

**EXH. RJR-11T  
DOCKET UG-230393  
WITNESS: RONALD J. ROBERTS**

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**PUGET SOUND ENERGY,**

**Respondent.**

**Docket UG-230393**

**PREFILED REBUTTAL TESTIMONY (NONCONFIDENTIAL) OF**

**RONALD J. ROBERTS**

**ON BEHALF OF PUGET SOUND ENERGY**

**OCTOBER 6, 2023**

**PUGET SOUND ENERGY**  
**PREFILED REBUTTAL TESTIMONY (NONCONFIDENTIAL) OF**  
**RONALD J. ROBERTS**

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**PUGET SOUND ENERGY**

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**LIST OF EXHIBITS**

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| Exh. RJR-12 | Docket UG-151663 Prefiled Direct Testimony of Larry E. Anderson   |
| Exh. RJR-13 | Docket UE-050664 Commission Acknowledgement Letter (August 29, 2005)                                      |
| Exh. RJR-14 | Shorelines Hearings Board SHB No. 16-002, Findings of Fact, Conclusions of Law, and Order (July 18, 2016) |
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| Exh. RJR-16 | Pollution Control Hearings Board Decision 11447, (November 19, 2021)                                      |
| Exh. RJR-17 | Tacoma LNG Fire and Safety Review, Braemar Technical Services (July 2, 2018)                              |

1 **PUGET SOUND ENERGY**

2 **PREFILED REBUTTAL TESTIMONY (NONCONFIDENTIAL) OF**  
3 **RONALD J. ROBERTS**

4 **I. INTRODUCTION**

5 **Q. Are you the same Ronald J. Roberts who submitted Prefiled Direct Testimony**  
6 **on May 25, 2023 on behalf of Puget Sound Energy in this proceeding?**

7 A. Yes, on May 25, 2023, I filed the Prefiled Direct Testimony of Ronald J. Roberts,  
8 Exhibit RJR-1T and nine supporting exhibits (Exh. RJR-2 through Exh. RJR-10).

9 **Q. What is the purpose of your rebuttal testimony?**

10 A. This rebuttal testimony responds to certain portions of the testimony submitted by  
11 other parties relating to PSE’s application for recovery of the costs PSE incurred to  
12 construct and operate the Tacoma LNG Facility, including costs PSE has been  
13 deferring. More specifically, my testimony demonstrates that:

14 (1) the Tacoma LNG Facility has been used and useful since February  
15 2022 and PSE should be allowed to recover the deferred return on rate base  
16 for the Tacoma LNG Facility that PSE incurred between February 2022 and  
17 December 2022;

18 (2) all costs PSE incurred after September 2016 were prudent and  
19 claims to the contrary based on arguments about “need” and “alternatives”  
20 are out of place in this proceeding;

1 (3) PSE’s customers benefit from changes made to the preliquefaction  
2 equipment and those costs should be recovered in rates;

3 (4) use of the four-mile pipeline segment is not limited to 10 days per  
4 year and PSE has appropriately accounted for its costs;

5 (5) PSE’s compliance with the air permit does not warrant changes to  
6 the NAES O&M Agreement nor additional reporting requirements;

7 (6) the Tribe’s repeated claims about negative externalities are incorrect  
8 and should again be rejected; and

9 (7) the Tribe’s repeated claims that PSE incurred excessive legal costs  
10 are disingenuous and should again be rejected.

11 Each of these issues is more fully discussed below.

12 **II. PSE SHOULD BE ALLOWED TO RECOVER DEFERRED**  
13 **COSTS AND RETURN ON RATE BASE IT DEFERRED IN 2022**  
14 **AND 2023**

15 **Q. Please describe the Commission’s treatment of PSE’s request to defer certain**  
16 **costs and return on rate base in the PSE 2022 rate case.<sup>1</sup>**

17 A. As described further in the Prefiled Direct Testimony of Susan E. Free,  
18 Exh. SEF-1T, in the Final GRC Order, the Commission approved, with

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<sup>1</sup> *WUTC v. PSE, Order Rejecting Tariff Sheets; Approving Settlements with Conditions; Authorizing and Requiring Compliance Filing*, Dockets UE-220066, UG-220067, & UG-210918 (Consolidated) (“2022 PSE GRC”) Order 24/10 (“Final GRC Order”) at ¶¶ 450, 501.

1 conditions, PSE’s ability to defer the operation and maintenance (“O&M”)  
2 expense, depreciation expense, and PSE’s return on its investment (“Deferred  
3 Costs”) associated with the regulated portion of the Tacoma LNG Facility until  
4 recovery of the facility is included in rates. The Commission allowed parties to  
5 challenge the prudence of later construction and operation costs in a future  
6 proceeding, including this tracker filing, and also conditioned its approval on the  
7 provisional recovery of a four-mile natural gas distribution line to allow for  
8 consideration of the appropriate allocation of costs of the distribution line to  
9 Puget LNG.

10 **A. The Dual-use Tacoma LNG Facility Promotes a Washington Public**  
11 **Policy Objective**

12 **Q. How do you respond to Staff’s claim that PSE did not modify its behavior<sup>2</sup>**  
13 **and should not recover the deferred return on rate base for the Tacoma LNG**  
14 **Facility incurred between February 2022 and December 2022?**

15 A. As I explained in my Prefiled Direct Testimony, the Tacoma LNG Project is a  
16 dual-use project used by PSE to provide peak day gas supply for customers and  
17 by a PSE affiliate, Puget LNG, to make and dispense cleaner fuel to maritime and  
18 trucking transportation customers. By serving these dual purposes, the costs to  
19 develop, construct and operate the project are shared, making the Tacoma LNG  
20 Project a cost-effective way to help meet the peak-day resource needs of PSE’s

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<sup>2</sup> See Erdahl, Exh. BAE-1CT, at 9:13-11:21.

1 gas utility customers.<sup>3</sup> Absent this dual-use, there would have been no build out  
2 of the marine-vessel-LNG-fueling-station infrastructure. Contrary to Staff's  
3 claims, PSE did modify its behavior. If both PSE and Puget LNG had not been  
4 able to participate in the Tacoma LNG dual-use Project (that includes marine-  
5 vessel fueling infrastructure), the Tacoma LNG Project would not have been the  
6 least cost resource and PSE would have selected a different alternative to serve its  
7 gas customers. The next alternative in the resource mix at that time was expanded  
8 interstate pipeline capacity of 85,300 dekatherms ("Dth") per day at an estimated  
9 annual cost of \$33.6 million per year plus the cost of gas on the coldest (likely,  
10 most expensive) days of the year.

11 **B. The Tacoma LNG Project Has Been Able to Provide 85,000 Dth of**  
12 **Capacity Since it Went In-service in February 2022**

13 **Q. Please describe Commission Staff's concern that the Tacoma LNG Facility**  
14 **was not able to provide 85,000 Dth of capacity in 2022.**

15 A. Staff claims that since the Bonney Lake Lateral upgrades to the distribution  
16 system that were needed for the Tacoma LNG Facility to provide 85,000 Dth of  
17 capacity on peak days were not made, injection capacity was limited to 50,000  
18 Dth per day (instead of 66,000 Dth per day), and the total delivery capacity of the  
19 Tacoma LNG Facility was limited to 69,000 Dth per day. Staff claims this means  
20 the total peak delivery capacity of the Tacoma LNG Facility was limited to 81

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<sup>3</sup> See Roberts, Exh. RJR-1T, at 1:12-2:4.



1 percent of the project's design capacity of 85,000 Dth per day.<sup>4</sup> Staff further  
2 claims that because the Tacoma LNG Project's capacity as a peaking resource  
3 was allegedly limited to 81 percent in 2022, only 81 percent of the Tacoma LNG  
4 Project was used and useful in 2022.<sup>5</sup> Staff claims further that PSE installed a  
5 revised configuration which enables the Tacoma LNG Project to inject vaporized  
6 gas directly into PSE's gas distribution at the design capacity of 66,000 Dth per  
7 day. Last, Staff claims the maximum hourly rate capability was tested and proven  
8 during the winter of 2022-2023, therefore, Staff assumed the full capacity of the  
9 facility was available starting January 1, 2023.<sup>6</sup>

10 **Q. How do you respond to Staff's claim that the Tacoma LNG Facility was not**  
11 **fully used and useful in 2022 and its recommendations for reductions to gas**  
12 **plant by approximately \$46 million, the depreciation deferral by \$700,000,**  
13 **and the annual amortization expense by \$300,000?**

14 A. I disagree with Staff's viewpoint. The Tacoma LNG Facility has been available  
15 to provide capacity to PSE natural gas customers since February 2022. PSE  
16 tested the vaporization capability of the Tacoma LNG Facility in January 2022 as  
17 a part of commissioning the plant. The vaporization equipment was able to  
18 vaporize at a rate of just over 2,750 Dth per hour (or 66,000 Dth per day),  
19 indicating that the equipment works as designed.

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<sup>4</sup> See Erdahl, Exh. BAE-1CT, at 14:13-19.

<sup>5</sup> *Id.* at 15:8-10.

<sup>6</sup> *Id.* at 15:13-16:2.

1 **Q. Should the Commission determine that a plant is used and useful on a**  
2 **percentage basis tied to the amount of capacity the plant can provide as Ms.**  
3 **Erdahl proposes?**

4 A. No, I am not aware of the Commission using such a definition of used and useful  
5 in the past, and I do not believe it would be a wise approach. Wind plants, gas  
6 fired generation plants, peakers, and the Tacoma LNG Facility that are in service  
7 and able to serve customers are used and useful whether or not they are operating  
8 at their full capacity at any given time.

9 **Q. Is Ms. Erdahl's characterization of the capacity of the Tacoma LNG Facility**  
10 **correct?**

11 A. No. It appears Staff drew its conclusion based on a misunderstanding of the  
12 design of the Tacoma LNG Facility.

13 **Q. Please elaborate on the Tacoma LNG Facility design at issue here.**

14 A. PSE analysis had indicated that by 2018 the firm demand connected to the  
15 Tacoma distribution system was approximately 50,000 Dth per day under design  
16 peak conditions, as limited by the North Tacoma gate station outlet pressure. PSE  
17 also recognized that the transportation fuel service provided by the Tacoma LNG  
18 Facility (later determined to be Puget LNG) would be utilizing 19,300 Dth per  
19 day of inlet gas to liquefy at the same time PSE was seeking vaporization  
20 supplies. It would not be possible to vaporize and liquefy at the same time  
21 because a single bidirectional pipeline segment integrates the Tacoma LNG

1 Facility into PSE's gas system. Therefore, it was determined that under peak  
2 conditions PSE would suspend liquefaction and divert the supply intended for  
3 Puget LNG use to other PSE gas system gate stations on the PSE distribution  
4 system and replace Puget LNG's gas with LNG via an in-tank title transfer. The  
5 effect is to create a peaking resource of 69,300 Dth. The diverted supply concept  
6 was a factor in determining the ultimate tank size and allocation between the  
7 regulated use by PSE and the non-regulated use by Puget LNG.

8 **Q. What was the purpose of the Bonney Lake lateral?**

9 A. PSE was aware that by installing the Bonney Lake lateral it could effectively  
10 connect a larger customer base to the Tacoma system (by lowering the outlet  
11 pressure at the North Tacoma gate station) and that portion of the system would  
12 add at least 16,000 Dth per day of design peak demand. PSE could then fully  
13 utilize the maximum output of the vaporization equipment, as measured on a daily  
14 basis.

15 This expanded demand base for vaporization volumes would bring the peaking  
16 capability to 85,300 Dth per day. Thus, the Bonney Lake lateral, which would  
17 involve only the cost of distribution piping and no added cost for increased  
18 vaporization, effectively became a very inexpensive *future resource option* for  
19 PSE. In fact, the addition of the Bonney Lake lateral had been studied in the 2017  
20 IRP and 2019 IRP and it remained a least cost future supply option. PSE has acted  
21 prudently to postpone construction of the Bonney Lake lateral until such time as  
22 an incremental supply source was needed.

1 This is consistent with the PSE testimony cited in Staff's testimony,  
2 Exh. BAE-1CT, at note 29. In that PSE testimony, which is included here as the  
3 first exhibit to my rebuttal testimony, Exh. RJR-12, PSE explained that what  
4 became known as the Tacoma LNG Project would provide approximately 69,000  
5 Dth per day (19,000 Dth per day supply diversion and 50,000 Dth per day  
6 injection). And, in the future when PSE's needs increased to 85,000 Dth per day,  
7 the "Bonney Lake lateral" would be installed.<sup>7</sup> This is supported by the PSE  
8 testimony cited by Staff which stated that the total cost of the gas distribution  
9 system upgrades did not include the cost of Bonney Lake improvements.<sup>8</sup>

10 PSE has consistently stated that the Tacoma LNG Facility is designed and would  
11 be capable of providing 85,000 Dth per day of peak-shaving capacity to the PSE  
12 distribution system. However, certain pressure limitations on the PSE distribution  
13 system were believed to limit the system from utilizing that full volume and those  
14 limitations would not be eliminated until system need increased such that the  
15 Bonney Lake lateral was completed.

16 **Q. Was the entire portion of the Tacoma LNG Facility allocated to PSE used**  
17 **and useful when it placed in-service on February 1, 2022?**

18 A. Yes. As I mentioned earlier, PSE tested the vaporization capability of the Tacoma  
19 LNG Facility in January 2022. The vaporization equipment was able to vaporize  
20 at a rate of just over 2,750 Dth per hour (or 66,000 Dth per day), indicating that

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<sup>7</sup> See Roberts, Exh. RJR-12, at 6:5-15.

<sup>8</sup> *Id.* at 7 n.1.

1 the equipment works as designed. In addition, all of the other components of the  
2 Tacoma LNG Facility (representing approximately 90% of the capital costs) were  
3 fully operational at that time.

4 The full 66,000 Dth per day flow rate of the vaporizer can and will be used for  
5 short periods of time (less than a full 24 hours in a day). The early morning and  
6 early evening peak hours are when customer demand is the highest and can be  
7 140 percent or more of an average hour in the day. On many gas distribution  
8 systems, including PSE's, customer demand during the 3 hour "morning pull" and  
9 the 3 hour "evening pull" can account for 36 percent of volumes for the day, even  
10 though those 6 hours represent only 25 percent of the hours in the day. While  
11 there is some level of flexibility in pipeline operations, most pipelines, can only  
12 promise a steady-state, level, hourly volume (daily rating/24 hours). The purpose  
13 of a peaking resource such as Tacoma LNG is to shave the peak hourly demand  
14 down to the relatively steady-state level of service from the pipeline. This higher  
15 hourly utilization (at a rate of 2,750 Dth per hour) was never limited by the outlet  
16 pressure at the North Tacoma gate station. Therefore, the Tacoma LNG Facility  
17 was used and useful when it went in-service on February 1, 2022.

1                   **III. CLAIMS BY PUBLIC COUNSEL AND THE TRIBE THAT**  
2                   **ALL COSTS INCURRED AFTER SEPTEMBER 2016 SHOULD BE**  
3                   **DISALLOWED ARE OUT OF PLACE HERE**

4                   **A. Public Counsel’s Claims Related to PSE’s Design Day Standard**  
5                   **Should be Rejected**

6                   **Q. What is Public Counsel’s primary reason for claiming that all costs incurred**  
7                   **after September 2016 should be disallowed?**

8                   A. Public Counsel states the main reason that all costs incurred after September 2016  
9                   should be disallowed is “the design day standard,” which Public Counsel claims  
10                  was “outdated by 2016.”<sup>9</sup>

11                  **Q. Has the Commission already addressed PSE’s use of the design day standard**  
12                  **in deciding to construct the Tacoma LNG Project?**

13                  A. Yes. In the Final GRC Order, the Commission endorsed PSE’s design day  
14                  standard as “intended to ensure a more robust natural gas system that will not run  
15                  short of resources when they are needed most.”<sup>10</sup> Moreover, the Commission  
16                  ruled that PSE had established the need for the Tacoma LNG Facility.<sup>11</sup> Because  
17                  Public Counsel’s testimony regarding the design day standard has already been  
18                  addressed by the Commission and relates to the issue of “need” that is outside the

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<sup>9</sup> See Earle, Exh. RLE-1CT, at 8:13-9:5.

<sup>10</sup> See Final GRC Order at ¶ 395; see also ¶ 419 (“we agree with PSE that it appropriately based planning decisions on its design day standard...”).

<sup>11</sup> Final GRC Order at ¶¶ 394-395; see also ¶ 449 (“the parties may review and challenge the prudence of later construction and operation costs...”).

1 scope of this proceeding, Public Counsel’s testimony on this topic should be  
2 disregarded.<sup>12</sup>

3 **Q. How do you respond to Public Counsel’s claim<sup>13</sup> that PSE uses the design  
4 day standard to dismiss actual weather and demand outcomes as irrelevant?**

5 A. The claim is false. As the quote above from the Final GRC Order makes clear,  
6 PSE uses the design day standard to make sure gas supply resources are planned  
7 and available to meet firm loads on the coldest days “when they are needed  
8 most.” Moreover, the testimony that is relied on and cited by Public Counsel  
9 from PSE’s rate case in Dockets UE-220066-UG-220067 does not mention  
10 “design day” or “actual weather and demand outcomes.”<sup>14</sup> In response to a  
11 question asking Mr. Roberts to summarize his testimony, Mr. Roberts stated as  
12 follows:

13 In Section III, I discuss the background and need for the Tacoma  
14 Liquefied Natural Gas Project (the Tacoma LNG Project”). I describe  
15 how PSE determined the need for a natural gas peaking resource, the  
16 alternatives considered, and how PSE assessed the economics benefits of  
17 completing the Tacoma LNG Project.<sup>15</sup>

18 In addition, in response to a question about experience PSE has that lends itself to  
19 the operation of an LNG facility, Mr. Roberts stated as follows:

20 PSE has significant experience with natural gas and natural gas storage.  
21 PSE has operated an LNG peak shaving facility in Gig Harbor for two  
22 decades. PSE uses the Gig Harbor facility to: store up to 140,000 gallons  
23 of LNG, which it purchases from other utilities; vaporize the LNG back to  
24 a gaseous state; and inject the natural gas into the local distribution system

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<sup>12</sup> PSE filed a motion to strike Public Counsel’s testimony on this topic on September 27, 2023.

<sup>13</sup> See Earle, Exh. RLE-1CT, at 9:1-3.

<sup>14</sup> See Earle, Exh. RLE-1CT, at 9 n.17.

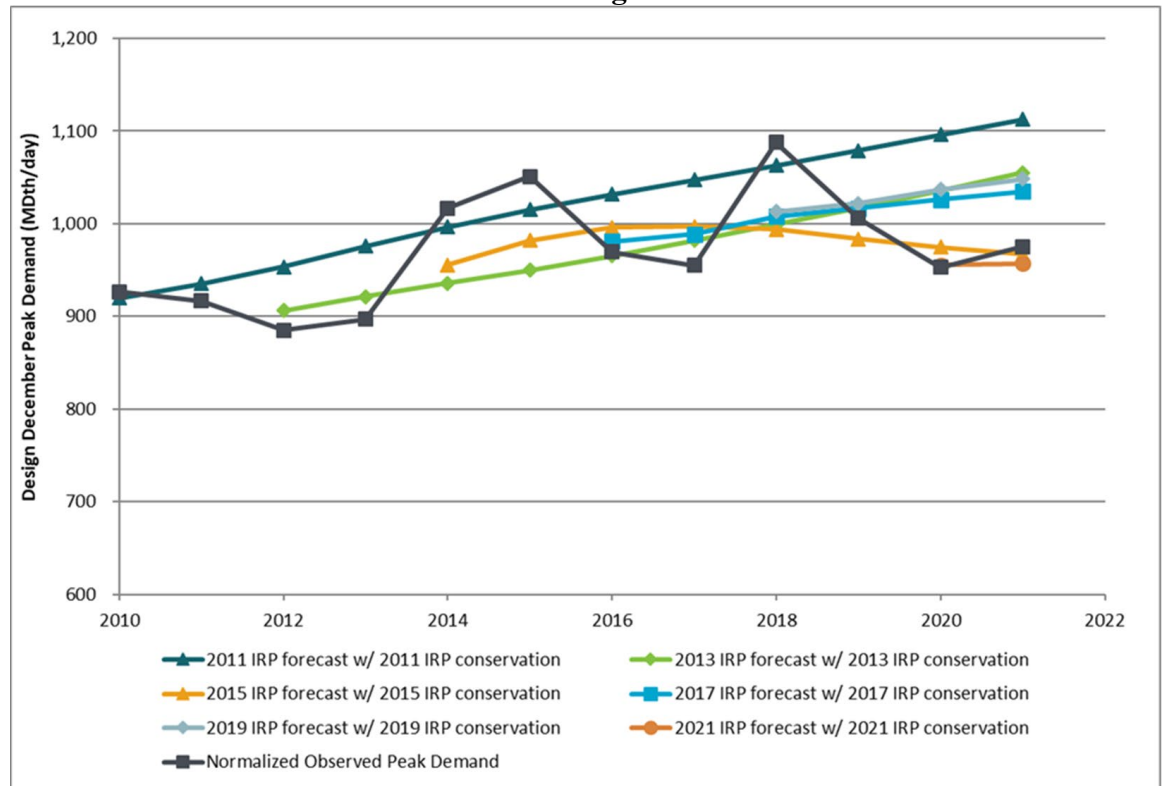
<sup>15</sup> Dockets UE-220066 and UG-220067, Exh. RJR-1T at 2:15-19.

1 to augment the pressure on cold days. In recent years the Gig Harbor  
2 facility has been used over 30 times per winter.

3 PSE also operates and co-owns the Jackson Prairie gas storage facility in  
4 Lewis County, which is the largest natural gas storage facility in the  
5 Pacific Northwest and provides 25 percent of the region's peak day gas  
6 demand. PSE also operates a fleet of natural gas-fired power plants, which  
7 are similar to the LNG plant in terms of requiring operations and  
8 maintenance planning, employee training, and safety programs.<sup>16</sup>

9 PSE did include testimony in the 2022 GRC that showed how PSE adjusts its  
10 forecast to reflect weather. Please see Figure 1 below for a comparison of PSE's  
11 weather-normalized actual maximum day sales volumes to its net design peak  
12 forecasts.

13 **Figure 1. Comparison of PSE's Weather-Normalized Actual Maximum Day**  
14 **Sales Volumes to its Net Design Peak Forecasts**



15  
<sup>16</sup> See Roberts, Exh. RJR-1CT, at 14:12-15:2.



1 As shown in Figure 1 above, PSE’s weather-normalized actual maximum day  
2 sales have been both below and above PSE’s forecasted net (i.e., net of  
3 conservation) design peak forecasts. In fact, Figure 1 demonstrates that PSE  
4 adjusted to actual maximum day sales information in the development of each  
5 subsequent forecast by adjusting subsequent starting points higher or lower and  
6 incorporating other adjustments based on assessment of mitigating factors. It  
7 should be noted that PSE reacted moderately (and did not over-react) to both  
8 lower and higher normalized actual data by adjusting each subsequent forecast.

9 The Commission should give no weight to Public Counsel’s claim that PSE views  
10 actual weather and demand outcomes as irrelevant.

11 **Q. How do you respond to Public Counsel’s claim that PSE’s design day**  
12 **standard was outdated by 2016?**

13 A. In its letter acknowledging PSE’s 2017 IRP, the Commission determined that  
14 PSE’s “2017 Electric and Natural Gas IRP complies with the statute and rules  
15 governing IRPs...”<sup>17</sup> The Commission found PSE’s analysis of its resource needs  
16 over the 20-year planning horizon “generally comprehensive,” and the  
17 Commission was “satisfied with the scope of analysis and overall presentation.”<sup>18</sup>  
18 The peak gas day was accepted by the Commission in the 2017 IRP and was  
19 therefore, not “outdated by 2016” as claimed by Public Counsel. The

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<sup>17</sup> See Roberts, Exh. RJR-13, Dockets UE-160918 & UG-160919, Correction to WUTC’s Attachment to its Letter Acknowledging PSE’s 2017 Electric and Natural Gas IRP, Att. at 1 (June 19, 2018).

<sup>18</sup> *Id.* Att. at 5.

1 Commission's acknowledgement letter is included as the second exhibit to my  
2 rebuttal testimony, Exh. RJR-13.

3 PSE confirmed the appropriateness of its gas planning standard in the 2021 IRP.  
4 The 2021 IRP found that: (1) PSE's gas planning standard is based on reliability  
5 and safety and is in line with industry best practices; and (2) the results of the  
6 2021 IRP analysis show that lower demand, which may result from a revised peak  
7 day planning standard, would not change the resource alternatives needed to serve  
8 future loads.<sup>19</sup>

9 Public Counsel also claims that PSE has not justified the 52 heating degree day  
10 ("HDD") economically since 2005 and that in "approving the 2005 standard, the  
11 Commission stated that 'the data underlying that analysis is now dated.'"<sup>20</sup> Public  
12 Counsel has selectively and misleadingly quoted from the Commission's  
13 acknowledgement letter. The entire quote reads as follows:

14 For its 2003 LCP, the company revised down its peak day from 53 heating  
15 degree-days (HDD) to 51 HDD. This small change freed up excess  
16 pipeline capacity that PSE sold in the winter, providing a source of  
17 revenue. The company presented a cost-benefit analysis of this decision in  
18 a technical meeting. While the *data underlying that analysis is now dated*,  
19 the analytical approach was appropriate. The Commission commends the  
20 company for its work in this area.<sup>21</sup>

21 Contrary to Public Counsel's misleading statement that the Commission found the  
22 data underlying PSE's 2005 design day standard to be dated, the Commission was  
23 commending PSE for its work related to the design day peak.

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<sup>19</sup> See, e.g., 2021 IRP at 9-67 and 9-68; 2021 IRP at Appx. L (Temperature Trend Study).

<sup>20</sup> See Earle, Exh. RLE-1CT at 11:8-11.

<sup>21</sup> See Exh. RJR-13 at 4-5 (emphasis added).

1 Public Counsel also criticizes<sup>22</sup> PSE’s 2023 IRP climate models that were used to  
2 project temperatures from 2020 to 2049. The three climate models chosen by the  
3 Northwest Power and Conservation Council to represent the “range of  
4 uncertainty” in the PSE region were chosen “to represent the high and low levels  
5 for four variables,” including winter HDDs. Not surprisingly, removing or  
6 ignoring the model suggested by Public Counsel would create a bias toward  
7 higher temperatures.

8 **Q. Do you have concerns with how Public Counsel characterizes the cost of**  
9 **Tacoma LNG with the reliability benefits Mr. Earle identifies from PSE’s**  
10 **2005 Least Cost Plan?**<sup>23</sup>

11 A. Yes. Public Counsel’s testimony compares a \$182 million dollar resource with an  
12 approximate 50-year life to a 1-year benefit calculation. Exhibit I-2, page 3, of  
13 PSE’s 2005 Least Cost Plan clearly states the benefit numbers are levelized,  
14 meaning the benefits shown are annualized. That is, Mr. Earle is comparing a 50-  
15 year cost metric with a 1-year benefit metric. The \$15.1 million cost discussed in  
16 the 2005 LCP is the levelized annual cost of adding resources to meet a design  
17 peak of just 2 degrees colder *at that time for the then-expected planning horizon*.  
18 The \$182 million figure is a one-time capital cost of a resource to meet customer  
19 demand at the design peak today (which is not quantified in degrees of  
20 temperature at peak). As such the \$15.1 million bears no relationship to the \$182

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<sup>22</sup> See Earle, Exh. RLE-1CT, at 14:8-15:9.

<sup>23</sup> See Earle, Exh. RLE-1CT, at 11:13-17.

1 million and Mr. Earle's testimony in this regard should be dismissed as not  
2 relevant.

3 **Q. How do you respond to Public Counsel's claim that PSE did not**  
4 **communicate with the PSE Board of Directors concerning the design day**  
5 **standard.<sup>24</sup>**

6 A. The Commission's prudency analysis requires that PSE inform its Board of  
7 Directors or management about a purchase decision and its costs and involve the  
8 Board of Directors or management in the decision process. As described in my  
9 Prefiled Direct Testimony, PSE continued to inform the PSE Board of Directors  
10 about the Tacoma LNG Project and involved the PSE Board of Directors in  
11 decisions after September 2016.<sup>25</sup> Public Counsel's focus on whether PSE  
12 specifically discussed the 2005 design peak day gas standard with the Board of  
13 Directors misses the point. The information provided to the Board of Directors is  
14 intended to assist them in making informed decisions. Discussing the design peak  
15 day standard would not have assisted the Board of Directors in their decision  
16 making on the Tacoma LNG Project.

17 In the 2022 GRC Order, the Commission found that "PSE's Board of Directors  
18 was sufficiently informed and involved at least through its decision to authorize  
19 construction of the facility on September 22, 2016."<sup>26</sup> The Commission also

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<sup>24</sup> See Earle, Exh. RLE-1CT, at 12:4-16.

<sup>25</sup> See Roberts, Exh. RJR-1T, at 30:10-39:9.

<sup>26</sup> Final GRC Order at ¶ 417.

1 found “that PSE provided adequate documentation of its decision-making as it  
2 developed and constructed the Tacoma LNG Facility.”<sup>27</sup> The Commission  
3 rejected Public Counsel’s and the Tribe’s challenges to the third and fourth  
4 prudence factors stating “we agree with PSE that it appropriately based planning  
5 decisions on its design day standard...”<sup>28</sup> The Commission should reject Public  
6 Counsel’s claims about not discussing the design day standard with the Board of  
7 Directors here.

8 **B. PSE’s “Use” of the Tacoma LNG Facility Supports the Prudence of**  
9 **Costs PSE Incurred after September 2016**

10 **Q. How do you respond to Public Counsel’s claims that PSE’s “use” of the**  
11 **Tacoma LNG Facility<sup>29</sup> as justification for a prudence determination should**  
12 **be dismissed?**

13 A. First, as acknowledged by Public Counsel, in the Final GRC Order, the  
14 Commission stated that when it reviews the prudence of PSE’s costs for the  
15 Tacoma LNG Facility, it “may also consider the extent to which the Facility was  
16 used as a peak-shaving resource.” Public Counsel’s claim<sup>30</sup> that PSE’s use of the  
17 Tacoma LNG Facility does not support the decision to build the Tacoma LNG  
18 Facility is based on its failed arguments concerning PSE’s design day criteria and  
19 comparison of alternatives and should be rejected as such.

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<sup>27</sup> *Id.* at ¶ 418.

<sup>28</sup> *Id.* at ¶ 419.

<sup>29</sup> *See* Earle, Exh. RLE-1CT, at 15:10-19:14.

<sup>30</sup> *See* Earle, Exh. RLE-1CT, at 15:13-16:11.

1 Public Counsel's claims<sup>31</sup> that PSE's use of vaporization in winter 2022-2023 did  
2 not constitute peak shaving to meet "design day criteria" indicates Public Counsel  
3 does not understand peak-shaving. Indeed, gas utilities use peak shaving, as  
4 necessary, to meet the demand on any given day. In generalized terms, peak-  
5 shaving is the process of adding a non-base loaded resource (i.e. intermittently  
6 operated) into the supply system to mitigate unfavorable results from demand-  
7 pressured conditions. Unfavorable results may include both operational and  
8 economic pressures on the system. At the most severe, this translates to  
9 supplying gas via the peak-shaving resource in order to shore up the stability of  
10 the system such that supply equals demand, system pressures are maintained as  
11 necessary to allow the system to function as designed, gas curtailments are  
12 prevented, or in the most extreme situations a loss of gas supply altogether does  
13 not occur. Peak resources provide buffer room for scenarios where demand (and  
14 price) is high, or the supply in the system is low relative to demand.

15 **Q. Has PSE used the Tacoma LNG Facility for peak-shaving?**

16 Yes. The Tacoma LNG Facility vaporization operation on February 1 and 2,  
17 2023 that was described in my Prefiled Direct Testimony, Exh. RJR-1T at  
18 41:3-11, is a good example. In that circumstance, the transport capacity of the  
19 Enbridge pipeline in British Columbia was limited to 64 percent which in turn  
20 limited PSE's gas supply. In light of the likelihood of further limits on gas supply,  
21 PSE used the Tacoma LNG Facility resource to vaporize and inject gas into its

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<sup>31</sup> See Exh. RLE-1CT, at 16:14-18:3.

1 distribution system.<sup>32</sup> It was reasonable and prudent for PSE to commence gas  
2 vaporization and injection to maintain PSE’s distribution system stability rather  
3 than gamble on Enbridge quickly returning its system to full capacity.

4 Peak-shaving may also refer to offsetting the need to make gas purchases when  
5 gas prices are high via use of an in-house peak-shaving resource. With a resource  
6 already at hand for peak-shaving capacity, it is reasonable for PSE to utilize the  
7 resource to meet gas demand on days when natural gas market prices are  
8 high. The Tacoma LNG Facility vaporization operation from February 22  
9 through 24, 2023 that was described in my Prefiled Direct Testimony,  
10 Exh. RJR-1T at 42:5-11, is a good example. It was cold, natural gas prices were  
11 high, and PSE had gas available in the Tacoma LNG tank that could be used for  
12 peak-shaving. PSE utilized lower cost gas that was liquefied, stored, and could be  
13 re-gasified for injection to the PSE distribution system, which otherwise would  
14 have been supplied with natural gas at a high market price to meet demand. The  
15 Tacoma LNG Facility provided benefits to customers by serving as the low-cost  
16 supply option and, as such, significantly offset gas purchases.

17 Public Counsel’s claim that curtailment would not have been “required” absent  
18 vaporization from the Tacoma LNG Facility<sup>33</sup> misses the point of having  
19 peak-shaving capabilities. Gas utilities such as PSE use peak-shaving to avoid a  
20 system situation where curtailment becomes required by adding capacity as

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<sup>32</sup> See Earle, Exh. RLE-8, PSE Response to Data Request No. 024.

<sup>33</sup> See Earle, Exh. RLE-1CT, at 17:12-18:3.

1 another buffer for available supply. As PSE explained in its response to Public  
2 Counsel Data Request 024, PSE used the Tacoma LNG Facility to “buttress  
3 system reliability and mitigate any potential trickle-down effects of a full [British  
4 Columbia] pipeline curtailment...”<sup>34</sup>

5 **Q. Are Public Counsel’s claims<sup>35</sup> that PSE failed to fill its portion of the tank**  
6 **prior to winter 2022-2023 relevant to a determination of the prudence of the**  
7 **costs PSE incurred constructing and operating the Tacoma LNG Facility?**

8 A. No. LNG storage facilities in general rely on turn-over of LNG product to ensure  
9 that LNG composition remains methane rich (i.e. high methane-number/lower  
10 Wobbe Index). When LNG is stored with low turnover, where deliveries are few  
11 and replenishments are occasional, LNG in storage becomes more susceptible to  
12 “weathering,” a condition where the methane within the LNG boils-off  
13 proportionally greater than other, heavier components (ethane, propane), and  
14 therefore experiences subsequent methane-number degradation/Wobbe Index  
15 elevation. This process is critical in understanding the decision to not top-off the  
16 LNG storage for the winter of 2022-2023.

17 Upon completion of commissioning in January 2022, Tacoma LNG readied itself  
18 for bunkering Puget LNG maritime fuel, which was slated for March 2022.

19 However, the first Puget LNG bunkering evolutions did not occur until

20 September 2022. To avoid having a large volume of weathering LNG inventory,

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<sup>34</sup> See Earle, Exh. RLE-8.

<sup>35</sup> See Earle, Exh. RLE-1CT, at 15:10-18:18.



1 PSE decided to delay topping-off PSE's tranche until Puget LNG deliveries  
2 commenced.

3 In November 2022, PSE evaluated then-current gas prices of \$8 to \$17 per Dth  
4 and determined it was economically efficient to maintain existing volumes and  
5 top-off PSE's tranche in the spring of 2023. During the winter 2022-2023,  
6 Tacoma LNG was available for vaporization dispatch as witnessed by the  
7 vaporization injection events described earlier in this testimony. Public Counsel's  
8 recommendation that PSE's "use" of the Tacoma LNG Facility be dismissed by  
9 the Commission is completely out of touch with the value the Tacoma LNG  
10 Facility provided to PSE and its customers.

11 **C. The Tribe's Testimony Does Not Address PSE's Post-2016 Costs to**  
12 **Design and Construct the Tacoma LNG Facility and Raises Cost**  
13 **Allocation Issues that Were Already Decided**

14 **Q. Do the Tribe's claims<sup>36</sup> address PSE's post-2016 costs to design and**  
15 **construct the Tacoma LNG Facility?**

16 A. No. The Tribe admits that its testimony "goes primarily to the first two of the  
17 Commission's four primary prudency factors, (1) the need for the resource, and  
18 (2) the evaluation of alternatives." The Commission addressed these two  
19 prudency factors explicitly in the Final GRC Order and found that:

20 PSE has demonstrated a need for the Tacoma LNG Facility at least  
21 through the initial decision to build the facility on September 22, 2016;<sup>37</sup>

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<sup>36</sup> See Earle, Exh. RXS-1T, at 17:11-15.

<sup>37</sup> Final GRC Order at ¶ 394.

1 PSE reasonably relied on its forecasts for gas demand, which showed a  
2 need for an LNG peak shaving facility;<sup>38</sup> and,

3 PSE has adequately considered alternatives to the Tacoma LNG Facility.<sup>39</sup>

4 As explained in my Prefiled Direct Testimony,<sup>40</sup> PSE used the same methods for  
5 analyzing the need for natural gas resources and the same load forecasting  
6 techniques throughout the time-period it was developing and constructing the  
7 Tacoma LNG Facility that it used prior to September 2016 when it was  
8 developing the Tacoma LNG Project. Much of the Tribe’s testimony is repeated  
9 from the testimony the Tribe’s witness, Dr. Sahu, offered in the 2022 GRC. Dr.  
10 Sahu claims<sup>41</sup> that PSE’s peak shaving needs could have been “accommodated” at  
11 the Jackson Prairie storage facility or by diverting gas from its electric generating  
12 facilities. The Commission rejected these alleged alternatives when they were  
13 offered by Public Counsel in the 2022 GRC.<sup>42</sup> Because the Tribe’s testimony  
14 regarding the need for the Tacoma LNG Facility and PSE’s evaluation of  
15 alternatives has already been addressed by the Commission and relates to the  
16 issue of “need” that is outside the scope of this proceeding, the Tribe’s testimony  
17 should be disregarded.<sup>43</sup>

18 **Q. How do you respond to the Tribe’s concerns that PSE (rate payers) are**  
19 **paying for portions of the facility that are necessary only for the non-**

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<sup>38</sup> *Id.*

<sup>39</sup> *Id.* at ¶ 412.

<sup>40</sup> *See* Roberts, Exh. RJR-1CT, at 12-14.

<sup>41</sup> *See* Sahu, Exh. RXS-1T, at 41:23 – 42:70.

<sup>42</sup> Final GRC Order at ¶¶ 414-416.

<sup>43</sup> PSE filed a motion to strike Mr. Sahu’s testimony on this issue on September 27, 2023.

1 regulated marine fueling business<sup>44</sup> and that PSE should be allocated a lower  
2 percentage of the costs of the vaporizer?<sup>45</sup>

3 A. The Tribe is wrong. The settlement approved by the Commission in  
4 Docket UG-151663 established the cost allocation methodology which sets out  
5 the percentages of the Tacoma LNG Facility capital and operating and  
6 maintenance costs to be applied to the regulated activities of PSE and the non-  
7 regulated activities of Puget LNG.<sup>46</sup> As described in my Prefiled Direct  
8 Testimony, the capital costs of Tacoma LNG Facility allocated to PSE were based  
9 on the allocation methodology approved in Order 10.

10 **D. Claims by the Tribe and Public Counsel Regarding Equity**  
11 **Considerations are Misplaced in This Proceeding**

12 **Q. Do you agree with the Tribe's claim<sup>47</sup> that the revised standard of review in**  
13 **RCW 80.28.425 is directly relevant to the prudence analysis for costs**  
14 **incurred by PSE after September 22, 2016 for the Tacoma LNG Facility?**

15 A. No, I do not. In the Final GRC Order, the Commission extensively discussed the  
16 standard of review in RCW 80.28.425 as it would apply to the Tacoma LNG  
17 Project.<sup>48</sup> The Commission determined that RCW 80.28.425 "should not be

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<sup>44</sup> See, Sahu, Exh. RXS-1T, at 13:2-7.

<sup>45</sup> See, Sahu, Exh. RXS-1T, at 46:20-26.

<sup>46</sup> See Docket UG-151663 Settlement Agreement dated September 30, 2016 and UG-151663, *Final Order 10 Approving and Adopting Settlement Stipulation; Reopening and Amending Order 08 in Docket U-072375*, dated Nov. 1, 2016 ("Order 10").

<sup>47</sup> See Sahu, Exh. RXS-1T, at 15:4-17:5.

<sup>48</sup> Final GRC Order at ¶¶ 422-431, 498.

1 applied retroactively”<sup>49</sup> and that it would be “unjust and unreasonable to  
2 incorporate information available only through hindsight into the prudence  
3 determination related to construction that occurred in 2016.”<sup>50</sup> That reasoning  
4 applies equally to the costs incurred for Tacoma LNG Facility construction that  
5 occurred after 2016, contrary to claims made by the Tribe.

6 The public interest standard in RCW 80.28.425 became effective July 25, 2021  
7 and mandated that gas and electric utility companies propose multiyear rate plans  
8 starting from January 1, 2022. As of July 1, 2021, construction of the Tacoma  
9 LNG Facility was 100 percent complete and capital costs allocable to PSE equal  
10 to \$226,801,000 had been incurred. After a commissioning process, the Tacoma  
11 LNG Facility was placed in-service on February 1, 2022, and total capital costs  
12 allocable costs to PSE at that time were \$241,649,000. It would be unjust and  
13 unreasonable for the Commission to “incorporate information available only  
14 through hindsight” into the prudence determination related to costs for  
15 construction that was effectively complete at the time RCW 80.28.425 became  
16 effective and for commissioning costs required to get the Tacoma LNG Facility  
17 in-service.

18 PSE understands the Commission is committed to “implement[ing] both  
19 performance-based regulations and equity considerations into its ratemaking  
20 framework”<sup>51</sup> and that the Commission intends to apply an “equity lens” in public

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<sup>49</sup> *Id.* at ¶ 427.

<sup>50</sup> *Id.* at ¶ 428.

<sup>51</sup> *Id.* at ¶ 426.

1 interest considerations going forward.<sup>52</sup> PSE also understands that based on  
2 RCW 80.28.425 when evaluating costs for purposes of prudency review, the  
3 Commission “may consider” equity and the other factors listed in the revised  
4 statute. But, as the Commission stated in the Final GRC Order, RCW 80.28.425  
5 “does not require the Commission to upend its longstanding principles of  
6 prudency review,”<sup>53</sup> and I believe it should not do so here.

7 The Tribe ignores the Commission’s treatment of this issue and is attempting to  
8 reconstitute its prior testimony to argue that equity considerations or the newly  
9 expanded definition of the public interest would support disallowance of PSE’s  
10 costs related to the Tacoma LNG Facility. The Tribe’s efforts should fail.

11 **Q. Public Counsel claims<sup>54</sup> the Commission did not address its concerns**  
12 **regarding the statutory definition of “public interest” in its finding that**  
13 **PSE’s decision to construct the Tacoma LNG Project was prudent. Do you**  
14 **agree?**

15 A. No. As described earlier, the Commission addressed the public interest in its  
16 extensive discussion of equity and environmental health issues in the Final GRC  
17 Order.<sup>55</sup> The Commission found the Tacoma LNG Settlement “consistent with the  
18 public interest as one of three multiparty settlements” and that parties opposing

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<sup>52</sup> *Id.* at ¶ 421.

<sup>53</sup> *Id.* at ¶ 429.

<sup>54</sup> *See* Earle, Exh. RLE-1CT, at 31-32.

<sup>55</sup> Final GRC Order at ¶¶ 421-432, 498.

1 the settlement had “failed to establish that the Settlement should be rejected as  
2 contrary to the public interest.”<sup>56</sup>

3 **Q. How do you respond to Public Counsel’s claim<sup>57</sup> that PSE’s alleged “failure**  
4 **to consider equity in [its] decision making is a failure of prudence even**  
5 **before RCW 80.28.425”?**

6 A. I disagree. The Commission stated in the Final GRC Order that RCW 80.28.425  
7 “must be applied to prudency going forward but should not be applied  
8 retroactively.”<sup>58</sup> Public Counsel’s argument that a public interest standard  
9 consistent with or similar to RCW 80.28.425 should be applied before the law  
10 was passed, completely ignores the Commission’s prior order concerning  
11 application of the statute. In addition, the costs to construct and operate the  
12 Tacoma LNG Facility at issue here were the direct result of decisions made when  
13 the PSE Board of Director’s approved moving forward in September 2016 and  
14 decided to pursue the modified construction option in the 2018 re-evaluation.<sup>59</sup>  
15 Contrary to the claims by the Tribe and Public Counsel, the costs were prudently  
16 incurred.

17 **Q. How do you respond to Public Counsel claims that the impact of PSE’s**  
18 **actions on its ratepayers as well as impacts on Highly Impacted Communities**

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<sup>56</sup> *Id.* at ¶ 431.

<sup>57</sup> *See* Earle, Exh. RLE-1CT, at 31:3-32:14.

<sup>58</sup> *Id.* at ¶ 427.

<sup>59</sup> *See* Roberts Prefiled Direct Testimony, Exh. RJR-1, at 19:1-27:2.

1 **and Vulnerable Populations should be included as part of the Commission’s**  
2 **review of PSE’s “practices.”<sup>60</sup>**

3 A. PSE gives serious consideration to the impacts of its actions on customers and  
4 people living in communities surrounding its facilities and the Tacoma LNG  
5 Facility is no different. Early in the development of the Tacoma LNG Project,  
6 PSE used multiple communication and outreach strategies to provide information  
7 to its customers. PSE briefed neighborhood councils, local community and  
8 business groups, and Port of Tacoma tenants; provided comment at City Council  
9 meetings; and provided tours of the Tacoma LNG Project site. PSE also  
10 undertook significant efforts to engage with the Tribe in 2014 and 2015 regarding  
11 the Tacoma LNG Project, many of which were rebuffed.

12 As I describe later in my testimony, construction of the Tacoma LNG Project  
13 improved environmental conditions onsite and in and around the Blair and  
14 Hylebos waterways, all to the benefit of the surrounding community, including  
15 the Tribe. In addition, off-site mitigation associated with the Tacoma LNG  
16 Facility also aids in improved ecological function in and around the Blair and  
17 Hylebos waterways. The benefits of PSE’s actions are perpetual and although  
18 Public Counsel and the Tribe seemingly refuse to acknowledge these as positive  
19 impacts, the material improvements at the site of the Tacoma LNG Facility were  
20 recited by the Shorelines Hearings Board in its decision denying an appeal by the

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<sup>60</sup> See Earle, Exh. RLE-1CT, at 31:19-32:2.

1           Tribe.<sup>61</sup> See the Third Exhibit to the Rebuttal Testimony of Ronald J. Roberts,  
2           Exh. RJR-14, for a copy of Shorelines Hearings Board Decision 9283 in SHB  
3           No. 16-002. PSE takes pride in being responsive to its customers and others that  
4           might be impacted by its operations, notwithstanding Public Counsel’s claims.

5           Public Counsel claims impacts on ratepayers should go “beyond the merely  
6           economic,” but the economics for PSE’s customers are important. If PSE had  
7           chosen the next most economic resource in the resource stack or stopped  
8           construction of the Tacoma LNG Facility when it performed the 2018  
9           reevaluation, the cost to meet the need would have been substantially higher. That  
10          would result in higher rates for PSE’s customers than what is being proposed.

11          Those costs would be disproportionately and inequitably borne by some of PSE’s  
12          customers. In addition, as I explained earlier, PSE can (and has) used the Tacoma  
13          LNG Facility for peak shaving to offset the need to make gas purchases when gas  
14          prices are high. Using the lower priced gas stored at the Tacoma LNG Facility  
15          instead of buying high priced gas provided significant benefits to customers.

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<sup>61</sup> See Roberts, Exh. RJR-14, at 17:8 - 18:6.



1                   **IV. PSE CUSTOMERS BENEFIT FROM CHANGES TO THE**  
2                   **PRELIQUEFACTION EQUIPMENT**

3           **Q. Please describe the concerns expressed by Commission Staff concerning**  
4           **changes to the preliquefaction equipment at the Tacoma LNG Facility.**

5           A. Commission Staff claims that changes to the preliquefaction treatment equipment  
6           were required only to meet the needs of TOTE, Puget LNG’s customer. Staff  
7           therefore recommends that the Commission deny recovery of the return of and the  
8           return on the incremental capital involved with the redesign in the LNG tracker’s  
9           revenue requirement.<sup>62</sup>

10          **Q. Please describe the concerns expressed by the Tribe concerning the changes**  
11          **to the preliquefaction equipment at the Tacoma LNG Facility.**

12               In its testimony, the Tribe claims that pretreating pipeline quality gas is needed  
13               only “because PSE is contractually required to provide LNG to TOTE that meets  
14               tight purity specifications.”<sup>63</sup> The Tribe also claims it was unreasonable for PSE  
15               to not anticipate changes in the composition of the feed gas to the Tacoma LNG  
16               Facility and instead to assume that the gas composition would remain steady  
17               during the life of the Tacoma LNG Facility. Therefore, costs incurred to redesign  
18               the Tacoma LNG Facility to address the change in feed gas were unnecessary.<sup>64</sup>

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<sup>62</sup> See Erdahl, Exh. BAE-1CT, at 17:6-20:2. According to Staff this would result in a \$500,000 reduction to gross plant, a \$20,000 reduction to the depreciation deferral, and a \$40,000 reduction to the return deferral, all of which result in a \$50,000 reduction to PSE’s as-filed revenue requirement request.

<sup>63</sup> See Sahu, Exh. RXS-1T, at 44:2-45:21.

<sup>64</sup> See Sahu, Exh. RXS-1T, at 48:20-21, 50:18-51:2.

1 **Q. Did the Commission address the changes to the preliquefaction equipment in**  
2 **PSE's rate case in Dockets UE-220066/UG220067?**

3 A. Yes. In the Final GRC Order at ¶ 403, the Commission stated that it was “not  
4 persuaded, either, that PSE incurred unreasonable costs in redesigning the facility  
5 due to changing composition of imported natural gas.”

6 **Q. Please respond to Commission Staff's concerns regarding changes to the**  
7 **preliquefaction equipment.**

8 A. Staff's conclusion that the redesign of the preliquefaction equipment was driven  
9 by Puget LNG's fuel supply agreement with TOTE, and therefore did not benefit  
10 PSE's customers, is incorrect. Pretreatment is necessary for liquefaction. The  
11 change PSE was seeing to the gas supply coming from Canada was an increase in  
12 heavy hydrocarbons such as ethane and propane. Those heavy hydrocarbons may  
13 freeze at the cryogenic temperatures encountered downstream in liquefaction, and  
14 as described above, contribute to weathering where the methane within the LNG  
15 boils-off proportionally greater than the other heavier hydrocarbons. The point of  
16 the redesign was to remove more of the heavy hydrocarbons from the feed gas.  
17 That removal avoids potential freezing of those particles in the liquefaction phase,  
18 eliminates high levels of ethane and propane in the stored LNG that are not good  
19 for PSE's customers or TOTE, and satisfies the TOTE contract requirement. The  
20 redesign benefits PSE's customers, not just TOTE.

1 **Q. Please respond to the Tribe’s concerns regarding changes to the liquefaction**  
2 **equipment.**

3 A. First, the Tribe’s claims that pretreatment of pipeline natural gas, including  
4 liquefaction, is not needed for PSE’s core customers is not true. As the  
5 Commission acknowledged in response to the Tribe’s argument that a vaporizer  
6 would not be necessary if PSE had not liquefied LNG for storage,

7 Dr. Sahu’s argument overlooks the extensive discussion and justifications  
8 PSE has provided for *LNG storage* as opposed to other alternatives. Once  
9 PSE established that LNG storage was a least-cost alternative for  
10 peak-shaving, a vaporizer was a necessary expense... .<sup>65</sup>

11 The same is true of natural gas pretreatment that must be completed prior to  
12 liquefaction. It constitutes a “necessary expense.” In addition, the Commission  
13 stated further in the Final GRC Order that it “was not persuaded by the Tribe’s  
14 argument that the Tacoma LNG Facility is ‘not really for rate payers at all.’”<sup>66</sup>

15 **Q. Should PSE have anticipated this change in the gas composition?**

16 A. The Tribe’s testimony offers no evidence that the historic gas composition on the  
17 Northwest Pipeline system had ever been anywhere near the levels seen since  
18 2016. No such evidence exists. PSE has been receiving gas originated in British  
19 Columbia since 1957 through its connection to the Northwest Pipeline system.  
20 PSE had never seen gas quality close to the redesigned level during the sixty-year  
21 period that it received gas from British Columbia. When PSE completed the

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<sup>65</sup> Final GRC Order at ¶ 401, emphasis in original, footnotes omitted.

<sup>66</sup> Final GRC Order at ¶ 411.

1 initial design of the Tacoma LNG Facility, the plant had the capability to handle  
2 gas of the quality that was then available. Contrary to the Tribe's claims, PSE had  
3 discussed the changing feedstock with pipelines and producers that produce and  
4 sell gas and understood the circumstances that gave rise to increases in ethane and  
5 propane content in the 2013-14 period. The most dramatic changes occurred  
6 thereafter. It was not unreasonable for PSE to not anticipate such a significant  
7 change in feed gas composition.

8 **Q. How should the costs incurred to change the preliquefaction equipment be**  
9 **treated in this proceeding?**

10 A. I agree with the Commission's statement in the Final GRC Order that PSE did not  
11 incur "unreasonable costs in redesigning the facility due to changing composition  
12 of imported natural gas." The \$500,000 cost to PSE that has been identified by  
13 Staff for the redesign was certainly minor as compared to the PSE total cost of  
14 \$243 million and, although the redesign was required to meet requirements in the  
15 TOTE contract, all customers benefit from the redesign. Further, there is no  
16 evidence to suggest that the final cost of the pre-treatment system would be any  
17 different than if PSE had known current gas quality when it did the initial plant  
18 design. The Commission should allow PSE to recover the costs it incurred for  
19 redesign of the preliquefaction equipment.



1 BOG is compressed into the four-mile pipeline segment and is used to serve PSE  
2 gas customers. PSE and Puget LNG are kept whole for their attributed BOG  
3 through an imbalance account that is cleared over time as new gas is liquefied.

4 **Q. What are the implications of BOG on the use of the four-mile pipeline**  
5 **segment?**

6 A. When the Tacoma LNG plant is not in liquefaction mode, the entire BOG volume  
7 flows on the bi-directional four-mile pipeline segment to serve PSE gas  
8 customers, reducing the need to purchase that quantity of gas each day. Since  
9 Puget LNG is not authorized to flow gas from the Tacoma LNG plant, all of the  
10 BOG and thus the outbound use of the four-mile pipeline segment are attributable  
11 to PSE and not Puget LNG.

12 **Q. Why is it appropriate to attribute more than 240 hours (10 days) use of the**  
13 **four-mile pipeline segment to PSE's peak-shaving operations?**

14 A. As discussed in more detail in Mr. Donahue's rebuttal testimony, Exh. WFD-5T,  
15 the four-mile pipeline segment is a bidirectional pipeline segment, which provides  
16 for contractual rights separately in each direction. This situation does not occur on  
17 any other pipeline segment on PSE's gas system. PSE has the right to utilize the  
18 entirety of the four-mile pipeline segment in an outbound (from Tacoma LNG  
19 plant) mode for multiple days to deliver vaporized peak-shaving volumes to PSE  
20 customers. This right supersedes the rights of Puget LNG (and PSE) to use the  
21 four-mile pipeline segment in the opposite direction. The PSE peak-shaving rights

1 to the four-mile pipeline segment are effectively a reservation of the space on the  
2 entire pipeline segment at any time regardless of the number of days or hours or  
3 volumes that PSE might actually use it. Furthermore, PSE retains the right to use  
4 the four-mile pipeline segment in an outbound direction for delivery of BOG to  
5 customers every day that liquefaction is not scheduled. Therefore, as discussed in  
6 the rebuttal testimonies of Mr. Donahue, Exh. WFD-5T, and Mr. Taylor,  
7 Exh. JDT-8T, it is appropriate under principles of cost-causation to reflect the  
8 reservation of one direction of the bidirectional four-mile pipeline segment by  
9 PSE in the cost allocation method.

10 **Q. Do you agree that PSE must recalculate the CIAC determination for Puget**  
11 **LNG using a cost-allocation method as proposed by Staff?**<sup>70</sup>

12 A. No. Under PSE's Rule 6, PSE is responsible for determining any new customer's  
13 cost responsibility through the CIAC calculation. PSE utilized cost-causation  
14 principles in determining the appropriate share of costs attributed to the provision  
15 of new service to Puget LNG in the same manner as for any other new customer.  
16 PSE applied the requirements of PSE's Rule 6 and determined that Puget LNG  
17 was not required to make a CIAC. This issue is further discussed in the rebuttal  
18 testimonies of PSE witnesses Mr. Donahue, Exh. WFD-5T, and Mr. Taylor,  
19 Exh. JDT-8T.

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<sup>70</sup> See Erdahl, Exh. BAE-1CT, at 26:11-27:12.

1                   **VI. THE PARTIES MISUNDERSTAND PSE'S COMPLIANCE**  
2                   **OBLIGATIONS UNDER THE AIR PERMIT**

3           **Q. Please respond to the claims by Staff<sup>71</sup> and the Tribe<sup>72</sup> that the Tacoma LNG**  
4           **Facility has violated the production limit of 250,000 gallons of LNG per**  
5           **calendar day.**

6           A. Condition 33 of the Tacoma LNG's air permit requires that the Tacoma LNG  
7           facility not produce and/or process more than 250,000 gallons per day (gpd) of  
8           LNG. LNG is produced by taking pipeline natural gas and running it through  
9           multiple steps to remove unwanted contaminants (e.g., amine pretreatment  
10          system, heavy hydrocarbon removal). These processes generate air emissions. The  
11          treated gas is then routed to compressors dedicated to processed pipeline gas and  
12          passed through the liquefaction unit to convert the gas to a liquid state. The  
13          compression and liquefaction steps do not generate air emissions. The resulting  
14          LNG is routed to the storage tank. A small percentage of the LNG in the storage  
15          tank boils off daily as a normal part of the process. This BOG has already gone  
16          through all of the treatment steps and so is routed to dedicated BOG compressors  
17          that only handle this recycled/previously treated gas. The compressed BOG is  
18          then mixed with fully treated pipeline gas and passed through the liquefaction unit  
19          to convert the mixed gas streams to a liquid state. The LNG is then routed to the  
20          storage tank.

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<sup>71</sup> See Exh. BAE-1CT, at 28:13-29:18.

<sup>72</sup> See Exh. RXS-1T, at 29:14-19.



1 PSE maintains that the 250,000 gpd limit in the air permit was intended to  
2 constrain the amount of pipeline gas being treated as the treatment steps generate  
3 the air contaminants. As the permit is not clear on this point, PSE conservatively  
4 reported to the PSCAA those days where the volume of LNG added to the tank  
5 exceeded 250,000 gpd while documenting that the LNG production volume has  
6 not exceeded 250,000 gpd. The PSCAA has not responded to PSE's  
7 communications.

8 I would note that the Tribe refers to Notices of Violation (“NOVs”) issued by the  
9 PSCAA that do not relate to the limitation on gallons of LNG produced or  
10 processed per day.<sup>73</sup> PSE received NOVs from the PSCAA on June 8, 2023, that  
11 pertained to self-reported events. Certain of the NOVs pertain to events that  
12 occurred during or soon after commissioning. During this period, the operators  
13 were starting up custom-built equipment for the first time, optimizing operations,  
14 and tuning instrumentation and controls. The operators continuously worked to  
15 minimize operational incidents and operate within the parameters of the permit.  
16 PSE has worked diligently to identify and address the root causes of the incidents  
17 identified in the NOVs and taken appropriate action to reduce the likelihood of  
18 recurrence. On June 21, 2023 PSE provided its response to the NOVs and  
19 reported that as of that date, it believed all corrections had been made.

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<sup>73</sup> See Sahu, Exh. RXS-1T, at 29:9-13.

1 **Q. What is your response to Staff’s recommendations<sup>74</sup> in light of its concerns**  
2 **related to violations of the air permit issued by the PSCAA?**

3 A. As described in my prefiled direct testimony, PSE and NAES executed an  
4 Operations & Maintenance Services agreement (“NAES O&M Agreement”) on  
5 January 27, 2020.<sup>75</sup> The NAES O&M Agreement utilizes a cost-plus model with  
6 metric-based performance bonuses that was partly modeled off the existing  
7 PSE/NAES agreement for operating the Ferndale Generation Facility. PSE  
8 assigned an Asset Manager to actively administer the NAES O&M Agreement,  
9 including budget, safety, and environmental review. The NAES O&M  
10 Agreement includes a cost-plus mechanism that incorporates an annual  
11 “Operations Fee” as well as an annual “Incentive Payment” that is based on  
12 meeting five performance factors, including an environmental factor. Should  
13 performance on these factors not achieve PSE’s goals, the Incentive Payment will  
14 be reduced and in an extreme case NAES would be required to pay liquidated  
15 damages to PSE.<sup>76</sup>

16 Since NAES has been in care, custody and control of the Tacoma LNG Facility,  
17 PSE and NAES environmental teams have routinely, and with only rare  
18 exceptions, held weekly conference calls to discuss the facility’s air permit  
19 compliance and a detailed review of all required reporting to PSCAA. As such  
20 Staff’s recommendation have already been enacted.

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<sup>74</sup> See Erdahl, Exh. BAE-1CT, at 31:2-13.

<sup>75</sup> The NAES O&M Agreement is included as Exh. RJR-10C.

<sup>76</sup> See Roberts, Exh. RJR-1T, at 50:9-51:16.

1 PSE does not believe increasing liquidated damages as they relate to  
2 environmental factors is necessary; to do so over-simplifies and inaccurately  
3 views all such violations as purely a result of negligence while ignoring the  
4 numerous complex factors that may lead to violations. PSE and NAES have  
5 collaboratively worked together to investigate root causes of compliance related  
6 matters and enacted steps to help mitigate future occurrences.

7 Staff's recommendation that PSE report any permit violations directly to PSCAA  
8 and copy the Commission on any such communication is unnecessary and  
9 duplicative. As Staff's witness concedes, the Commission is not an environmental  
10 regulator. The Commission made the same statement in the 2022 Final GRC  
11 Order and went on to state further "[RCW 80.28.425] does not allow the  
12 Commission to retrospectively second-guess the determinations of other, more  
13 specialized environmental health agencies ..."77 Condition 48 of the air permit  
14 requires that the Tacoma LNG facility notify the PSCAA, in writing, within 30  
15 days of the end of the month in which an exceedance of any emissions limitation  
16 or standard identified in these permit conditions is discovered. It would serve no  
17 purpose for the Commission to require PSE to provide a copy of written notice to  
18 PSCAA to the Commission.

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<sup>77</sup> Final GRC Order at ¶ 427.

1                                   **VII. THE PARTIES IGNORE BENEFITS OF THE TACOMA**  
2                                   **LNG FACILITY AND MAKE FALSE ASSERTIONS ABOUT**  
3                                   **NEGATIVE EXTERNALITIES**

4   **Q. Is the assertion in the Tribe’s testimony<sup>78</sup> accurate that negative externalities**  
5                   **caused by the Tacoma LNG Project present disparate impacts to the Tribe**  
6                   **and other environmentally-overburdened communities?**

7   A. No. Claims of “significant adverse air pollution” raised in the testimony on behalf  
8                   of the Tribe are not based on the facts. The Tacoma LNG Facility does not create  
9                   “significant adverse air pollution.” Moreover, these concerns were raised by the  
10                  Tribe in PSE’s 2022 general rate case,<sup>79</sup> and rejected by the Commission in the  
11                  Final GRC Order.<sup>80</sup> For this reason, they are outside the scope of this  
12                  proceeding.

13                 Nevertheless, the Tribe attempts to relitigate these issues even though the  
14                 Commission previously noted the Pollution Control Hearings Board’s (“PCHB”)  
15                 “findings as to the credibility of Dr. Sahu’s testimony undermine many of the  
16                 Tribe’s arguments regarding air quality impacts and its emphasis on Dr. Sahu’s  
17                 opinions.”<sup>81</sup> Dr. Ranajit Sahu, the individual who provides testimony on behalf  
18                 of the Tribe in this proceeding, was a lead witness for the Tribe and raised  
19                 concerns about pollutant emissions before the PCHB in case number PCHB No.  
20                 19-087c. The PCHB rejected the findings and conclusions of Dr. Sahu. Please see

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<sup>78</sup> See Sahu, Exh. RXS-1T, at 19:1-26:4.

<sup>79</sup> Compare Sahu Exh. RXS-1T at 21:3-26:4, with 2022 PSE GRC Sahu Exh. RXS-1T at 17:9-21:9.

<sup>80</sup> Final Order at ¶¶ 427-436.

<sup>81</sup> *Id.* at ¶ 436.

1 the Fourth Exhibit to the Rebuttal Testimony of Ronald J. Roberts, Exh. RJR-15,  
2 for a copy of PCHB Decision 11448 in PCHB No. 19-087c.

3 Dr. Sahu provides a variety of allegations about emissions that were rejected in  
4 other forums charged with reviewing emissions for permitting purposes. These  
5 arguments were found to be either not credible or overstatements of the alleged  
6 impact, including, but not limited to those related to: toxic air pollutants,<sup>82</sup>  
7 volatile organic compounds,<sup>83</sup> and hazardous air pollutants.<sup>84</sup> For instance, the  
8 PCHB noted it rejected Dr. Sahu’s “passing assertions” that the Tacoma LNG  
9 Facility was a significant source of hazardous air pollutants because his testimony  
10 was “devoid of supporting evidence.”<sup>85</sup>

11 The PCHB agreed with the conclusion of PSE’s witness, Dr. Libicki, that the  
12 emissions from the Tacoma LNG Facility are low in its final decision in the case.  
13 The decision of the PCHB states as follows: “As analyzed in ¶¶ 65-105, [the  
14 Tacoma LNG Facility] is not a major source.”<sup>86</sup> The decision of the PCHB further  
15 states that, “[i]n sum, the [PCHB] concludes that Appellants did not meet their  
16 burden of proving in Issue 4d that [the Puget Sound Clean Air Agency]  
17 erroneously concluded that [the Tacoma LNG Facility] is not a major source of  
18 one or more pollutants.”<sup>87</sup> The assertion on behalf of the Tribe that the Tacoma

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<sup>82</sup> See Roberts, Exh. RJR-15, at 34 and 77-83 (PCHB Order at ¶¶ 54, 148-160).

<sup>83</sup> See Roberts, Exh. RJR-15, at 58 (PCHB Order at ¶ 105).

<sup>84</sup> See Roberts, Exh. RJR-15, at 77-83 (PCHB Order at ¶¶ 148-160).

<sup>85</sup> See Roberts, Exh. RJR-15, at 41, n. 18.

<sup>86</sup> See Roberts, Exh. RJR-15, at 32.

<sup>87</sup> See Roberts, Exh. RJR-15, at 58.

1 LNG Facility creates negative externalities that inequitably affect surrounding  
2 communities due to “significant adverse air pollution” is false.

3 **Q. Do you agree with testimony offered on behalf of the Tribe<sup>88</sup> that claims the**  
4 **Tacoma LNG Facility is actively causing human health impacts that**  
5 **inequitably impact neighboring communities?**

6 A. No. As explained below, both the Puget Sound Clean Air Agency (“PSCAA”) and  
7 the PCHB have determined that the Tacoma LNG Facility is a minor source and  
8 that its emissions are consistent with statutory requirements designed to avoid  
9 harm to human health and the environment. Any assertion of an inequitable  
10 impact is specious because the impacts themselves are negligible.

11 **Q. How do you respond to the Tribe’s testimony<sup>89</sup> ignoring the significant**  
12 **benefits to the surrounding community that were provided by construction of**  
13 **the Tacoma LNG Facility?**

14 A. The Tribe’s testimony is perplexing at best. Construction of the Tacoma LNG  
15 Project improved environmental conditions onsite and in and around the Blair and  
16 Hylebos waterways, all to the benefit of the surrounding community, including  
17 the Tribe. PSE built the Tacoma LNG Facility on a brownfield site that contained  
18 multiple abandoned buildings, chipping lead paint, asbestos, and uncontrolled  
19 stormwater releases. PSE remediated and demolished over 350,000 square feet of

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<sup>88</sup> See Sahu, Exh. RXS-1T, at 28:1-31:10.

<sup>89</sup> See Sahu, Exh. RXS-1T, at 26:7-28:20.

1 buildings (in the process recycling approximately 83 percent of the materials by  
2 weight), cleaned up the site, planted vegetation along portions of the 50-foot  
3 marine buffer, and installed a stormwater system that provides for treatment of  
4 diffuse water sources prior to discharge into the Hylebos waterway. The  
5 Shorelines Hearings Board noted these material improvements at the site of the  
6 Tacoma LNG Facility in a decision denying an appeal by the Tribe of the  
7 Shoreline Substantial Development Permit issued by the City of Tacoma.<sup>90</sup>

8 Off-site mitigation associated with the Tacoma LNG Facility also aids in  
9 improved ecological function in and around the Blair and Hylebos waterways. To  
10 mitigate for impacts associated with the construction of the new fuel loading  
11 facilities on the Blair Waterway, PSE removed creosote-treated piles from the  
12 Blair Waterway and Sperry Ocean Terminal, removed creosote-treated overwater  
13 decking from the Hylebos Waterway and Sperry Ocean Terminal, all to an off-site  
14 mitigation site. As found by the Shorelines Hearings Board in Decision 9283,

15 [t]he [Shorelines Hearing] Board finds that the evidence presented  
16 establishes that the removal of creosote-treated materials will benefit  
17 surface water quality and salmonid habitat by removing a source of  
18 contamination.<sup>91</sup>

19 The Tribe states that the air emissions reductions provided by the Tacoma LNG  
20 Project will occur over a “large region,” as if that were a negative impact.<sup>92</sup> The  
21 Tribe’s statement, however, does not negate the fact that residents in communities

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<sup>90</sup> See Roberts, Exh. RJR-14, at 17:8-18:6.

<sup>91</sup> See Roberts, Exh. RJR-14, at 31:11-13.

<sup>92</sup> See Sahu, Exh. RXS-1T, 27:12-20.

1 surrounding the Tacoma LNG Facility will share in the benefits of the emission  
2 reductions because those communities are in the middle of that large region.

3 **Q. The Tribe’s testimony states that PSE has “been unwilling” to prepare a**  
4 **Health Impact Assessment (“HIA”) to ascertain the health impacts of the**  
5 **Tacoma LNG Facility on surrounding communities.<sup>93</sup> Is PSE required to**  
6 **prepare a HIA for the Tacoma LNG Facility?**

7 A. PSE is not required to prepare an HIA for the Tacoma LNG Facility nor was there  
8 an agency request to prepare an HIA during any of the Tacoma LNG Facility  
9 permitting or environmental review. In fact, in the Final GRC Order, the  
10 Commission declined “to require a Health Impact Assessment of the facility, as  
11 advocated by the Tribe.” The Commission stated further it “primarily acts as an  
12 economic regulator” and does not have regulations or experience in administering  
13 HIAs.<sup>94</sup> The Commission should disregard the Tribe’s attempt to insert the HIA  
14 in this proceeding just as it did in its prudency determination of the Tacoma LNG  
15 Facility in the Final GRC Order.

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<sup>93</sup> See Sahu, Exh. RXS-1T, at 31:15 – 32:17.

<sup>94</sup> Final GRC Order at ¶ 439.



1 **Q. How do you respond to the Tribe's claims<sup>95</sup> that the Tacoma LNG Facility**  
2 **presents an undefined, unmitigated, and inequitable risk of catastrophic**  
3 **accident?**

4 A. I would first point out that the Commission considered and explicitly rejected the  
5 Tribe's arguments concerning the risk of catastrophic accident at the Tacoma  
6 LNG Facility in the Final GRC Order.<sup>96</sup>

7 The allegations contained in the testimony on behalf of the Tribe suggesting that  
8 the Tacoma LNG Facility presents significant safety risks are unsupported and  
9 false. The question of the safety of the Tacoma LNG Facility was put to rest by  
10 the Final Environmental Impact Statement and PCHB Decision 11447 in Case  
11 No. 19-087c. Please see the Fifth Exhibit to the Rebuttal Testimony of Ronald J.  
12 Roberts, Exh. RJR-16, for a copy of the PCHB Decision 11447 in Case  
13 No. 19-087c.

14 Safety is of paramount importance to PSE, and the construction and operation of  
15 the Tacoma LNG Facility is no different. During the facility design processes,  
16 PSE engaged third party consultants and engineers to evaluate seismic and  
17 explosion risks. GexCon US, Inc., prepared a report entitled *Tacoma LNG –*  
18 *Dispersion Modeling* (July 16, 2015), which it then supplemented in the report  
19 entitled *Flammable Gas Dispersion Analysis for the Tacoma LNG Site at the*  
20 *TOTE Dock* (Sept. 17, 2015). PSE's project design engineers, Chicago Bridge &

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<sup>95</sup> See Sahu, Exh. RXS-1T, at 11:13-18; 20:9-11; 26:1-4, 19-22; 27:7-8; 32-35.

<sup>96</sup> Final GRC Order at ¶¶ 440-444.

1 Iron, requested these studies on behalf of PSE to model and evaluate dispersion  
2 simulations to confirm that in the unlikely event a flammable vapor cloud ever  
3 arose, it would be contained to the area under the facility's control and would not  
4 impair the any emergency ingress/egress routes.

5 Safety was also a central consideration in the Final Environmental Impact  
6 Statement for the Tacoma LNG Facility. As part of the Final Environmental  
7 Impact Statement, the City of Tacoma conducted its own solicitation and engaged  
8 a third-party engineering firm, Braemar Technical Services' Engineering & Naval  
9 Architecture Group ("Braemar"), to independently peer-review and evaluate the  
10 facility's design, layout and function for safety, code compliance, and industry  
11 best practices. Braemar specializes in LNG services, and it evaluated the general  
12 arrangement and technical function of plant components for compliance to codes,  
13 standards, and industry best practices. Braemar also evaluated the design and  
14 layout for safety, reliability, and sustainability within the Tacoma LNG Facility  
15 for minimum required equipment spacing, and property boundary setbacks. This  
16 evaluation resulted in the report entitled *EIS Technical Review of Tacoma LNG*  
17 *Facility* report (June 25, 2015) and was provided to the City of Tacoma for use in  
18 the Environmental Impact Statement. This report found the Tacoma LNG Facility  
19 to be of sound engineering and recommended that continued compliance with  
20 safety standards be demonstrated as design engineering continued.

21 Later, the Tacoma City Fire Department engaged Braemar to evaluate the  
22 proposed design and siting for compliance of the Tacoma LNG Facility to

1 validate that its fire protection and safety systems conformed to applicable LNG  
2 codes and standards. This evaluation resulted in a report entitled *Tacoma LNG*  
3 *Fire and Safety Review* (July 2, 2018), which evaluated the proposed design and  
4 siting for compliance of the Tacoma LNG Facility during the execution phase of  
5 the project to validate that fire protection and safety systems conformed to  
6 applicable LNG codes and standards. Please see the Sixth Exhibit to the Rebuttal  
7 Testimony of Ronald J. Roberts, Exh. RJR-17, for a copy of the *Tacoma LNG*  
8 *Fire and Safety Review* (July 2, 2018) prepared for the Tacoma City Fire  
9 Department by Braemar.

10 The fire and safety report prepared by Braemar summarized its review of the  
11 Tacoma LNG Facility as follows

12 The technical review of Tacoma LNG's fire and safety systems did not  
13 reveal any fatal flaws or visible design deficiencies. Tacoma LNG was  
14 designed to the applicable codes and standards with significant attention to  
15 detail, and a perceived objective of becoming a best in class LNG facility.  
16 Some Tacoma LNG design features go beyond code compliance to  
17 provide additional layers of protection from an unsafe event. Examples are  
18 full containment LNG tank type, mounded refrigerant and heavies'  
19 removal vessels, and discretionary vents to the flare.

20 The full containment type LNG tank has a robust design suited for the  
21 local conditions. The LNG tank features include integral secondary  
22 containment, foundations on piles with seismic isolators, lateral spreading  
23 barriers to control soil liquefaction, concrete coated roof, and no  
24 penetrations below liquid level in the primary container. The LNG tank  
25 design is per [National Fire Protection Association] 59A 2006 edition that  
26 requires a safe shutdown earthquake (SSE) design without a loss of  
27 containment. No credible failure scenarios were identified for the full  
28 containment LNG 5 storage tank.

29 Over the past 50 years [Chicago Bridge & Iron] has constructed a large  
30 portion of the US LNG utility and base load facilities bringing significant  
31 design and construction experience to this project. [Chicago Bridge &

1 Iron's] portfolio of completed LNG projects includes some of the world's  
2 largest import and export LNG facilities.<sup>97</sup>

3 **Q. Did the PCHB consider evidence regarding the safety of the Tacoma LNG**  
4 **Facility in its proceeding?**

5 A. Yes. In the PCHB proceeding, PSE presented witnesses regarding the safety of  
6 the facility, including lead engineer Matthew Stobart and Dr. Fillipo Gavelli, an  
7 expert on LNG facilities and safety regulations. Dr. Gavelli performed his own  
8 calculations using information specific to the Tacoma LNG Facility to inform his  
9 testimony and support his determination that the Tacoma LNG Facility did not  
10 constitute a credible scenario for catastrophic failure under the Pipeline and  
11 Hazardous Materials Safety Administration regulations. The PCHB concluded  
12 that the testimony offered by Mr. Stobart and Dr. Gavelli was credible and  
13 persuasive. In doing so, the PCHB gave greater weight to the testimony of Mr.  
14 Stobart and Dr. Gavelli than to Dr. Sahu, witness for the Puyallup Tribe:

15 The [PCHB] finds and concludes that the testimony from Stobart and Dr.  
16 Gavelli was credible and persuasive. The [PCHB] gives greater weight to  
17 Stobart and Dr. Gavelli's testimony based on their expertise with LNG  
18 facilities, experience with state and federal regulations for these facilities,  
19 and direct knowledge and evaluations of the [Tacoma LNG Facility]  
20 design changes.<sup>98</sup>

21 Accordingly, the PCHB rejected the Puyallup Tribe's challenge to the adequacy  
22 of the safety review for the Tacoma LNG Facility. It should be noted that, in the  
23 proceeding before the PCHB, Dr. Gavelli testified—and the PCHB cited in

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<sup>97</sup> See Roberts, Exh. RJR-17, at 64.

<sup>98</sup> See Roberts, Exh. RJR-16, at 75:18-76:1.

1 support—that “[t]he siting requirements of 49 C.F.R. 193, to which [the Tacoma  
2 LNG Facility] is subject, cover the methods and means of managing risks from  
3 spills, or design spills, at the facility.”<sup>99</sup> Nonetheless, the Tribe’s testimony here  
4 invites the Commission to discount the relevance of these federal safety  
5 regulations,<sup>100</sup> which regulations are expressly adopted by reference by the  
6 Commission in WAC 480-93-999. Rather than speak to the applicable safety  
7 regulations issued by the PHMSA and adopted by this Commission, the testimony  
8 on behalf of the Tribe speculatively concludes, without analysis or fact, that the  
9 Tacoma LNG Facility must necessarily present a safety risk.

10 Finally, the testimony offered on behalf of the Tribe erroneously suggests that the  
11 fact the Pipeline Safety section of this Commission asked for additional  
12 information about facility safety—as the section is required to do—must  
13 necessarily infer that the Tacoma LNG Facility is unsafe.<sup>101</sup> This suggested  
14 inference does not correlate with the facts. It is the responsibility of the Pipeline  
15 Safety section to delve deeply into and probe a facility’s compliance with safety  
16 regulations. The only inference to be drawn from the request from the Pipeline  
17 Safety section of the Commission for additional information is that it did its job to  
18 ensure that the Tacoma LNG Facility is properly designed and engineered to meet  
19 the safety regulations governing LNG facilities.

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<sup>99</sup> See Roberts, Exh. RJR-16, at 69:7-8.

<sup>100</sup> See Sahu, RXS-1T, at 34:6-35:22.

<sup>101</sup> See Sahu, RXS-1T, at 33:4-9.

1 **Q. The Tribe claims<sup>102</sup> that PSE has announced plans to sell LNG transported**  
2 **by rail. Is that allegation true?**

3 A. No. PSE has no plans to transport LNG by rail. The Tribe made this same  
4 allegation in the 2022 GRC and PSE disputed it there. In the Final GRC Order,  
5 the Commission placed “relatively little weight on claims that PSE may transport  
6 LNG by rail” because there was limited evidence to support the claim.<sup>103</sup> The  
7 Tribe has offered no new evidence to support its specious claim here because  
8 there is none; PSE has no plans to transport LNG by rail.

9 **VIII. THE COMMISSION SHOULD REJECT THE TRIBE’S**  
10 **CLAIMS THAT PSE’S LEGAL COSTS SHOULD BE**  
11 **DISALLOWED**

12 **Q. Did PSE’s choice of the Port of Tacoma location or its litigation staffing**  
13 **result in excess costs for ratepayers as claimed in the Tribe’s testimony?<sup>104</sup>**

14 A. No. The testimony offered on behalf of the Tribe is incorrect in suggesting that  
15 PSE would have incurred less legal fees if it had located the LNG Facility in a  
16 more remote location or constructed a different facility to meet its needs and that  
17 PSE’s litigation staffing resulted in excess costs to defend the decision to  
18 construct the Tacoma LNG Facility. I would note that the Tribe made those same  
19 claims about PSE’s legal fees in its testimony in the PSE 2022 GRC. The  
20 Commission rejected similar arguments in the Final GRC Order where it held that

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<sup>102</sup> See Sahu, Exh. RXS-1T, at 36:8-38:19.

<sup>103</sup> Final GRC Order at ¶¶ 444-445.

<sup>104</sup> See Sahu, Exh. RXS-1T, at 51:5-21.

1 it is “not credible for the Tribe to challenge PSE’s recovery of litigation costs in  
2 this proceeding when PSE has so far prevailed on the vast majority of issues  
3 raised by the Tribe in other forums.”<sup>105</sup>

4 With regard to the Tribe’s claims that PSE used “a large contingent of attorneys”  
5 and “did not conserve resources in litigating” the air permit, it is important that  
6 the Commission understand the scope of that litigation. On December 19, 2019,  
7 Advocates for a Cleaner Tacoma, and other environmental litigants (collectively,  
8 the “Other Appellants”) and the Tribe each separately appealed the order of the  
9 PSCAA issuing the air permit to PSE to construct the Tacoma LNG Facility.  
10 Those appeals challenged the Air Permit and the Supplemental Environmental  
11 Impact Statement issued under the State Environmental Protection Act.

12 In the consolidated appeals, the Tribe and Other Appellants raised over forty  
13 issues. In addition, the administrative record reflects the protracted discovery and  
14 voluminous motions filed by the Tribe and Other Appellants. There were twenty-  
15 five prehearing motions, and PSE was compelled to produce approximately  
16 70,000 documents. Approximately, 140 hours of depositions were taken over a  
17 series of weeks. The parties filed approximately 1,500 exhibits to the record, of  
18 which around 50 exhibits were ultimately admitted by the PCHB. The defending  
19 parties, the PSCAA and PSE, successfully eliminated eighteen of the issues  
20 before the hearing through various dispositive motions. Most of the remaining  
21 issues involved highly technical analysis and complex scientific principles

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<sup>105</sup> Final GRC Order at ¶ 420.

1 spanning a broad range of topics that required testimony of different expert  
2 witnesses in a variety of specialty areas.

3 On November 19, 2021, following an evidentiary hearing that lasted ten days, the  
4 PCHB issued two orders, PCHB Decision 11447<sup>106</sup> and PCHB Decision 11448,<sup>107</sup>  
5 addressing the remaining twenty-three issues. These two orders reflected the  
6 PCHB's review of the 350 admitted exhibits and testimony from nineteen  
7 witnesses regarding State Environmental Protection Act issues (five on behalf of  
8 the Tribe and Other Appellants, ten on behalf of PSE, and four on behalf of the  
9 PSCAA) and thirteen witnesses regarding air permit issues (one on behalf of the  
10 Tribe and the Other Appellants; nine on behalf of PSE; and three on behalf of the  
11 PSCAA). By any measure, the Tribe and the Other Appellants aggressively  
12 litigated issues related to both the State Environmental Policy Act and the  
13 Washington Clean Air Act in a far-reaching and wide-ranging appeal that  
14 required multiple attorneys to defend.

15 **Q. Was PSE's response to the appeals of the Tribe appropriate?**

16 A. Yes. PSE's response to the appeals of the Tribe and the Other Appellants was  
17 directly responsive to the number and scope of issues raised by those parties and  
18 the aggressive tactics used in discovery. PSE's legal spend was largely driven by  
19 the Tribe, through Dr. Sahu, raising numerous issues and misleading claims (some  
20 of which, as discussed previously, are raised again in this proceeding) across a

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<sup>106</sup> See Roberts, Exh. RJR-16.

<sup>107</sup> See Roberts, Exh. RJR-15.



1 broad range of niche specialties (all of which he claimed expert knowledge) that  
2 were unsupported and repeatedly rejected by the PCHB. This long list of spurious  
3 legal issues substantially increased PSE's legal costs.

4 Dr. Sahu's claimed expertise in multiple areas required lawyers and witnesses  
5 covering different specialties to be present during portions of his deposition which  
6 addressed and often conflated multiple issues. For example, his prefiled testimony  
7 in the PCHB appeal presented eleven separate "opinions" covering allegations:  
8 (1) of emissions impacts on the Tribe; (2) of lack of rigor in the PSCAA's  
9 analysis; (3) that the Tacoma LNG Facility was a major source of air emissions;  
10 (4) that air modeling for SO<sub>2</sub> and particulate matter (PM<sub>2.5</sub>) were flawed; (5) that  
11 the PSCAA's conclusion finding that hazardous air pollutants and toxic air  
12 pollutants were within regulatory threshold was unreliable; (6) that the underlying  
13 process design was not sufficiently mature for permitting; (7) that the PSCAA's  
14 best available control technology for toxins (tBACT) analysis was insufficient; (8)  
15 that the PSCAA's best available control technology analysis was insufficient (9)  
16 that PSE withheld information from the PSCAA; (10) that Condition 41 of the  
17 permit does not appropriately constrain the Tacoma LNG Facility to the use of  
18 Canadian gas; and (11) that nitrous oxide ("N<sub>2</sub>O") emissions were materially  
19 underestimated. The breadth of this unsupported laundry list of opinions certainly  
20 contributed to PSE's defense needs and resulting legal fees.

1 **Q. How did the PCHB respond to the opinions and arguments offered by Dr.**  
2 **Sahu?**

3 A. Time and time again, the PCHB rejected Dr. Sahu's contentions, including:

4 (1) at pages 24-28 and page 31 of Decision 11448, Exh. RJR-15, the  
5 PCHB rejects Dr. Sahu's argument that meteorological data utilized in  
6 modeling was not representative of site conditions;

7 (2) at pages 44-45 of Decision 11448, Exh. RJR-15, the PCHB rejects  
8 Dr. Sahu's contention that the Tacoma LNG Facility is a fuel conversion  
9 facility;

10 (3) at page 45 of Decision 11448, Exh. RJR-15, the PCHB rejects  
11 volatile organic compound emissions are underestimated stating, that "Dr.  
12 Sahu presented no calculations or analysis to support his opinion...";

13 (4) at page 46 of Decision 11448, Exh. RJR-15, the PCHB rejects Dr.  
14 Sahu's conclusion that bypass emissions should be included in emissions  
15 calculation and finding "clear and convincing evidence that Dr. Sahu's  
16 position is contrary to the air agencies' practice....";

17 (5) at page 47 of Decision 11448, Exh. RJR-15, the PCHB finds that  
18 "Dr. Sahu's opinion runs counter to the definition of potential to emit in  
19 WAC 173-400-030(76)....";

20 (6) at page 49 of Decision 11448, Exh. RJR-15, the PCHB rejects Dr.  
21 Sahu's allegations that the flare would not achieve a 99% destruction of  
22 volatile organic compounds, finding that "Dr. Sahu did not perform any  
23 analysis to evaluate the flare's anticipated performance";

24 (7) at page 65 of Decision 11448, Exh. RJR-15, the PCHB finds that  
25 PSE's testimony "refuted Dr. Sahu's testimony" about exit gas  
26 temperature;

27 (8) at page 68 of Decision 11448, Exh. RJR-15, the PCHB critiques  
28 Dr. Sahu's "algebraic calculations" and "scant evidence";

29 (9) at page 81 of Decision 11448, Exh. RJR-15, the PCHB cites that  
30 Dr. Sahu admitted that he did not have support for his critique of toxic air  
31 pollutant analysis; and

32 (10) at pages 92-93 of Decision 11448, Exh. RJR-15, the PCHB  
33 rejected Dr. Sahu's analysis of Condition 41 of the permit.

1 Even where the decisions of the PCHB do not expressly identify testimony  
2 offered on behalf of the Tribe by Dr. Sahu, the PCHB decisions reject almost  
3 every single contention offered by Dr. Sahu on behalf of the Tribe regarding  
4 emissions analyses, best available control technology analyses, air modeling, and  
5 sufficiency of the Air Permit and the permitting process. In sum, the strategy of  
6 the Tribe and Dr. Sahu to raise numerous unsupported issues before the PCHB  
7 without regard to strength of argument or legitimacy, significantly and  
8 unequivocally contributed to the magnitude of legal fees of which the testimony  
9 on behalf of the Tribe now seeks to complain.

10 The arguments the Tribe made in these other forums were fundamentally repeats  
11 of the same arguments hoping for a different answer from a different decision  
12 maker. While it necessitated repeated defenses by PSE, the PSE arguments were  
13 likewise fundamentally the same and that limited the need for internal counsel  
14 time. Regrettably, it did not alter the fact that external counsel was still required  
15 to fashion its arguments in each of the different forums and address exhaustive  
16 discovery attempts. The Commission should make the same finding here and  
17 allow PSE to recover its litigation costs for the Tacoma LNG Project.

## 18 IX. CONCLUSION

19 **Q. Does that conclude your prefiled direct testimony?**

20 **A.** Yes, it does.  
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