

www.pse.com



Puget Sound Energy, Inc.
P.O. Box 97034
Bellevue, WA 98009-9734

Filed via Web Portal and Overnight Courier

May 31, 2016

Mr. Steven V. King, Executive Director and Secretary
Washington Utilities and Transportation Commission
1300 South Evergreen Park Drive S.W.
P.O. Box 47250
Olympia, WA 98504-7250

**Re: Annual Renewable Portfolio Standard Report - 2016
RCW-Required Report, RCW 19.285.070 and
WAC-Required Report, WAC 480-109-210**

Dear Mr. King:

Enclosed for filing, please find an original and three copies of Puget Sound Energy's ("PSE") report detailing the annual reporting requirements for the Renewable Portfolio Standard Report (the "Report") in RCW 19.285.070 and WAC 480-109-210. PSE is asking the Commission to approve its 2016 Renewable Energy Target of 1,848,542 MWh.

PSE requests confidential treatment for Attachment 4 to the Report under RCW 80.04.095 and in accordance with WAC 480-07-160. The information labeled as confidential includes commercially sensitive data and confidential information related to renewable energy credit sales revenues, which could expose PSE to competitive injury if disclosure is unrestricted. Therefore, PSE requests confidential treatment on the basis that the information labeled confidential contains "valuable commercial information, including trade secrets or confidential marketing, cost, or financial information, or customer-specific usage and network configuration and design information," as provided in in RCW 80.04.095 in accordance with WAC 480-07-160(2)(c).

A copy of this report will also be submitted to the Department of Commerce.

Mr. Steven V. King
May 31, 2016
Page 2

If you have any questions about the information contained in this filing, please contact Katherine Barnard, Director, Revenue Requirement & Compliance, at (425) 462-3716.

Sincerely,


For Ken Johnson
Director, State Regulatory Affairs

Enclosure

Puget Sound Energy
2016 Annual Renewable Portfolio Standard Report
pursuant to RCW 19.285.070 and WAC 480-109-210

June 1, 2016

Required Contents: Checklist and Table of Contents

RCW 19.285.070	WAC 480-109-210(2)	Section/Page
The utility's annual load for the prior two years	The utility's annual load for the prior two years	Section 1 Annual Load For Previous Two Years Page 1
The amount of megawatt-hours needed to meet the annual renewable energy target	The total number of megawatt-hours from eligible renewable resources and/or renewable resource credits the utility needed to meet its annual renewable energy target by January 1 of the target year	Section 2 Renewable Energy Target Page 1
The amount of megawatt-hours of each type of eligible renewable resource acquired, the type and amount of renewable energy credits acquired	The amount (in megawatt-hours) of each type of eligible renewable resource used and the amount of renewable energy credits acquired	Section 3 Renewable Energy Acquired To Have Met Renewable Energy Target Page 1
The percent of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of renewable energy credits	Total incremental cost as a dollar amount and in dollars per megawatt-hour of renewable energy generated by all eligible renewable resources and multiply the dollars per megawatt-hour cost by the number of megawatt-hours needed for target year compliance.	Section 4 Incremental Cost Calculation and Revenue Requirement Ratio Page 2
	State whether the utility is relying upon one of the alternative compliance mechanisms provided in WAC 480-109-220 instead of fully meeting its renewable resource target.	Section 5 Alternative Compliance Page 3

RCW 19.285.070	WAC 480-109-210(2)	Section/Page
	Describe the resources that the utility intends to use to meet the renewable resource requirements for the target year.	Section 6 2016 Compliance Plan Page 3
	A list of each eligible renewable resource that serves Washington customers, for which a utility owns the certificates, with an installed capacity greater than twenty-five kilowatts.	Section 7 Eligible Resources Page 4
	The number of certificates sold, their WREGIS certificate numbers, their source, and the revenues obtained from the sales.	Section 8 Sales Page 4

Attachment 1: Memo dated December 18, 2015 Regarding Eligible Renewable Resources

Attachment 2: Appendix N from PSE's Integrated Resource Plan filed with the Commission on November 25, 2015

Attachment 3: Reporting Tool

Attachment 4: REC Sales

Section 1. Annual Load for the Prior Two Years

	<u>2014</u>	<u>2015</u>
Delivered Load to Retail Customers (MWh)	20,568,949	20,509,764

The source of this data is the Puget Sound Energy, Inc. (“PSE”) 2015 FERC Form 1, p. 301, line 10, columns d and e.

Section 2. 2016 Renewable Energy Target

This section provides the number of megawatt-hours from eligible renewable resources and/or renewable resource credits the utility needed to meet its annual renewable energy target by January 1st of the target year.

After Commission approval, PSE’s Renewable Energy Target for 2016 will be 1,848,542 MWh.

Calculation:

	<u>2014</u>	<u>2015</u>
Delivered Load to Retail Customers (MWh)	20,568,949	20,509,764
Average Load	20,539,357	
9% of Average Load	1,848,542	

Section 3 Renewable Energy Acquired To Meet 2016 Renewable Energy Target

This section provides the amount (in megawatt-hours) of each type of eligible renewable resource used, and the amount of renewable energy credits acquired to meet the 2016 target.

As demonstrated in Attachment 1, PSE has sufficient eligible renewable resources to meet its 2016 target. PSE plans to meet its 2016 target with a combination of incremental hydro along with other renewable energy certificates from qualifying resources as demonstrated in the following table:

Incremental Hydro Resources	121,712
Eligible Wind Resources	2,049,774

Section 4. Incremental Cost Calculation and Revenue Requirement Ratio

This section calculates the total incremental cost as a dollar amount and in dollars per megawatt-hour of renewable energy generated by all eligible renewable resources and multiplies the dollars per megawatt-hour cost by the number of megawatt-hours needed for target year compliance and provides the annual revenue requirement ratio.

Consistent with the requirements outlined in WAC 480-109-210 (2)(a)(i) (A) through (G), the calculation of incremental costs for each eligible resource is performed at the time of acquisition. PSE has not acquired any new resources since 2013 and therefore continues to utilize incremental cost calculations as documented in Attachment 2. The incremental costs along with the annual megawatt hour (MWH) for each eligible resource are as follows:

(\$-Millions/Year)	Renewable Resources	Equivalent Non-Renewables			One-Year Incremental Costs	Annual MWh
		Peakers	Markets	Totals		
Hopkins-Ridge	\$18.77	\$1.71	\$19.26	\$20.97	(\$2.20)	466,908
Wild-Horse	\$34.94	\$3.21	\$26.53	\$29.74	\$5.20	642,984
Klondike-III	\$10.27	\$0.93	\$8.98	\$9.91	\$0.36	157,680
Hopkins-Infill	\$1.28	\$0.17	\$1.19	\$1.36	(\$0.08)	21,024
Wild-Horse-Expansion	\$10.03	\$0.81	\$5.09	\$5.90	\$4.14	91,980
Lower-Snake-River-I	\$70.61	\$1.69	\$48.51	\$50.20	\$20.42	897,900
Snoqualmie-Falls-Upgrades	\$3.85	\$0.74	\$2.44	\$3.18	\$0.67	34,164
Lower-Baker-4	\$8.60	\$1.37	\$7.92	\$9.29	(\$0.69)	109,500
Total					\$27.81	2,422,140

As demonstrated in the table above, the incremental cost of eligible renewable resources is \$27.81M resulting in an average cost/MWh of \$11.48. For the 2016 target year compliance, the incremental cost is \$21.2M ($\$11.48 * 1,848,542$ MWh).

The total annual retail revenue requirement for 2016 is \$2040.615 million. The 2016 revenue requirement is based on the revenue requirement determined in PSE's last general rate case (UE-111048) and adjusted for the 2013 and 2014 PCORC (Dockets UE-130617, and UE-141141 respectively) and UE-130137 (Expedited Rate Filing).

The resulting ratio of this investment relative to the utility's total annual retail revenue requirement is 1% ($27.81M / 2040.615M = 1\%$).

Section 5. Alternative Compliance

This section states whether the utility is relying upon one of the alternative compliance mechanisms provided in WAC 480-109-220 instead of fully meeting its renewable resource target. A utility using an alternative compliance mechanism must use the incremental cost methodology described in this section and include sufficient data, documentation and other information in its report to demonstrate that it qualifies to use that alternative mechanism.

PSE is not utilizing an alternative compliance mechanism provided for in RCW 19.285.040(2)(d) or RCW 19.285.050(1) and WAC 480.109.220 instead of meeting its 2016 Renewable Energy Target.

Section 6. 2016 Compliance Plan

This section describes the resources that PSE intends to use to meet the renewable resource requirements for the target year.

PSE is positioned to meet its 2016 Renewable Energy Target with a combination of qualified hydroelectric upgrades and other renewable energy certificates from qualifying resources. The following table provides a summary of PSE's expected 2016 compliance. Further details about this information can be found in Attachment 3.

2016 Compliance Plan	
	MWh or Equiv
Lower Baker Project Incremental Hydro	101,198
Snoqualmie Falls Project Incremental Hydro	20,514
Lower Snake River - Phalen Gulch (Vintage 2015)	301,443
Extra Apprenticeship Credits	60,289
Wild Horse Phase II (Vintage 2015)	88,693
Extra Apprenticeship Credits	17,739
Lower Snake River-Dodge Junction (Vintage 2015)	421,560
Extra Apprenticeship Credits	84,312
Wild Horse (Vintage 2015)	512,757
Hopkins Ridge (Vintage 2015)	312,633
Hopkins Ridge Phase II (Vintage 2015)	14,879
Available to Meet Target	1,936,017
2016 RPS Target	1,848,542
(Deficit) / Surplus	87,475

Data for 2016 provided above is an estimate and is subject to change.

Section 7. Eligible Resources

This section provides a list of each eligible renewable resource that serves Washington customers, for which PSE owns the certificates, with an installed capacity greater than twenty-five kilowatts and each resource's WREGIS registration status and use of certificates, whether it be for annual target compliance, a voluntary renewable energy program as provided for in RCW 19.29A.090, or owned by the customer; and eligible resources being included in the report for the first time and documentation of their eligibility.

PSE has acquired sufficient eligible renewable resources in its portfolio to supply at least nine percent of its estimated load for the year 2016, in advance of January 1, 2016. Eligible renewable resources that PSE may elect to use in whole or in part to meet its 2016 target include (but not limited to):

- Hopkins Ridge Wind Project;
- Wild Horse Wind Project;
- Wild Horse Expansion Wind Project (including extra apprenticeship credits);
- Lower Snake River Wind Project (including extra apprenticeship credits);
- Klondike III Wind Project (e.g. the output PSE purchases from Iberdrola);
- Snoqualmie Falls Hydroelectric Efficiency Upgrades;
- Lower Baker River Hydroelectric Efficiency Upgrades;
- Allocation of Hydroelectric Efficiency Upgrades that may be (now or in the future) a part of PSE's Mid-C Contracts;
- Customer-Generator owned facilities taking service from PSE under PSE electric rate Schedule 91; and
- Any other eligible renewable resources that may become available in 2016 or 2017.

Please also see Attachment 1.

Section 8. Sales

This section reports on the number of certificates sold, their WREGIS certificate numbers, their source, and the revenues obtained from the sales.

The following table summarizes PSE's REC sales by source and vintage year for 2012 through 2015 vintages. To date, the company has not transferred title to any Vintage 2016 RECs. Any Vintage 2016 REC sales will be reported in the 2017 report.

REC Sales by Year by Resource						
Source	WREGIS #	Vintage				Total REC Revenues
		2012	2013	2014	2015	
Wild Horse	W183	238,143	246,192	541,930	-	1,026,265
Wild Horse Phase II	W1364	54,206	47,386	98,496	10,000	210,088
Hopkins Ridge	W184	171,359	166,117	423,662	35,533	796,671
Hopkins Ridge Phase II	W1382		7,309	18,641	1,735	27,685
Klondike III	W237	58,264	68,465	133,571	17,945	278,245
Lower Snake River-Dodge Junction	W2669	-	201,751	230,247	-	431,998
Lower Snake River-Phalen Gulch	W2670	-	142,210	169,808	12,732	324,750
		521,972	879,430	1,616,355	77,945	3,095,702

Reflects REC Transfers through 4/30/16

Confidential Attachment 4 provides transaction details including the revenue proceeds associated with those sales.

Attachment 1

MEMORANDUM

TO: Kathie Barnard, Roger Garratt, Michael Mullally

FROM: Anna Mikelsen Mills, Chris Schaefer

SUBJECT: Requirements of Chapter 480-109-200 WAC

DATE: December 18, 2015

Background

Chapter 480-109-200 WAC Renewable portfolio standard states:

"(1) **Renewable resource target.** Each utility must meet the following annual targets.

(b) *By January 1st of each year beginning in 2016 and continuing through 2019, each utility must use sufficient eligible renewable resources, acquire equivalent renewable energy credits, or a combination of both, to supply at least nine percent of its two-year average load for the remainder of each target year.*

...

(2) **Credit eligibility.** Renewable energy credits produced during the target year, the preceding year or the subsequent year may be used to comply with this annual renewable resource requirement provided that they were acquired by January 1st of the target year.

(3) **WREGIS registration.** All eligible hydropower generation and all renewable energy credits used for utility compliance with the renewable resource target must be registered in WREGIS, regardless of facility ownership. Any megawatt-hour of eligible hydropower or renewable energy credit that a utility uses for compliance must have a corresponding certificate retired in the utility's WREGIS account.

(5) **Target calculation.** In meeting the annual targets of this section, a utility must calculate its annual target based on the average of the utility's load for the previous two years.

(6) **Integration services.** A renewable resource within the Pacific Northwest may receive integration, shaping, storage or other services from sources outside of the

Pacific Northwest and remain eligible to count towards a utility's renewable resource target. (Emphasis added.)

Summary

Pursuant to the requirements of Chapter 480-109-200 WAC, we have prepared this Memorandum to document that Puget Sound Energy, Inc. ("PSE") has acquired sufficient eligible renewable resources in its portfolio by January 1, 2016 to supply at least nine percent of its estimated load for the year 2016.

This is consistent with the information provided to the WUTC on November 25, 2015 in PSE's compliance filing in Docket No. UE-141170, PSE's 2015 Integrated Resource Plan ("IRP"). In the Executive Summary of the IRP, PSE stated that:

"... PSE has acquired enough eligible renewable resources and RECs to meet the requirements of the law through 2022."

Following provides a summary of the Company's eligible renewable resources, load and renewable energy target.

Eligible Renewable Resources

PSE has acquired sufficient eligible renewable resources in its portfolio to supply at least nine percent of its estimated load for the year 2016, in advance of January 1, 2016.

Eligible renewable resources that PSE may elect to use in whole or in part to meet its 2016 target include (but are not limited to):

- Hopkins Ridge Wind Project;
- Wild Horse Wind Project;
- Wild Horse Expansion Wind Project (including extra apprenticeship credits);
- Lower Snake River Wind Project (including extra apprenticeship credits);
- Klondike III Wind Project (e.g. the output PSE purchases from Iberdrola);

- Snoqualmie Falls Hydroelectric Efficiency Upgrades¹;
- Lower Baker River Hydroelectric Efficiency Upgrades²;
- Allocation of Hydroelectric Efficiency Upgrades that may be (now or in the future) a part of PSE's Mid-C Contracts;
- Customer-Generator owned facilities taking service from PSE under PSE electric rate Schedule 91; and
- Any other eligible renewable resources that may become available in 2016 or 2017.

Total 2014 generation from Hopkins Ridge, Wild Horse, Wild Horse Expansion and Lower Snake River was about 1,973,000 megawatt-hours (not inclusive of the extra apprenticeship credits); similar generation may be achieved for 2015 and 2016.

These eligible renewable resources may be impacted by events beyond PSE's reasonable control that could not have been reasonably anticipated or ameliorated that prevented PSE from meeting the renewable energy target. Such events may include weather-related damage, mechanical failure, strikes, lockouts, or actions of a governmental authority that adversely affect the generation, transmission, or distribution of an eligible renewable resource owned by or under contract to a qualifying utility.

PSE does not currently intend to utilize one of the alternative compliance mechanisms provided for in RCW 19.285.040(2)(d) or RCW 19.285.050(1) and WAC 480-109-220 instead of meeting its 2016 renewable resource target. However, there may be events beyond PSE's control during the remainder of the calendar year 2016 which could prompt PSE to utilize the alternative compliance mechanisms in RCW 19.285.040(2)(i) and WAC 480-109-220. Such determination will be made when PSE reports on its final 2016 compliance in the 2017 or 2018 report.

¹ PSE is anticipating its Snoqualmie Falls Hydroelectric Project will be WREGIS registered in 2016. However, the Company will have more than enough renewable energy credits to meet the 2016 target without the WREGIS registration.

² PSE is anticipating its Lower Baker River Hydroelectric Project will be WREGIS registered in 2016. However, the Company will have more than enough renewable energy credits to meet the 2016 target without the WREGIS registration.

Load

Load is defined in the rules as:

"Load" means the amount of kilowatt-hours of electricity delivered in the most recently completed year by a qualifying utility to its Washington retail customers. Load does not include off-system sales or electricity delivered to transmission-only customers.

PSE's actual 2014 delivered load is 20,575,878,000 kilowatt-hours (i.e. 20,575,878 megawatt-hours) and the 2015 forecast load is about 20,659,370,027 kilowatt-hours (i.e. 20,659,370 megawatt-hours).

Consistent with WAC 480-109-210(2), based on the average of PSE's load in 2014 and 2015 and as reflected above, the Company's estimated load for purposes of meeting its 2016 target will likely be in the neighborhood of 20,617,624 megawatt-hours.

2016 Renewable Resource Target

Chapter 480-109-200(1)(b) WAC states: *"By January 1st of each year beginning in 2016 and continuing through 2019, each utility must use sufficient eligible renewable resources, acquire equivalent renewable energy credits, or a combination of both, to supply at least nine percent of its two-year average load for the remainder of each target year."* (Emphasis added.)

Based on the load estimations above and the nine percent requirement in Chapter 480-109-200 WAC, the Company's estimated renewable energy target for 2016 may end up being approximately 1,855,586 megawatt-hours.

PSE expects to generate more eligible renewable energy than its 2016 requirement (not including any renewable energy credits generated in 2015 that the Company may elect to use for its 2016 requirement).

PSE will report on the specific renewable energy credits produced and to be retired for final compliance with the 2016 target in either its annual 2017 or 2018 report, and reserves the right to submit renewable energy credits from the resources reported here or to substitute with renewable energy credits produced from 2015 to 2017 by other eligible renewable resources or with 2016 generation from eligible renewable resources that have not been converted to renewable energy credits.

Conclusion

PSE's eligible renewable resources in 2016 may be expected to generate approximately 2,529,739 megawatt-hours and/or renewable energy credits and/or extra apprenticeship credits (not inclusive of: i) any renewable energy credits that may be committed/sold to third parties and/or customers or ii) any renewable energy credits generated in 2015 that the Company may elect to use for its 2016 renewable resource target).

Events beyond PSE's reasonable control may yet occur during the remainder of calendar year 2016 which could prompt PSE to utilize the alternative compliance mechanism in RCW 19.285.040(2)(i) and WAC 480-109-220. Such events may include weather-related damage, mechanical failure, strikes, lockouts, or actions of a governmental authority that adversely affect the generation, transmission, or distribution of an eligible renewable resource owned by or under contract to a qualifying utility. Such determination will be made when PSE reports on its final 2016 compliance in the annual 2017 or 2018 renewable resource target report.

As provided to the WUTC on November 25, 2015 in PSE's compliance filing in Docket No. UE-141170, (PSE's 2015 IRP), PSE is on track to meet the renewable resource target requirements for the year 2016 and all the way to the year 2022. PSE has acquired enough eligible renewable resources or renewable energy credits to meet the estimated renewable energy target for 2016.

Attachment 2



INCREMENTAL COST OF RENEWABLE RESOURCES

According to RCW 19.285, certain electric utilities in Washington must meet 15 percent of their retail electric load with eligible renewable resources by the calendar year 2020. The annual target for the calendar year 2012 was 3 percent of retail electric load, and for 2016, it is 9 percent. However, if the incremental cost of those renewable resources compared to an equivalent non-renewable is greater than 4 percent of its revenue requirement, then a utility will be considered in compliance with the annual renewable energy target in RCW 19.285. The law states it this way: “The incremental cost of an eligible renewable resource is calculated as the difference between the levelized delivered cost of the eligible renewable resource, regardless of ownership, compared to the levelized delivered cost of an equivalent amount of reasonably available substitute resources that do not qualify as eligible renewable resources.”⁹

Analytic Framework. This analysis compares the revenue requirement cost of each renewable resource with the projected market value and capacity value at the time of the renewable acquisition. There may be other approaches to calculating these costs – such as using variable costs from different kinds of thermal plants instead of market. However, PSE’s approach is most reasonable because it most closely reflects how customers will experience costs; i.e., PSE would not dispatch a peaker or CCCT with the ramping up and down of a wind farm without regard to whether the unit is being economically dispatched. For example, a peaker will not be economically dispatched often at all, so capacity from the thermal plant and energy from market is the closest match to actual incremental costs – and that is the point of this provision in the law – a to ensure customers don’t pay too much. This, “contemporaneous” with the decision-making aspect of PSE’s approach, is important. Utilities should be able to assess whether they will exceed the cost cap before an acquisition, without having to worry about ex-post adjustments that could change compliance status. The analytical framework here reflects a close approximation of the portfolio analysis used by PSE in resource planning, as well as in the evaluation of bids received in response to the company’s request for proposals (RFP).

⁹ / RCW 19.285.050 (1) (a) (b)



“Eligible Renewable Resources”

Figure N-46: Resources that meet RCW 19.285 definition of Eligible Renewable Resource

	Nameplate (MW)	Annual Energy (aMW)	Commercial Online Date	Market Price/Peaker Assumptions	Capacity Credit Assumption
Hopkins Ridge	149.4	53.3	Dec 2005	2004 RFP	20%
Wild Horse	228.6	73.4	Dec 2006	2006 RFP	17.2%
Klondike III	50	18.0	Dec 2007	2006 RFP	15.6%
Hopkins Infill	7.2	2.4	Dec 2007	2007 IRP	20%
Wild Horse Expansion	44	10.5	Dec 2009	2007 IRP	15%
Lower Snake River I	342.7	102.5	Apr 2012	2010 Trends	5%
Snoqualmie Upgrades	6.1	3.9	Mar 2013	2009 Trends	95%
Lower Baker Upgrades	30	12.5	May 2013	2011 IRP Base	95%
Generic Wind 2023	206	71	Jan 2023	2015 IRP Base	8%
Generic Wind 2028	131	45	Jan 2028	2015 IRP Base	8%

Equivalent Non-renewable. The incremental cost of a renewable resource is defined as the difference between the levelized cost of the renewable resource compared to an equivalent non-renewable resource. An equivalent non-renewable is an energy resource that does not meet the definition of a renewable resource in RCW 19.285, but is equal to a renewable resource on an energy and capacity basis. For the purpose of this analysis, the cost of an equivalent non-renewable resource has three components:

1. **Capacity Cost:** There are two parts of capacity cost. First is the capacity in MW. This would be nameplate for a firm resource like biomass, or the assumed capacity of a wind plant. Second is the \$/kW cost, which we assumed to be equal to the cost of a peaker.
2. **Energy Cost:** This was calculated by taking the hourly generation shape of the resource, multiplied by the market price in each hour. This is the equivalent cost of purchasing the equivalent energy on the market.
3. **Imputed Debt:** The law states the non-renewable must be an “equivalent amount,” which includes a time dimension. If PSE entered into a long-term contract for energy, there would be an element of imputed debt. Therefore, it is included in this analysis as a cost for the non-renewable equivalent.

For example, Hopkins Ridge produces 466,900 MWh annually. The equivalent non renewable is to purchase 466,900 MWh from the Mid-C market and then build a 30 MW (149.4*20 percent = 30) peaker plant for capacity only. With the example, the cost comparison includes the hourly



Mid-C price plus the cost of building a peaker, plus the cost of the imputed debt. The total revenue requirement (fixed and variable costs) of the non-renewable is the cost stream – including end effects – discounted back to the first year. That net present value is then levelized over the life of the comparison renewable resource.

Cost of Renewable Resource. Levelized cost of the renewable resource is more direct. It is based on the proforma financial analysis performed at the time of the acquisition. The stream of revenue requirement (all fixed and variable costs, including integration costs) are discounted back to the first year – again, including end effects. That net present value is then levelized out over the life of the resource/contract. The levelized cost of the renewable resource is then compared with the levelized cost of the equivalent non-renewable resource to calculate the incremental cost.

The following is a detailed example of how PSE calculated the incremental cost of Wild Horse. It is important to note that PSE's approach uses information contemporaneous with the decision making process, so this analysis will not reflect updated assumptions for capacity, capital cost, or integration costs, etc.

Eligible Renewable: Wild Horse Wind Facility

Capacity Contribution Assumption: $228.6 * 17.2\% = 39 \text{ MW}$



1. Calculate Wild Horse revenue requirement.

Figure N-47 is a sample of the annual revenue requirement calculations for the first few years of Wild Horse, along with the NPV of revenue requirement.

Figure N-47: Calculation of Wild Horse Revenue Requirement

(\$ Millions)	20-yr NPV	2007	2008	...	2025
Gross Plant		384	384	...	384
Accumulative depreciation (Avg.)		(10)	(29)	...	(355)
Accumulative deferred tax (EOP)		(20)	(56)	...	(7)
Rate base		354	299	...	22
After tax WACC		7.01%	7.01%	...	7.01%
After tax return		25	21	...	2
Grossed up return		38	32	...	2
PTC grossed up		(20)	(20)	...	-
Expenses		16	16	...	22
Book depreciation		19	19	...	19
Revenue required	370.9	53	48	...	44
End effects	4.6				
Total revenue requirement	375				



2. Calculate revenue requirement for equivalent non-renewable: Peaker capacity.

Capacity = 39 MW

Capital Cost of Capacity: \$462/KW

Figure N-48: Calculation of Peaker Revenue Requirement

(\$ Millions)	20-yr NPV	2007	2008	...	2025
Gross Plant		18	18	...	18
Accumulative depreciation (Avg.)		(0)	(1)	...	(10)
Accumulative deferred tax (EOP)		(0)	(0)	...	(3)
Rate base		18	17	...	5
After tax WACC		7.01%	7.01%	...	7.01%
After tax return		1	1	...	0
Grossed up return		2	2	...	0
Expenses		1	1	...	2
Book depreciation		1	1	...	1
Revenue required	32	4	4	...	3
End effects	2				
Total revenue requirement	34				



3. Calculate revenue requirement for equivalent non-renewable: Energy

Energy: 642,814 MWh

For the market purchase, we used the hourly power prices from the 2006 RFP plus a transmission adder of \$1.65/MWh in 2007 and escalated at 2.5 percent.

Figure N-49: Calculation of Energy Revenue Requirement

Month	Day	Hour	20-yr NPV	2007	...	2025
1	1	1		49 MW * \$59/MW = \$2891	...	49 MW * \$61/MW = \$2989
1	1	2		92 MW * \$60/MW = \$5520	...	92 MW * \$63/MW = \$5796
...
12	31	24		13 MW * \$59/MW = \$767	...	13 MW * \$65/MW = \$845
(\$Millions)						
Cost of Market				36	...	41
Imputed Debt				1	...	0
Total Revenue Requirement			285	37	...	41



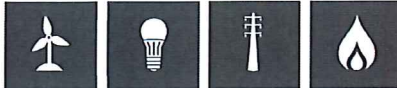
4. Incremental cost

The table below is the total cost of Wild Horse less the cost of the peaker and less the cost of the market purchases for the total 20-year incremental cost difference of the renewable to an equivalent non-renewable.

Figure N-50: 20-yr Incremental Cost of Wild Horse

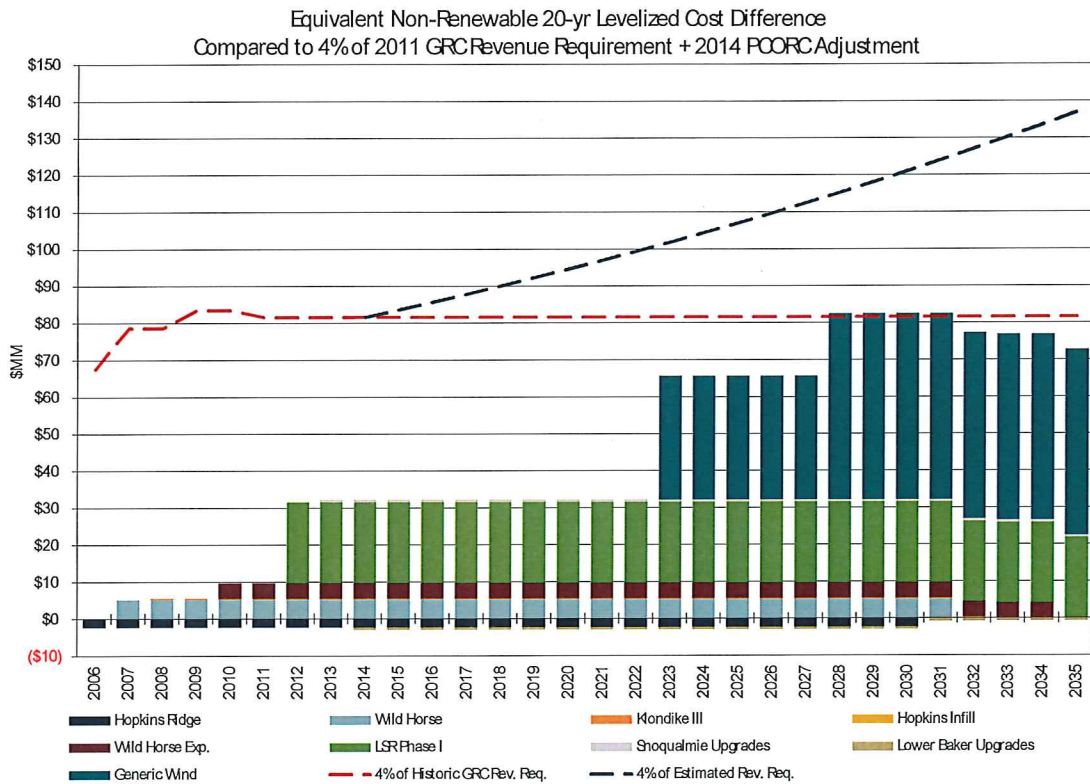
(\$ Millions)	20-yr NPV
Wild Horse	375
Peaker	34
Market	285
20-yr Incremental Cost of Wild Horse	56

We chose to spread the incremental cost over 25 years since that is the depreciable life of a wind project used by PSE. The payment of \$56 Million over 25 years comes to \$5.2 Million/Year using the 7.01 percent discount rate.



Summary Results. Each renewable resource that counts towards meeting the renewable energy target was compared to an equivalent non-renewable resource starting in the same year and levelized over the book life of the plant: 25 years for wind power and 40 years for hydroelectric power. Figure N-51 presents results of this analysis for existing resources and projected resources. This demonstrates PSE expects to meet the physical targets under RCW 19.285 without being constrained by the cost cap. A negative cost difference means that the renewable was lower-cost than the equivalent non-renewable, while a positive cost means that the renewable was a higher cost.

Figure N-51: Equivalent Non-renewable 20-year Levelized Cost Difference Compared to 4% of 2011 GRC Revenue Requirement + 2014 PCORC adjustment



As the chart reveals, even if the company's revenue requirement were to stay the same for the next 10 years, PSE would still not hit the 4 percent requirement. The estimated revenue requirement uses a 2.5 percent assumed escalation from the company's current revenue requirement.

Attachment 3

General Instructions:

- Grey shading indicates cells where information is not required
- Yellow shading indicate cells where inputs are entered
- Green shading indicate cells with dropdown lists
- White shading indicate formulated cells
- Blue shading indicates summary calculations

"Compliance Summary" Worksheet

Enter "X" When Complete	Checklist Item	Cell/Row Description	Units	Cell/Row	Comments
X	1	Reporting Entity	Text	B2	Enter the name of the reporting entity
X	2	Reporting Date	Year	B4	Enter the date the report is submitted
	3	Delivered Load to Retail Customers	MWh	B7:E7	Enter the MWh delivered to customers

"Facility Detail" Worksheet

Enter "X" When Complete	Checklist Item	Cell/Row Description	Units	Cell/Row	Comments
Instructions in the section are for the cells B2:F31. Each row represents a different facility. FIRST UPDATE cell B1053 For Start Year					
X	1	Facility Name	Text	B2:B31	Enter the name of the qualifying facility or contract
X	2	WREGIS ID	Text	C2:C31	Enter the WREGIS ID for the qualifying facility
X	3	Facility Type	Toggle	D2:D31	Select the generation type for the qualifying facility
X	4	Extra Apprenticeship Credit Eligibility	Toggle	E2:E31	For facilities that qualify for extra apprenticeship credits select "Eligible". Select "Not Eligible for non-qualifying facilities.
X	5	Distributed Generation Eligibility	Toggle	F2:F31	For facilities that qualify for distributed generation select "Eligible". Select "Not Eligible for non-qualifying facilities.

Enter "X" When Complete	Checklist Item	Cell/Row Description	Units	Cell/Row	Comments
Instructions in this section identify the input locations for the 1st facility found in the "Facility Detail" worksheet. Inputs for facilities 2 through 30, also found in the "Facility Detail" worksheet, are identical to facility 1.					
	6	Total MWh Produced from Facility	Number	D39:F39	Enter the annual MWh output from the qualifying facility
	7	Percent of MWh Qualifying	%	D40:F40	Enter the percent of MWh produced that are eligible for meeting RCW 19.285
	8	Percent of Qualifying MWh Allocated to WA State Compliance	%	D41:F41	Enter the percent of qualifying MWh used for compliance with RCW 19.285. Used for facilities that are utilized for RPS compliance in two or more states.
	9	Quantity of RECs from MWh Sold	Number	D50:F50	Enter the annual amount of RECs sold. For Multi-Jurisdictional Utilities, enter in annual WA allocated amount of RECs sold.
	10	Bonus Incentives Transferred	Number	D51:F51	Enter the annual amount of transferred RECs procured from bonus incentives
	11	Bonus Incentives Not Realized	Number	D52:F52	Enter the annual number of bonus incentives that were not realized
	12	2011 Surplus Applied to 2012	Number	D56	Enter the amount of RECs procured in 2011 used for compliance in 2012
	13	2012 Surplus Applied to 2011	Number	E57	Enter the amount of RECs procured in 2012 used for compliance in 2011
	14	2012 Surplus Applied to 2013	Number	E58	Enter the amount of RECs procured in 2012 used for compliance in 2013
	15	2013 Surplus Applied to 2012	Number	F59	Enter the amount of RECs procured in 2013 used for compliance in 2012

Reporting Entity:

--

Reporting Date:

June 1, 2016

RCW 19.285 Compliance Need

Delivered Load to Retail Customers (MWh)

WA State RCW 19.285 Requirement

Quantity Required for Compliance

2013	2014	2015	2016
21,208,608	20,568,949	20,509,764	Not Applicable
3%	3%	3%	9%

635,202	626,663	1,848,542
---------	---------	-----------

Eligible Quantity Acquired

Qualifying MWh Allocated to WA

Quantity from Non REC Eligible Generation

Total Quantity Available for RCW 19.285 Compliance

2013	2014*	2015*	2016
2,019,929	2,156,021	1,931,011	246,203
184,567	196,970	166,886	7,319
2,204,496	2,352,991	2,097,897	253,522

Sales and Transfers

Quantity of RECs Sold

Bonus Incentives Transferred

Bonus Incentives Not Realized

Total Sold / Transferred / Unrealized

2013	2014	2015	2016
(879,430)	(1,616,355)	(77,945)	-
-	-	-	-
(78,269)	(99,710)	(4,546)	-
(957,699)	(1,716,065)	(82,491)	-

Adjustments

2013 Surplus Applied to 2014

2014 Surplus Applied to 2013

2014 Surplus Applied to 2015

2015 Surplus Applied to 2014

2015 Surplus Applied to 2016

2016 Surplus Applied to 2015

Net Surplus Adjustments

2013	2014	2015	2016
(1,246,796)	1,246,796		
-	-		
	(588,088)	588,088	-
	-	-	-
		(1,917,964)	1,917,964
(293,096)	658,708	(1,329,876)	1,917,964

Adjustment for Events Beyond Control

-	-	-	-
---	---	---	---

RCW 19.285 Compliance Surplus / (Deficit)

2013	2014*	2015*	2016
318,818	660,432	58,865	322,944

* Any surplus shown in 2014 or 2015 may be sold or used for compliance in subsequent years.

In both the "Compliance Summary" and "Facility Detail" worksheets, utilities may need to protect commercially sensitive information by use of the CONFIDENTIAL designation.

Facility Name:	Facility WREGIS ID:	Facility Type	Extra Apprenticeship Credit Eligibility:	Distributed Generation Bonus Eligibility:	Online Date:
Wild Horse	W183	Wind	Not Eligible	---	
Hopkins Ridge	W184	Wind	Not Eligible	---	
Klondike III	W237	Wind	Not Eligible	---	
Wild Horse Phase II	W1364	Wind	Eligible	---	
Hopkins Ridge Phase II	W1382	Wind	Not Eligible	---	
Lower Snake River - Dodge Junction	W2669	Wind	Eligible	---	
Lower Snake River - Phalen Gulch	W2670	Wind	Eligible	---	
Wanapum Fish Bypass	Not Available	Water (Incremental Hydro)	Not Eligible	---	
Baker River Project	Not Available	Water (Incremental Hydro)	Not Eligible	---	
Snoqualmie Falls Project	Not Available	Water (Incremental Hydro)	Not Eligible	---	
Facility 11			---	---	
Facility 12			---	---	
Facility 13			---	---	
Facility 14			---	---	
Facility 15			---	---	
Facility 16			---	---	
Facility 17			---	---	
Facility 18			---	---	
Facility 19			---	---	
Facility 20			---	---	
Facility 21			---	---	
Facility 22			---	---	
Facility 23			---	---	
Facility 24			---	---	
Facility 25			---	---	
Facility 26			---	---	
Facility 27			---	---	
Facility 28			---	---	
Facility 29			---	---	
Facility 30			---	---	

In both the "Compliance Summary" and "Facility Detail" worksheets, utilities may need to protect commercially sensitive information by use of the CONFIDENTIAL designation.

Facility Name: **Wild Horse**

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Wild Horse
Percent of MWh Qualifying Under RCW 19.285
Percent of Qualifying MWh Allocated to WA
Eligible MWh Available for RCW 19.285 Compliance

2014	2015	2016
546,457	512,757	34,212
100%	100%	100%
100%	100%	100%
546,457	512,757	34,212

Non REC Eligible Generation

Extra Apprenticeship Credit
Distributed Generation Bonus
Total Quantity from Non REC Eligible Generation

2014	2015	2016
-	-	-
-	-	-
-	-	-

REC Sales / Transfers

Quantity of RECs Sold
Bonus Incentives Transferred
Bonus Incentives Not Realized
Total Sold / Transferred / Unrealized

2014	2015	2016
541,930	-	-
541,930	-	-

Adjustments

2013 Surplus Applied to 2014
2014 Surplus Applied to 2013
2014 Surplus Applied to 2015
2015 Surplus Applied to 2014
2015 Surplus Applied to 2016
2016 Surplus Applied to 2015
Net Surplus Adjustments

2014	2015	2016
308,445		
4,527	4,527	
-		
	512,757	512,757
	-	
303,918	(508,230)	512,757

Adjustment for Events Beyond Control

--	--	--

Contribution to RCW 19.285 Compliance

308,445	4,527	546,969
----------------	--------------	----------------

Facility Name:

Hopkins Ridge

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Hopkins Ridge
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

2014	2015	2016
423,662	348,166	27,526
100%	100%	100%
100%	100%	100%
423,662	348,166	27,526

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

2014	2015	2016
-	-	-
-	-	-
-	-	-

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

2014	2015	2016
423,662	35,533	-
423,662	35,533	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

2014	2015	2016
223,346		
-	-	
-		
	312,633	312,633
	-	
223,346	(312,633)	312,633

Adjustment for Events Beyond Control

--	--	--

Contribution to RCW 19.285 Compliance

223,346	-	340,159
---------	---	---------

Facility Name:

Klondike III

May be used for Target Year 2016 Compliance

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Klondike III
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

2014	2015	2016
133,571	121,605	4,064
100%	100%	100%
100%	100%	100%
133,571	121,605	4,064

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

2014	2015	2016
-	-	-
-	-	-
-	-	-

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

2014	2015	2016
133,571	17,945	-
133,571	17,945	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

2014	2015	2016
67,395		
-	-	
-		
	103,660	103,660
	-	
67,395	(103,660)	103,660

Adjustment for Events Beyond Control

--	--	--

Contribution to RCW 19.285 Compliance

67,395	-	107,724
--------	---	---------

Facility Name:

Wild Horse Phase II

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Wild Horse Phase II
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

	2014	2015	2016
Total MWh Produced / Purchased from Wild Horse Phase II	105,180	98,693	6,585
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	105,180	98,693	6,585

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

	2014	2015	2016
Extra Apprenticeship Credit	21,036	19,739	1,317
Distributed Generation Bonus	-	-	-
Total Quantity from Non REC Eligible Generation	21,036	19,739	1,317

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

	2014	2015	2016
Quantity of RECs Sold	98,496	10,000	-
Bonus Incentives Transferred	-	-	-
Bonus Incentives Not Realized	19,699	2,000	-
Total Sold / Transferred / Unrealized	118,195	12,000	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

	2014	2015	2016
2013 Surplus Applied to 2014	71,243	-	-
2014 Surplus Applied to 2013	-	-	-
2014 Surplus Applied to 2015	8,021	8,021	-
2015 Surplus Applied to 2014	-	-	-
2015 Surplus Applied to 2016	-	106,432	106,432
2016 Surplus Applied to 2015	-	-	-
Net Surplus Adjustments	63,222	(98,411)	106,432

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control			
--------------------------------------	--	--	--

Contribution to RCW 19.285 Compliance

Actual 2014 Retirement

Contribution to RCW 19.285 Compliance	71,243	8,021	114,334
Actual 2014 Retirement	65,090		

Facility Name:

Hopkins Ridge Phase II

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Hopkins Ridge Phase II
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

	2014	2015	2016
Total MWh Produced / Purchased from Hopkins Ridge Phase II	18,641	16,614	1,327
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	18,641	16,614	1,327

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

	2014	2015	2016
Extra Apprenticeship Credit	-	-	-
Distributed Generation Bonus	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

	2014	2015	2016
Quantity of RECs Sold	18,641	1,735	-
Bonus Incentives Transferred	-	-	-
Bonus Incentives Not Realized	-	-	-
Total Sold / Transferred / Unrealized	18,641	1,735	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

	2014	2015	2016
2013 Surplus Applied to 2014	9,827	-	-
2014 Surplus Applied to 2013	-	-	-
2014 Surplus Applied to 2015	-	-	-
2015 Surplus Applied to 2014	-	-	-
2015 Surplus Applied to 2016	-	14,879	14,879
2016 Surplus Applied to 2015	-	-	-
Net Surplus Adjustments	9,827	(14,879)	14,879

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control			
--------------------------------------	--	--	--

Contribution to RCW 19.285 Compliance

Contribution to RCW 19.285 Compliance	9,827	-	16,206
---------------------------------------	-------	---	--------

Facility Name: Lower Snake River - Dodge Junction

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Lower Snake River - Dodge Junction
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

	2014	2015	2016
Total MWh Produced / Purchased from Lower Snake River - Dodge Junction	500,349	421,560	30,008
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	500,349	421,560	30,008

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

	2014	2015	2016
Extra Apprenticeship Credit	100,070	84,312	6,002
Distributed Generation Bonus	-	-	-
Total Quantity from Non REC Eligible Generation	100,070	84,312	6,002

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

	2014	2015	2016
Quantity of RECs Sold	230,247	-	-
Bonus Incentives Transferred	-	-	-
Bonus Incentives Not Realized	46,049	-	-
Total Sold / Transferred / Unrealized	276,296	-	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

	2014	2015	2016
2013 Surplus Applied to 2014	322,956		
2014 Surplus Applied to 2013			
2014 Surplus Applied to 2015	324,122	324,122	
2015 Surplus Applied to 2014	-		
2015 Surplus Applied to 2016		505,872	505,872
2016 Surplus Applied to 2015		-	
Net Surplus Adjustments	(1,166)	(181,750)	505,872

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control			
--------------------------------------	--	--	--

Contribution to RCW 19.285 Compliance

Actual 2014 Retirement

Contribution to RCW 19.285 Compliance	322,956	324,122	541,882
Actual 2014 Retirement	280,655		

Lower Snake River - Phalen Gulch

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Lower Snake River - Phalen Gulch
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

	2014	2015	2016
Total MWh Produced / Purchased from Lower Snake River - Phalen Gulch	379,323	314,175	20,769
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	379,323	314,175	20,769

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

	2014	2015	2016
Extra Apprenticeship Credit	75,865	62,835	
Distributed Generation Bonus	-	-	-
Total Quantity from Non REC Eligible Generation	75,865	62,835	-

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

	2014	2015	2016
Quantity of RECs Sold	169,808	12,732	-
Bonus Incentives Transferred	-	-	-
Bonus Incentives Not Realized	33,962	2,546	-
Total Sold / Transferred / Unrealized	203,770	15,278	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

	2014	2015	2016
2013 Surplus Applied to 2014	243,584		
2014 Surplus Applied to 2013			
2014 Surplus Applied to 2015	251,418	251,418	
2015 Surplus Applied to 2014	-		
2015 Surplus Applied to 2016		361,732	361,732
2016 Surplus Applied to 2015		-	
Net Surplus Adjustments	(7,834)	(110,314)	361,732

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control			
--------------------------------------	--	--	--

Contribution to RCW 19.285 Compliance

Actual 2014 Retirement

Contribution to RCW 19.285 Compliance	243,584	251,418	382,501
Actual 2014 Retirement	240,619		

Facility Name:

Wanapum Fish Bypass

May be used for 2016 RPS Compliance

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Wanapum Fish Bypass
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

	2014	2015	2016
Not Eligible		Not Eligible	
	100%	100%	100%
	100%	100%	100%
	-	-	-

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

	2014	2015	2016
	-	-	-
	-	-	-
	-	-	-

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

	2014	2015	2016
	-	-	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

	2014	2015	2016
	-		
		-	
	-		
			-
		-	
	-	-	-

Adjustment for Events Beyond Control

--	--	--	--

Contribution to RCW 19.285 Compliance

Use of Wanapum Fish Bypass for 2016 RPS Compliance will be dependent upon Grant County filing WREGIS registration.
 To-date Grant County has not filed Wanapum in WREGIS

	-	-	-
--	---	---	---

Facility Name:

Baker River Project

MWh Allocated to WA Compliance

Total MWh Produced / Purchased from Baker River Project
 Percent of MWh Qualifying Under RCW 19.285
 Percent of Qualifying MWh Allocated to WA
 Eligible MWh Available for RCW 19.285 Compliance

	2014	2015	2016
	121,480	308,611	357,590
	28.3%	28.3%	28.3%
	100%	100%	100%
	34,379	87,337	101,198

Non REC Eligible Generation

Extra Apprenticeship Credit
 Distributed Generation Bonus
 Total Quantity from Non REC Eligible Generation

	2014	2015	2016
	-	-	-
	-	-	-
	-	-	-

REC Sales / Transfers

Quantity of RECs Sold
 Bonus Incentives Transferred
 Bonus Incentives Not Realized
 Total Sold / Transferred / Unrealized

	2014	2015	2016
	-	-	-

Adjustments

2013 Surplus Applied to 2014
 2014 Surplus Applied to 2013
 2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 Net Surplus Adjustments

	2014	2015	2016
	-		
		-	
	-		
			-
		-	
	-	-	-

Adjustment for Events Beyond Control

--	--	--	--

Contribution to RCW 19.285 Compliance

Actual 2014 Retirement

	34,379	87,337	101,198
--	--------	--------	---------

Baker estimated RPS Eligible generation based on Incremental Hydro Calculation Method 2. Baker Project still pending completion of WREGIS Registration

Facility Name:

Snoqualmie Falls Project

MWh Allocated to WA Compliance

	2014	2015	2016
Total MWh Produced / Purchased from Snoqualmie Falls Project	170,104	118,871	241,346
Percent of MWh Qualifying Under RCW 19.285	8.5%	8.5%	8.5%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	14,459	10,104	20,514

Non REC Eligible Generation

	2014	2015	2016
Extra Apprenticeship Credit	-	-	-
Distributed Generation Bonus	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-

REC Sales / Transfers

	2014	2015	2016
Quantity of RECs Sold			
Bonus Incentives Transferred			
Bonus Incentives Not Realized			
Total Sold / Transferred / Unrealized	-	-	-

Adjustments

	2014	2015	2016
2013 Surplus Applied to 2014	-		
2014 Surplus Applied to 2013			
2014 Surplus Applied to 2015		-	
2015 Surplus Applied to 2014	-		
2015 Surplus Applied to 2016			-
2016 Surplus Applied to 2015		-	
Net Surplus Adjustments	-	-	-

Adjustment for Events Beyond Control

--	--	--	--

Contribution to RCW 19.285 Compliance

	14,459	10,104	20,514
--	---------------	---------------	---------------

Actual 2014 Retirement 14,459

Snoqualmie Falls Project estimated RPS Eligible generation based on Incremental Hydro Calculation Method 2.

Snoqualmie Falls Project still pending completion of WREGIS Registration

Compliance Contribution by Generation Type

	2013	2014	2015	2016
Wind	0	1,246,796	588,088	2,049,774
Solar	-	-	-	-
Water (Incremental Hydro)	-	48,838	97,441	121,712
Biomass	-	-	-	-
Geothermal	-	-	-	-
Landfill Gas	-	-	-	-
Sewage Treatment Gas	-	-	-	-
Wave, Ocean, Tidal	-	-	-	-
Biodiesel Fuel	-	-	-	-

**CONFIDENTIAL PER WAC 480-07-160
REDACTED VERSION**

Attachment 4

REC Revenues by Year by Resource

Source	WREGIS #	Vintage				Total REC Revenues
		2012	2013	2014	2015	
Wild Horse	W183	REDACTED				
Wild Horse Phase II	W1364					
Hopkins Ridge	W184					
Hopkins Ridge Phase II	W1382					
Klondike III	W237					
Lower Snake River-Dodge Junction	W2669					
Lower Snake River-Phalen Gulch	W2670					
		\$ -	\$ -	\$ -	\$ -	\$ -
						\$ -

PUGET SOUND ENERGY
Deferred REC Revenue Proceeds
A/C 25400221

Vintages 2012 through 2015

Attachment 4
CONFIDENTIAL PER WAC 480-07-160

Facility	Transaction			Qty	REC	Total Qty	Total REC	
	Vintage	Mo/Yr	WREGIS #		Revenues		Revenues	
Wild Horse Phase II	2012-01WH2	May-12	W1364	11,460		54,206		2012 Vintage
Wild Horse Phase II	2012-07WH2	Nov-13	W1364	5,173		47,386		2013 Vintage
Wild Horse Phase II	2012-08WH2	Nov-13	W1364	7,555		98,496		2014 Vintage
Wild Horse Phase II	2012-09WH2	Nov-13	W1364	5,730		10,000		2015 Vintage
Wild Horse Phase II	2012-10WH2	Nov-13	W1364	8,749				
Wild Horse Phase II	2012-11WH2	Nov-13	W1364	6,660				
Wild Horse Phase II	2012-12WH2	Nov-13	W1364	8,879				
Wild Horse Phase II	2013-07WH2	Oct-14	W1364	8,048				
Wild Horse Phase II	2013-08WH2	Oct-14	W1364	4,733	REDACTED		REDACTED	
Wild Horse Phase II	2013-09WH2	Oct-14	W1364	7,637				
Wild Horse Phase II	2013-10WH2	Oct-14	W1364	4,582				
Wild Horse Phase II	2013-11WH2	Oct-14	W1364	7,682				
Wild Horse Phase II	2013-12WH2	Oct-14	W1364	9,931				
Wild Horse Phase II	2013-10WH2	Jan-15	W1364	1,600				
Wild Horse Phase II	2013-12WH2	Jan-15	W1364	3,173				
Wild Horse Phase II	2014-01WH2	Apr-15	W1364	5,002				
Wild Horse Phase II	2014-02WH2	Apr-15	W1364	7,583				
Wild Horse Phase II	2014-03WH2	Apr-15	W1364	11,579				
Wild Horse Phase II	2014-04WH2	Apr-15	W1364	12,732				
Wild Horse Phase II	2014-05WH2	Apr-15	W1364	9,343				
Wild Horse Phase II	2014-06WH2	Apr-15	W1364	8,109				
Wild Horse Phase II	2014-07WH2	Apr-15	W1364	5,008				
Wild Horse Phase II	2014-09WH2	Apr-15	W1364	6,626				
Wild Horse Phase II	2014-06WH2	Aug-15	W1364	3,314				
Wild Horse Phase II	2014-09WH2	Dec-15	W1364	1,440				
Wild Horse Phase II	2014-12WH2	Dec-15	W1364	500				
Wild Horse Phase II	2014-12WH2	Dec-15	W1364	7,678				
Wild Horse Phase II	2014-10WH2	Jan-16	W1364	7,625				
Wild Horse Phase II	2014-11WH2	Jan-16	W1364	11,591				
Wild Horse Phase II	2014-08WH2	Mar-16	W1364	290				
Wild Horse Phase II	2014-12WH2	Mar-16	W1364	76				
Wild Horse Phase II	2015-07WH2	Mar-16	W1364	10,000				
Hopkins Ridge Phase II	2013-07HR2	Oct-14	W1382	1,222		7,309		2013 Vintage
Hopkins Ridge Phase II	2013-08HR2	Oct-14	W1382	932		18,641		2014 Vintage

Hopkins Ridge Phase II	2013-09HR2	Oct-14	W1382	1,486		1,735	2015 Vintage
Hopkins Ridge Phase II	2013-10HR2	Oct-14	W1382	819			
Hopkins Ridge Phase II	2013-11HR2	Oct-14	W1382	1,330			
Hopkins Ridge Phase II	2013-12HR2	Oct-14	W1382	1,520			
Hopkins Ridge Phase II	2014-01HR2	Oct-14	W1382	1,233			
Hopkins Ridge Phase II	2014-02HR2	Oct-14	W1382	1,376	REDACTED	REDACTED	
Hopkins Ridge Phase II	2014-03HR2	Oct-14	W1382	2,173			
Hopkins Ridge Phase II	2014-04HR2	Oct-14	W1382	2,147			
Hopkins Ridge Phase II	2014-05HR2	Oct-14	W1382	1,884			
Hopkins Ridge Phase II	2014-06HR2	Oct-14	W1382	1,883			
Hopkins Ridge Phase II	2014-07HR2	Jan-15	W1382	1,262			
Hopkins Ridge Phase II	2014-08HR2	Jan-15	W1382	1,165			
Hopkins Ridge Phase II	2014-09HR2	Jan-15	W1382	693			
Hopkins Ridge Phase II	2014-09HR2	Apr-15	W1382	437			
Hopkins Ridge Phase II	2014-10HR2	Apr-15	W1382	1,483			
Hopkins Ridge Phase II	2014-11HR2	Apr-15	W1382	1,813			
Hopkins Ridge Phase II	2014-12HR2	Apr-15	W1382	1,092			
Hopkins Ridge Phase II	2015-01HR2	Apr-15	W1382	574			
Hopkins Ridge Phase II	2015-02HR2	Apr-15	W1382	1,161			
Wild Horse	2012-01WH	May-12	W183	38,143		238,143	2012 Vintage
Wild Horse	2012-07WH	Dec-13	W183	26,875		246,192	2013 Vintage
Wild Horse	2012-08WH	Dec-13	W183	39,253		541,930	2014 Vintage
Wild Horse	2012-09WH	Dec-13	W183	29,767			
Wild Horse	2012-10WH	Dec-13	W183	45,454			
Wild Horse	2012-11WH	Dec-13	W183	34,606			
Wild Horse	2012-12WH	Dec-13	W183	24,045			
Wild Horse	2013-07WH	Jul-14	W183	15,535			
Wild Horse	2013-07WH	Oct-14	W183	26,280			
Wild Horse	2013-08WH	Oct-14	W183	24,591			
Wild Horse	2013-09WH	Oct-14	W183	39,676			
Wild Horse	2013-10WH	Oct-14	W183	32,117			
Wild Horse	2013-11WH	Oct-14	W183	27,336			
Wild Horse	2013-11WH	Jan-15	W183	12,577			
Wild Horse	2013-12WH	Jan-15	W183	25,465	REDACTED	REDACTED	
Wild Horse	2013-12WH	Feb-15	W183	3,000			
Wild Horse	2013-12WH	Apr-15	W183	39,615			
Wild Horse	2014-01WH	Oct-14	W183	25,000			
Wild Horse	2014-01WH	Nov-14	W183	991			
Wild Horse	2014-02WH	Nov-14	W183	39,394			
Wild Horse	2014-03WH	Nov-14	W183	60,000			

Wild Horse	2014-04WH	Nov-14	W183	66,150			
Wild Horse	2014-05WH	Nov-14	W183	48,537			
Wild Horse	2014-06WH	Nov-14	W183	39,928			
Wild Horse	2014-03WH	Apr-15	W183	160			
Wild Horse	2014-06WH	Apr-15	W183	19,422			
Wild Horse	2014-07WH	Apr-15	W183	26,017			
Wild Horse	2014-08WH	Apr-15	W183	36,234			
Wild Horse	2014-09WH	Apr-15	W183	41,907			
Wild Horse	2014-10WH	Apr-15	W183	38,734			
Wild Horse	2014-12WH	May-15	W183	20,000			
Wild Horse	2014-11WH	Jun-15	W183	30,000			
Wild Horse	2014-10WH	Dec-15	W183	882			
Wild Horse	2014-12WH	Dec-15	W183	22,000			
Wild Horse	2014-11WH	Jan-16	W183	24,038			
Wild Horse	2014-11WH	Feb-16	W183	1,653			
Wild Horse	2014-12WH	Mar-16	W183	883			
Hopkins Ridge	2012-07HR	Nov-13	W184	22,170		171,359	2012 Vintage
Hopkins Ridge	2012-08HR	Nov-13	W184	23,942		166,117	2013 Vintage
Hopkins Ridge	2012-09HR	Nov-13	W184	17,681		423,662	2014 Vintage
Hopkins Ridge	2012-10HR	Nov-13	W184	32,566		35,533	2015 Vintage
Hopkins Ridge	2012-10HR	Nov-13	W184	833			
Hopkins Ridge	2012-11HR	Nov-13	W184	25,218			
Hopkins Ridge	2012-12-HR	Nov-13	W184	48,949			
Hopkins Ridge	2013-07HR	Aug-14	W184	27,772			
Hopkins Ridge	2013-08HR	Aug-14	W184	7,228			
Hopkins Ridge	2013-08HR	Oct-14	W184	13,962			
Hopkins Ridge	2013-09HR	Oct-14	W184	33,769			
Hopkins Ridge	2013-10HR	Oct-14	W184	18,608	REDACTED	REDACTED	
Hopkins Ridge	2013-11HR	Oct-14	W184	30,236			
Hopkins Ridge	2013-12HR	Oct-14	W184	34,542			
Hopkins Ridge	2014-01HR	Oct-14	W184	28,019			
Hopkins Ridge	2014-02HR	Oct-14	W184	31,279			
Hopkins Ridge	2014-03HR	Oct-14	W184	49,384			
Hopkins Ridge	2014-04HR	Oct-14	W184	48,790			
Hopkins Ridge	2014-05HR	Oct-14	W184	42,826			
Hopkins Ridge	2014-06HR	Oct-14	W184	42,793			
Hopkins Ridge	2014-07HR	Oct-14	W184	17,305			
Hopkins Ridge	2014-08HR	Oct-14	W184	5,970			
Hopkins Ridge	2014-07HR	Jan-15	W184	11,371			
Hopkins Ridge	2014-08HR	Jan-15	W184	20,509			

Hopkins Ridge	2014-09HR	Apr-15	W184	25,682			
Hopkins Ridge	2014-10HR	Apr-15	W184	33,693			
Hopkins Ridge	2014-11HR	Apr-15	W184	41,204			
Hopkins Ridge	2014-12HR	Apr-15	W184	24,837			
Hopkins Ridge	2015-01HR	Apr-15	W184	13,037			
Hopkins Ridge	2015-02HR	Apr-15	W184	22,496			
Klondike III	2012-07K3	Oct-13	W237	16,041		58,264	2012 Vintage
Klondike III	2012-08K3	Oct-13	W237	14,164		68,465	2013 Vintage
Klondike III	2012-09K3	Oct-13	W237	9,214		133,571	2014 Vintage
Klondike III	2012-10K3	Oct-13	W237	6,499		17,945	2015 Vintage
Klondike III	2012-11K3	Oct-13	W237	4,082			
Klondike III	2012-11K3	Nov-13	W237	101			
Klondike III	2012-12K3	Nov-13	W237	3,641			
Klondike III	2012-12K3	Nov-13	W237	4,522			
Klondike III	2013-01K3	Mar-14	W237	4,000			
Klondike III	2013-07K3	Jul-14	W237	18,439			
Klondike III	2013-08K3	Jul-14	W237	12,249			
Klondike III	2013-09K3	Jul-14	W237	10,448			
Klondike III	2013-10K3	Jul-14	W237	5,856			
Klondike III	2013-11K3	Jul-14	W237	7,926			
Klondike III	2013-12K3	Jul-14	W237	9,547			
Klondike III	2014-01K3	Aug-14	W237	6,730			
Klondike III	2014-02K3	Aug-14	W237	8,102			
Klondike III	2014-03K3	Aug-14	W237	9,982			
Klondike III	2014-04K3	Aug-14	W237	10,186			
Klondike III	2014-04K3	Oct-14	W237	2,256			
Klondike III	2014-05K3	Oct-14	W237	2,957	REDACTED		REDACTED
Klondike III	2014-07K3	Oct-14	W237	14,575			
Klondike III	2014-08K3	Oct-14	W237	13,120			
Klondike III	2014-05K3	Jan-15	W237	11,854			
Klondike III	2014-06K3	Jan-15	W237	13,146			
Klondike III	2014-06K3	Apr-15	W237	6,455			
Klondike III	2014-09K3	Apr-15	W237	10,070			
Klondike III	2014-10K3	Apr-15	W237	6,107			
Klondike III	2014-11K3	Apr-15	W237	10,298			
Klondike III	2014-12K3	Apr-15	W237	7,733			
Klondike III	2015-01K3	Jun-15	W237	3,410			
Klondike III	2015-02K3	Jun-15	W237	6,590			
Klondike III	2015-02K3	Aug-15	W237	1,516			
Klondike III	2015-03K3	Aug-15	W237	6,429			

Lower Snake River-Dodge Junction	2013-07DJ	Oct-14	W2669	32,666		201,751		2013 Vintage
Lower Snake River-Dodge Junction	2013-08DJ	Oct-14	W2669	26,144		230,247		2014 Vintage
Lower Snake River-Dodge Junction	2013-09DJ	Oct-14	W2669	43,424				
Lower Snake River-Dodge Junction	2013-10DJ	Oct-14	W2669	22,926				
Lower Snake River-Dodge Junction	2013-11DJ	Oct-14	W2669	37,127	REDACTED		REDACTED	
Lower Snake River-Dodge Junction	2013-12DJ	Oct-14	W2669	39,464				
Lower Snake River-Dodge Junction	2014-07DJ	Oct-14	W2669	38,161				
Lower Snake River-Dodge Junction	2014-08DJ	Oct-14	W2669	30,132				
Lower Snake River-Dodge Junction	2014-09DJ	Apr-15	W2669	34,897				
Lower Snake River-Dodge Junction	2014-10DJ	Apr-15	W2669	40,553				
Lower Snake River-Dodge Junction	2014-11DJ	Apr-15	W2669	50,548				
Lower Snake River-Dodge Junction	2014-12DJ	Apr-15	W2669	35,956				
Lower Snake River-Phalen Gulch	2013-07PG	Oct-14	W2670	22,993		142,210		2013 Vintage
Lower Snake River-Phalen Gulch	2013-08PG	Oct-14	W2670	18,193		169,808		2014 Vintage
Lower Snake River-Phalen Gulch	2013-09PG	Oct-14	W2670	13,056		12,732		2015 Vintage
Lower Snake River-Phalen Gulch	2013-09PG	Oct-14	W2670	19,776				
Lower Snake River-Phalen Gulch	2013-10PG	Oct-14	W2670	16,782				
Lower Snake River-Phalen Gulch	2013-11PG	Oct-14	W2670	27,555	REDACTED		REDACTED	
Lower Snake River-Phalen Gulch	2013-12PG	Oct-14	W2670	23,855				
Lower Snake River-Phalen Gulch	2014-07PG	Oct-14	W2670	28,789				
Lower Snake River-Phalen Gulch	2014-08PG	Oct-14	W2670	21,948				
Lower Snake River-Phalen Gulch	2014-09PG	Apr-15	W2670	26,547				
Lower Snake River-Phalen Gulch	2014-10PG	Apr-15	W2670	30,269				
Lower Snake River-Phalen Gulch	2014-11PG	Apr-15	W2670	37,582				
Lower Snake River-Phalen Gulch	2014-12PG	Apr-15	W2670	24,673				
Lower Snake River-Phalen Gulch	2015-01PG	Apr-15	W2670	12,732				
GRAND TOTAL				3,095,702		3,095,702		