in Named Communities both at the tranche and program levels. Additionally, special attention was given to better understanding participation barriers among Highly Impacted Communities (HICs) and Vulnerable Populations (VPs).

In 2023, these efforts continued and were further developed. PSE conducted a Disparities and Root Factors Report to analyze 2022's Distributional Equity efforts for electric and dual fuel customers, and it expanded to include natural gas in this Recognition Equity exercise in 2023. It found that PSE equitably distributed energy benefits and non-energy impacts (NEIs) for both electric and natural gas sections of the energy efficiency tranche above the 30 percent minimum designation of customer benefit delivery into Named Communities, as defined by the Clean Energy Implementation Plan (CEIP).<sup>5</sup> PSE also doubled the distribution of NEIs in 2023 as compared to 2022 and adopted the core tenets of energy justice for enterprise-wide use. More details of PSE's adaptive measures to increase equity efforts can

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<sup>4</sup> Code changes affecting the 2022-2023 biennium included the 2018 Washington State Energy Code (WSEC), the 2021 WSEC, and the Washington State's Labor & Industries (L&I) Law that mandated that heat pump water heater (HPWH) installations must be done by certified plumbers.

<sup>5</sup> Docket UE-210795 in WUTC Order 08 Condition 20. The Order reads: PSE will identify the customers and communities within the broader category of Named Communities in consultation with interested persons and advisory groups. PSE will designate a minimum percentage of energy benefits that will flow to Named Communities with deepest need.

be found in PSE's 2023 Biennial CEIP Update and in the 2024-2025 Biennial Conservation Plan's (BCP) Equity Focus section.

## A. 2022-2023 Adaptive Management

- **Clean Buildings Accelerator (CBA)** – In 2022, PSE developed presentations, emails, and optimized its website to help customers comply with the state's Clean Buildings law. In 2023, the CBA team sought out ways to increase program awareness by applying and being selected for several awards and recognition. This included a nomination for the Leadership in Energy Efficiency award through the Northwest Energy Efficiency Alliance (NEEA), winning the William Hammer Top Innovator Award, and winning the 2023 Achievement in Business Customer Experience award from Public Utilities Fortnightly.
- **Commercial Strategic Energy Management (CSEM)** – PSE increased site walk-throughs to identify efficiency measures in 2022, allowing the company to offer additional incentives and improve customer satisfaction.
- **Low Income Weatherization** – In 2022, PSE implemented geo-targeted marketing and increased many measure incentives by 30 percent, allowing implementation agencies to use other funding sources more flexibly for this no-cost customer offering. In 2023, PSE addressed customer confusion regarding state and federal income thresholds by redesigning webpages; focusing on demographic-based marketing efforts; and applying inflation multipliers to measure costs to keep agency incentives at pace with inflation and rising costs.
- **Manufactured Home New Construction** – In 2022, PSE added a natural gas measure to reach all available customers, expanding the program's reach and offering greater energy savings.
- **Efficiency Boost** – The Efficiency Boost Marketplace was launched in 2023 allowing many moderate-income customers to purchase thermostats for as low as \$1 with free shipping. PSE also promoted Efficiency Boost rebates in stores to aid in thermostat and appliance sales.
- **Weatherization** – A new weatherization-related measure, Advanced Duct Sealing, was launched in 2023. Additionally, the program was able to build on previously launched projects and pilots to increase customer savings and rebates.
- **Home Energy Reports (HER)** – PSE added customers in 2022 and 2023 to address program attrition and expand service. In addition PSE deployed an Easy Assessment, which allows customer to more easily complete an online survey and be aware of their home's energy use.
- **Industrial Systems Optimization (ISOP)** – A pilot-like initiative was launched in 2023 that provides bundled incentives to ISOP customers for implementing operations and maintenance (O&M) and capital projects at the same time.
- **Multifamily Retrofit** – The program offered and extended the LTO period for ductless heat pumps that resulted in a 132 percent installation increase from 2022.

- **Increased Incentives** – PSE added incentives for many programs to drive additional participation throughout the 2022-2023 biennium.
- **Collaboration with Electric Utilities** – PSE collaborated with surrounding electric utilities to provide streamlined customer offers and incentives on dual-fuel projects, making it easier for customers to install more efficient and cost-effective energy solutions.
- **Commercial/Industrial Commissioning and Controls Programs** – In 2023, Business Energy Management (BEM) added a technical account manager to focus outreach to commercial trade allies, leading to more contractor awareness.
- In 2023, PSE dedicated a teammate to work with state and federal funding with the goal of maximizing conservation impacts for its customers. This staff member was active in Commerce Inflation Reduction Act (IRA) rebate design conversations and public comment opportunities while preparing resources for rebate integration into conservation programs. Additionally, PSE developed [pse.com/ira](https://pse.com/ira) to provide information on the IRA for its customers that includes available tax credits. PSE estimates that up to \$15.8 million<sup>6</sup> came back to PSE customers in the form of 25C tax credits in addition to the rebates PSE was able to deliver to its customers.
- Additional detailed adaptive management techniques are available in the 2022 and 2023 Annual Reports.

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<sup>6</sup> PSE estimates are based on PSE rebate participation in water heat and electric space heat programs and assumptions on customers who would be able to receive nonrefundable tax credits.

## II. 2022-2023 Verified Conservations Results

### A. 2022-2023 Verified Electric Conservation Results

The 2022-2023 total conservation savings of 502,540 MWh is a combination of the 2022 and 2023 total Annual Report savings. To arrive at a total penalty savings number, the following items were removed: Schedule 449s, pilots with uncertain savings, and NEEA savings. The removal of savings not in the penalty yields a total Annual Report penalty savings number of 455,030 MWh. At the end of the biennium, savings are adjusted to account for the Biennial Conservation Achievement Review (BCAR) and the Home Energy Reports (HER) evaluation. There were no adjustments due to the BCAR; however, HER electric savings were increased by 12,904 MWh based on evaluation results to arrive at a verified penalty savings of 467,933 MWh. This amount is short of the EIA penalty threshold plus decoupling threshold amount of 494,060 MWh by 26,127 MWh or at 94.7 percent of target. The electric achievement for the biennium is reflected in Table II-1 below.

**Table II-1 2022-2023 Electric Conservation Savings**

<b>2022-2023 Electric Penalty Savings Calculations</b>	
Conservation Savings	
Description	MWh
2022 Annual Report Savings	244,343
2023 Annual Report Savings	258,196
<b>Total Conservation Savings</b>	<b>502,540</b>
Sch. 449	18,136
Pilots	347
NEEA	29,027
Total Savings Not Included Penalty	47,510
<b>Total Penalty Savings</b>	<b>455,030</b>
BCAR	0
HER Eval Adjustment	12,904
Total Savings Adjustment	12,904
<b>VERIFIED PENALTY SAVINGS</b>	<b>467,933</b>
<b>Penalty Threshold plus Decoupling Threshold</b>	<b>494,060</b>
Percent	94.7%

### B. 2022-2023 Verified Natural Gas Conservation Results

The 2022-2023 total conservation savings of 9,225,209 therms is a combination of the 2022 and 2023 total Annual Report savings. In this biennium there were no adjustments, leading to this total penalty savings number. It was then necessary to add other adjustments completed since the Annual Report filings. The natural gas HER evaluation yielded an increase of 102,207 therms. When added to the Annual Report penalty savings, the verified penalty savings total becomes 9,327,416 therms. This amount is short of the natural gas penalty threshold plus decoupling threshold amount of 9,726,077 therms by 398,661 therms or at 95.9 percent of total penalty target. The natural gas achievement for the biennium is reflected in Table II-2.

**Table II-2 2022-2023 Natural Gas Conservation Savings**

2022-2023 Natural Gas Penalty Savings Calculations	
Conservation Savings	
Description	Therms
2022 conservation savings	4,670,011
2023 conservation savings	4,555,198
<b>Total conservation savings</b>	<b>9,225,209</b>
NEEA Gas	-
Pilots	-
Total Savings Not in penalty	-
<b>Total Penalty Savings</b>	<b>9,225,209</b>
BCAR	0
HER Eval Adjustment	102,207
Total Savings Adjustment	102,207
<b>VERIFIED PENALTY SAVINGS</b>	<b>9,327,416</b>
<b>Penalty Threshold plus Decoupling Threshold</b>	<b>9,726,077</b>
Percent	95.9%

### C. 2022-2023 Biennial Conservation Achievement Report (BCAR) Report

In the 2022-2023 biennium, PSE implemented an independent review of its biennial electric and natural gas savings and collaborated with Commission staff on consultant selection. Prior to the 2022-2023 biennium, the Biennial Electric Conservation Achievement Report (BECAR) was an electric-only savings review for the biennium. New for the 2022-2023 biennium, PSE added an independent third-party evaluation of the portfolio-level biennial natural gas conservation savings achievement, as was required by a condition in UTC Order 01 in Docket UG-210823. The new combined report is known as the Biennial Conservation Achievement Report (BCAR).

The BCAR examines electric savings baselines, measure savings calculation methodology, tracking and reporting accuracy; validates reported electric and natural gas savings; reviews Company actions taken in response to the recommendations from the previous BCAR; and assesses whether the company has undertaken follow-up actions on program evaluation studies completed after the previous BCAR.

The independent consultant who conducts the BCAR also makes recommendations for PSE operations, measure savings calculation methodology, and data collection. The independent consultant may also make recommendations for electric and natural gas savings adjustments, which PSE considers and reviews with the CRAG prior to implementing any revisions.

PSE provides CRAG members with interim BCAR status updates and reports throughout the biennium and includes the BCAR final report as an appendix to its Biennial Achievement Report to the Commission, in accordance with WAC 480-109-120(4).

The final conclusion of the 2022-2023 BCAR was that no savings adjustments were necessary for the biennium. The following are the BCAR tasks and specific findings:



1. **Unit energy savings review** – The BCAR consultant found that Unit Energy Savings (UES) values used by PSE have been applied correctly and consistently and were developed with appropriate methodologies, inputs, and assumptions. The consultant recommended that PSE consider clearly describing the baseline type and methodology, particularly for PSE-deemed/Regional Technical Forum (RTF)-derived measures.
2. **Portfolio savings review** – The consultant confirmed that the total electric and natural gas energy savings reported in the 2022 and 2023 Annual Reports equaled the total electric and natural gas energy savings recorded in PSE’s program tracking data.
3. **Previous BECAR recommendation response review** – PSE has sufficiently addressed and/or taken appropriate actions in response to recommendations from the previous BECAR reports. Recommendations and responses can be seen in Exhibit 1, Supplement 1: *Biennial Conservation Achievement Review of the Puget Sound Energy 2022-2023 Conservation Program Portfolio, Section 2.3-Task 3*.
4. **Evaluation report response review** – PSE has sufficiently addressed and/or taken appropriate actions in response to recommendations from all recent evaluation reports. In some cases, evaluation reports include “Recommendations” and “Considerations.” The consultant recommended that PSE formally define these terms and determine whether they have equivalent implications for future program administration and BCAR reports.

## D. 2022-2023 Home Energy Reports (HER) Electric Savings Adjustment

PSE facilitates an annual evaluation of the Home Energy Reports (HER) program savings, per a 2008 agreement with the CRAG. The evaluation for a given year is often not completed in time for the corresponding Annual Report, given the complexity of the analysis. In other words, the 2022 and 2023 evaluation are not available for the 2022 and 2023 Annual Reports. Therefore, PSE estimates HER savings in Plans and Annual Reports based on the program’s historical performance and anticipated trends. Then PSE trues-up the estimates in the Biennial Report based on the final evaluations. Based on a one-year measure life, PSE claims total savings for the Biennial for the combined evaluations per agreement with the CRAG.

In the 2022 Annual Report, PSE reported HER savings of 50,165,130 kWh. In the 2023 Annual Report, PSE reported HER savings of 30,805,311 kWh. The reduction in reported savings for 2023 was to account for the shortfall in evaluated versus reported savings in 2022 and a similar potential shortfall in evaluated savings for 2023. The 2023 evaluation included higher savings than PSE anticipated. This was primarily driven by savings continuing to increase for the newest cohorts (Jan. 2022 forward) by +5.4 million kWh and cohorts who began receiving treatment prior to 2022 seeing a net evaluated savings increase of about +3.7 million kWh in 2023 over 2022. This results in reporting an increase in evaluated versus reported savings over the Biennial. The total savings adjustment is 12,903,521 kWh (93,873,962 – 80,970,441 = 12,903,521) reflected in the Table II-3 2022-2023 HER Electric Evaluation Report Savings below. Please visit Exhibit 1, Supplements 2 and 3 to review program evaluations.



Table II-3 2022-2023 HER Electric Evaluation Report Savings

2022-2023 Home Energy Reports Electric Savings			
Index	1-Year Measure Life	Savings, kWh	Computation
a	Reported savings in 2022 Annual Report	50,165,130	
b	2022 savings shortfall	-7,759,986	
c	Filed savings for 2023	46,739,220	
d	Estimated shortfall in 2023 from Filed savings	-8,173,923	
e	Savings shortfall in 2022 plus estimated 2023 shortfall	-15,933,909	=b+d
f	Reported savings in 2023 Annual Report	30,805,311	=c-e
g	<b>Total reported saving for the biennium</b>	<b>80,970,441</b>	=a+f
h	Savings from 2022 evaluation per DNV	42,405,144	
i	Savings from 2023 evaluation per DNV	51,468,818	
j	<b>Total Savings for 2022-23</b>	<b>93,873,962</b>	=h+i
k	<b>Adjustment to 2022-2023 Biennial Electric Conservation Report.</b>	<b>12,903,521</b>	=j-g

### E. 2022-2023 Home Energy Reports (HER) Natural Gas Savings Adjustment

PSE facilitates an annual evaluation of the Home Energy Reports (HER) program savings, per a 2008 agreement with the CRAG. The evaluation for a given year is often not completed in time for the corresponding Annual Report, given the complexity of the analysis. In other words, the 2022 and 2023 evaluation are not available for the 2022 and 2023 Annual Reports. Therefore, PSE estimates HER savings in Plans and Annual Reports based on the program's historical performance and anticipated trends. Then PSE trues-up the estimates in the Biennial Report based on the final evaluations. Based on a one-year measure life, PSE claims total savings for the Biennial for the combined evaluations per agreement with the CRAG.

In the 2022 Annual Report, PSE reported HER savings of 1,470,101 therms. In the 2023 Annual Report, PSE reported HER savings of 1,026,804 therms. This reduction was to account for the shortfall in evaluated versus reported savings in 2022 and a potential similar shortfall in evaluated savings for 2023. The 2023 evaluation included higher savings than PSE anticipated. This results in reporting an increase in the overall savings for the Biennial of 102,207 therms (2,599,112 – 2,496,905 = 102,207) reflected in the Table II-4 2022-2023 HER Natural Gas Evaluation Report Savings below. Please visit Exhibit 1, Supplements 2 and 3 to review program evaluations.

Table II-4 2022-2023 HER Natural Gas Evaluation Report Savings

<b>2022-2023 Home Energy Reports Natural Gas Savings Adjustments</b>			
Index	1-Year Measure Life	Savings, Therms	Computation
a	Reported savings in 2022 Annual Report	1,470,101	
b	2022 savings shortfall	-250,565	
c	Filed savings for 2023	1,539,090	
d	Estimated shortfall in 2023 from Filed savings	-261,721	
e	Savings shortfall in 2022 plus estimated 2023 shortfall	-512,286	=b+d
f	Reported savings in 2023 Annual Report	1,026,804	=c-e
g	<b>Total reported saving for the biennium</b>	<b>2,496,905</b>	=a+f
h	Savings from 2022 evaluation per DNV	1,219,536	
i	Savings from 2023 evaluation per DNV	1,379,576	
j	<b>Total Savings for 2022-23</b>	<b>2,599,112</b>	=h+i
k	<b>Adjustment to 2022-2023 Biennial Gas Conservation Report</b>	<b>102,207</b>	=j-g