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PUGET SOUND ENERGY

*Puget Sound Energy, Inc.
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Filed via Web Portal

May 31, 2018

Mr. Mark L. Johnson, 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 - 2018
RCW-Required Report, RCW 19.285.070 and
WAC-Required Report, WAC 480-109-210**

Dear Mr. Johnson:

Attached for filing, please find Puget Sound Energy's ("PSE's") 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 2018 Renewable Energy Target of 1,879,417 MWh.

PSE requests confidential treatment for Attachments 4 and 5 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 purchases and 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. Mark L. Johnson
May 31, 2018
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 or katherine.barnard@pse.com.

Sincerely,

/s/ Katherine J. Barnard

Katherine J. Barnard
Director, Revenue Requirements & Regulatory Compliance
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Attachments:

PSE 2018 RPS Report

Attachment 1: Memo

Attachment 2: IRP Appendix N

Attachment 3: Reporting Tool

Attachment 4: REC Sales (Redacted Version)

Attachment 4: REC Sales (Confidential Version)

Attachment 5: Incremental Cost Template (Redacted Version)

Attachment 5: Incremental Cost Template (Confidential Version)

Attachment 6: Department of Commerce EIA Workbook

Attachment 7: Apprenticeship Credit Approval Letters

Puget Sound Energy
2018 Annual Renewable Portfolio Standard Report
pursuant to RCW 19.285.070 and WAC 480-109-210

June 1, 2018

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 2017 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 13, 2017 Regarding Eligible Renewable Resources

Attachment 2: Appendix N from PSE’s Integrated Resource Plan filed with the Commission on November 14, 2017

Attachment 3: Reporting Tool

Attachment 4: REC Sales, Confidential Version

Attachment 4: REC Sales, Redacted Version

Attachment 5: Incremental Cost Template, Confidential Version

Attachment 5: Incremental Cost Template, Redacted Version

Attachment 6: Department of Commerce EIA Workbook

Attachment 7: Apprenticeship Credit Approval Letters

Section 1. Annual Load for the Prior Two Years

	<u>2016</u>	<u>2017</u>
Delivered Load to Retail Customers (MWh)	20,448,423	21,316,397

The source of this data is the Puget Sound Energy (“PSE”) 2017 FERC Form 1, p. 301, line 10, columns d and e.

Section 2. 2018 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 2018 will be 1,879,417 MWh.

Calculation:

	<u>2016</u>	<u>2017</u>
Delivered Load to Retail Customers (MWh)	20,448,423	21,316,397
Average Load	20,882,410	
9% of Average Load	1,879,417	

Section 3. Renewable Energy Acquired To Meet 2018 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 2018 target.

As demonstrated in Attachment 1, PSE has sufficient eligible renewable resources to meet its 2018 target. PSE plans to meet its 2018 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	120,648
Eligible Wind Resources	2,185,465
Solar	37,300

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.

The following is a summary of PSE's incremental cost calculation as developed in Staff's template, attached as Attachment 5.

Incremental Cost	\$27.8M
Revenue Requirement	\$1,996,287M
Percentage	1.459%
Source of Information	Please see table below.

PSE's incremental cost is based on the average cost of eligible renewable resources. 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:

Resource	Renewable Resource	Equivalent Non-Renewable			One Year Incremental Cost	Annual MWh	Market Price/Peaker Assumptions*
		Peaker	Market	Total			
Hopkins Ridge	\$18.77	\$1.71	\$19.26	\$20.97	(\$2.20)	466,908	2004 RFP
Wild Horse	\$34.94	\$3.21	\$26.53	\$29.74	\$5.20	642,984	2006 RFP
Klondike III	\$10.27	\$0.93	\$8.98	\$9.91	\$0.36	157,680	2006 RFP
Hopkins Infill	\$1.28	\$0.17	\$1.19	\$1.36	(\$0.08)	21,024	2007 IRP
Wild Horse Expansion	\$10.03	\$0.81	\$5.09	\$5.90	\$4.14	91,980	2007 IRP
Lower Snake River I	\$70.61	\$1.69	\$48.51	\$50.20	\$20.42	897,900	2010 Trends
Snoqualmie Falls Upgrade	\$3.85	\$0.74	\$2.44	\$3.18	\$0.67	34,164	2009 Trends
Lower Baker 4	\$8.60	\$1.37	\$7.92	\$9.29	(\$0.69)	109,500	2011 IRP Base
Total					\$27.81	2,422,140	

(\$ Millions/Year)

This information appears in PSE's 2017 IRP, Appendix N, Page N-177, Figure N-145, and is provided in Attachment 2.

The incremental cost of the eligible renewable resources portfolio is \$27.81M resulting in an average cost/MWh of \$11.48. The incremental cost for the 2018 target year, based on the average cost for the portfolio of resources is \$21.6M ($\$11.48 * 1,879,417$ MWh).

The resulting ratio of this investment relative to the utility's total annual retail revenue requirement is 1.459%¹

Utilizing Staff's template, attached as Attachment 5, that calculates the incremental cost for the target based on the actual planned resources, the incremental cost for 2018 target year compliance is \$22.1M. It should be noted that the 2018 target year incremental cost calculation includes 44,300 of Vintage 2017 Recs that PSE purchased for 2018 compliance. Due to negative power market pricing, PSE wind generation resources were curtailed which impacted the level of generation at various PSE owned facilities. In order to manage ERU supply for potential CAR compliance and to ensure adequate RECs for RPS compliance, part of the curtailment strategy included purchasing REC volumes equivalent to the MWh of wind generation curtailed. The cost of these REC purchases equaled \$108,480 and has been included in the incremental costs for the target year compliance. The power costs savings associated with this strategy resulted in approximately \$252,000 of power cost savings or a net benefit to the power supply portfolio of \$144,000 (252K less 108K).

The total annual retail revenue requirement for 2018 is \$1,996.287 million.² The 2018 revenue requirement is based on the revenue requirement determined in PSE's last general rate case (UE-170033) after adjusting for Tax Cuts and Jobs Act ("Tax Reform") (Docket UE-180202).

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 2018 Renewable Energy Target.

¹ The revenue requirement ratio for 2018, considering the purchased RECs discussed above, would be 1.465%. See Attachment 5 for calculations.

² Figure reflects Revenue Requirement from PSE's 2017 General Rate Case, after adjusting for Tax Reform updates approved by the Commission in Docket UE-180202. Electric Revenue Requirement as originally approved in UE-170033 was \$2,069,159,344. Utilizing the pre-tax reform, revenue requirement results in a 1.408% revenue requirement ratio.

Section 6. 2018 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 2018 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 2018 compliance. Further details about this information can be found in Attachment 3.

2018 Compliance Plan	
	MWh or Equiv
Lower Baker Project Incremental Hydro	101,842
Snoqualmie Falls Project Incremental Hydro	18,806
Lower Snake River - Phalen Gulch (Vintage 2017)	299,266
Extra Apprenticeship Credits	59,853
Wild Horse Phase II (Vintage 2017)	99,368
Extra Apprenticeship Credits	19,874
Lower Snake River-Dodge Junction (Vintage 2017)	413,806
Extra Apprenticeship Credits	82,761
Hopkins Ridge (Vintage 2017)	329,544
Hopkins Ridge Phase II (Vintage 2017)	15,881
Wild Horse (Vintage 2017)	394,116
Various REC Purchases	44,300
Available to Meet Target	1,879,417

Data for 2018 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 2018, in advance of January 1, 2018. Eligible renewable resources that PSE may elect to use in whole or in part to meet its 2018 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 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;
- Purchased RECs associated with PSE's curtailment strategy;
- 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 2018 or 2019.

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 2016 vintages. Through March 31, 2018, the Company has not transferred title to any Vintage 2017 RECs.

RECs Sold by Year by Resource

Source	WREGIS #	Vintage					Total RECs Sold
		2012	2013	2014	2015	2016	
Wild Horse	W183	238,143	246,192	541,930	43,254	138,677	1,208,196
Wild Horse Phase II	W1364	54,206	47,386	98,496	10,000	-	210,088
Hopkins Ridge	W184	171,359	166,117	423,662	109,781	190,560	1,061,479
Hopkins Ridge Phase II	W1382	-	7,309	18,641	1,735	9,184	36,869
Klondike III	W237	58,264	68,465	133,571	60,697	62,849	383,846
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	238,199	401,270	3,657,226

Reflects REC transfers through 3/31/18.

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



MEMORANDUM

TO: Kathie Barnard, Paul Wetherbee and Chris Smith

FROM: Tricia Fischer and Chris Schaefer

DATE: December 13, 2017

SUBJECT: Requirements of Chapter 480-109-200 WAC

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.

Summary

Pursuant to the requirements of Chapter 480-109-200 WAC, we have prepared this Memorandum to document that Puget Sound Energy ("PSE") has acquired sufficient eligible renewable resources in its portfolio, by January 1, 2018, to supply at least nine percent of its 2016-2017 average load for the 2018 target year. This is consistent with the information

provided to the WUTC on November 14, 2017 in PSE's compliance filing in Docket UE-160918, PSE's 2017 Integrated Resource Plan ("IRP"). The Executive Summary of the IRP stated that, "... PSE has acquired enough eligible renewable resources and RECs to meet the requirements of the law until 2022."

The following provides detail of PSE's eligible renewable resources, load and renewable energy target.

Eligible Renewable Resources

Eligible renewable resources that PSE may elect to use in whole or in part to meet its 2018 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 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 2018 or 2019.

Total 2016 generation from Hopkins Ridge, Wild Horse, Wild Horse Expansion, Lower Snake River and Klondike III Wind Projects was approximately 2,086,524 megawatt-hours (not inclusive of the extra apprenticeship credits); similar generation may be achieved for 2017 and 2018.

These eligible renewable resources may be impacted by events beyond PSE's reasonable control, which could not be reasonably anticipated, that could prevent 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 PSE.

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 for meeting its 2018 renewable resource target. However, there may be events beyond PSE's control during calendar year 2018 which could prompt PSE to utilize one of the above mentioned alternative compliance mechanisms. Such determination will be made when PSE reports on its final 2018 compliance in the 2019 or 2020 report.

Load

As defined in the rule, "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 2016 delivered load was 20,448,423,000 kilowatt-hours (20,448,423 megawatt-hours) and the 2017 forecast load is 21,118,903,000 kilowatt-hours (21,118,903 megawatt-hours).

Consistent with WAC 480-109-210(2), based on the average of PSE's load in 2016 and 2017 and as reflected above, PSE's estimated load for purposes of meeting its 2018 target is 20,783,663 megawatt-hours.

2018 Renewable Resource Target

Pursuant to Chapter 480-109-200(1)(b) WAC, PSE's renewable resource target shall be nine percent of its 2016-2017 average load. Therefore, PSE's estimated renewable energy target for 2018 is approximately 1,870,530 megawatt-hours (nine percent of 20,783,663 megawatt-hours.) PSE expects to generate eligible renewable energy in excess of its 2018 requirement (not including any renewable energy credits generated in 2017 that PSE may elect to use for its 2018 requirement). PSE may choose to purchase out of state eligible RECs to meet annual compliance targets and use PSE-owned and Washington located resources for other purposes such as compliance under the Clean Air Rule.

PSE will report on the specific renewable energy credits produced and to be retired for final compliance with the 2018 target in either its 2019 or 2020 annual report, and reserves the right to submit renewable energy credits from the resources reported here or to substitute with renewable energy credits produced from 2017 to 2019 by other eligible renewable resources or with 2018 generation from eligible renewable resources that have not been converted to renewable energy credits.

Conclusion

PSE has acquired enough eligible renewable resources or renewable energy credits to meet the estimated renewable energy target for 2018.

PSE's expected 2018 eligible renewable resource generation of 2,224,490 megawatt-hours, not including extra apprenticeship credits, exceeds its 2018 renewable resource target of 1,870,530 megawatt-hours.



9. 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 was 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.”

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).



“Eligible Renewable Resources”

Figure N-145: Resources that Meet RCW 19.285 Definition of Eligible Renewable Resources

	Nameplate (MW)	Annual Energy (aMW)	Commercial Online Date	Market Price/Peaker Assumptions	Capacity Credit Assumption
Hopkins Ridge	149.4	53.3	Dec-05	2004 RFP	20%
Wild Horse	228.6	73.4	Dec-06	2006 RFP	17.20%
Klondike III	50	18	Dec-07	2006 RFP	15.60%
Hopkins Infill	7.2	2.4	Dec-07	2007 IRP	20%
Wild Horse Expansion	44	10.5	Dec-09	2007 IRP	15%
Lower Snake River I	342.7	102.5	Apr-12	2010 Trends	5%
Snoqualmie Upgrades	6.1	3.9	Mar-13	2009 Trends	95%
Lower Baker Upgrades	30	12.5	May-13	2011 IRP Base	95%
Generic Solar 2022	266	70.8	Jan-22	2017 IRP Base	0%
Generic Solar 2024	112	29.8	Jan-24	2017 IRP Base	0%
Generic Solar 2032	25	6.7	Jan-32	2017 IRP Base	0%
Generic Solar 2033	59	15.7	Jan-33	2017 IRP Base	0%
Generic Solar 2037	25	6.6	Jan-37	2017 IRP Base	0%

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 the 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-146 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-146: 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-147: 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-148:: 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-149: 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

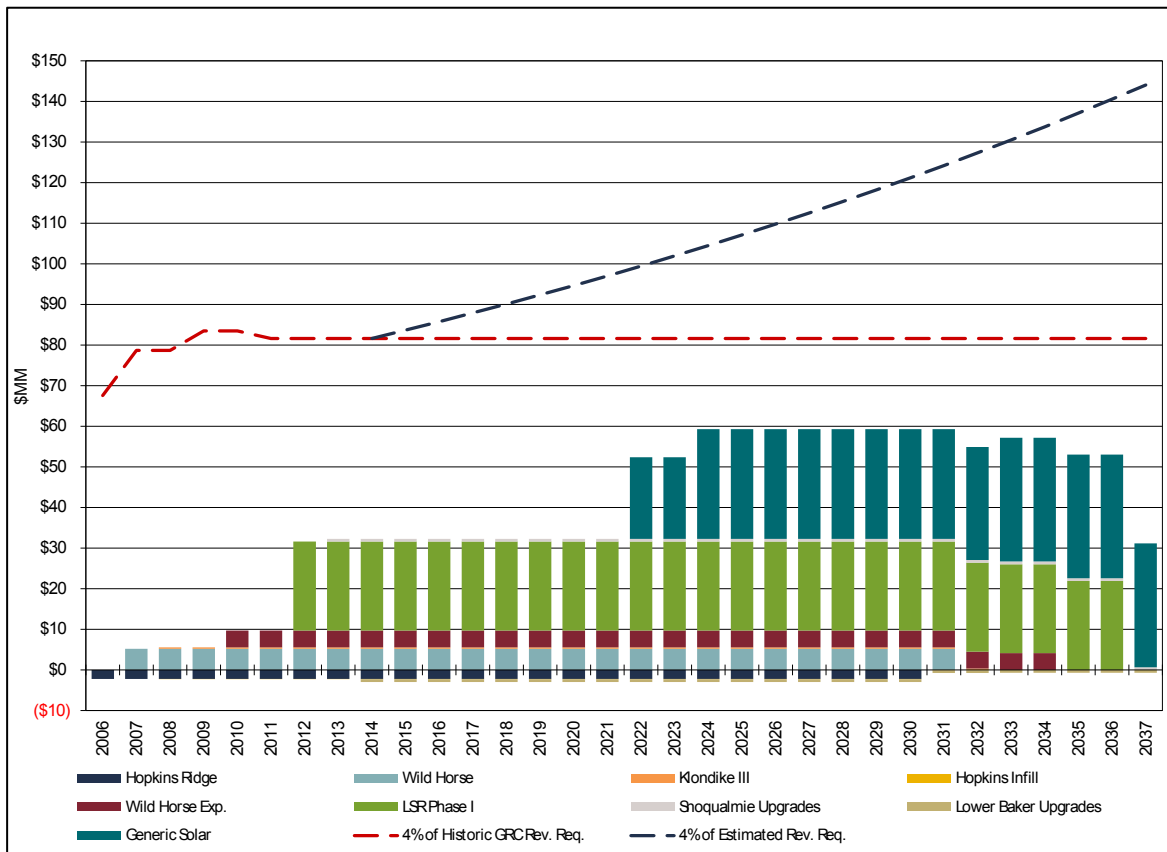
We chose to spread the incremental cost over 25 years since that is the depreciable life of a wind project used by PSE. The payment of \$56 Million over 25 years comes to \$5.2 Million per year using the 7.01 percent discount rate.



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-150 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-150: 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:

Puget Sound Energy

Reporting Date:

June 1, 2018

RCW 19.285 Compliance Need

Delivered Load to Retail Customers (MWh)
WA State RCW 19.285 Requirement
Quantity Required for Compliance

	2014	2015	2016	2017	2018
Delivered Load to Retail Customers (MWh)	20,568,949	20,509,764	20,448,423	21,316,397	Not Applicable
WA State RCW 19.285 Requirement	3%	3%	9%	9%	9%
Quantity Required for Compliance		626,663	1,848,542	1,843,118	1,879,417

Eligible Quantity Acquired

Qualifying MWh Allocated to WA
Quantity from Non REC Eligible Generation
Total Quantity Available for RCW 19.285 Compliance

	2014	2015	2016	2017	2018
Qualifying MWh Allocated to WA	2,156,021	1,931,011	2,205,548	1,934,234	333,973
Quantity from Non REC Eligible Generation	196,970	166,886	195,475	162,488	17,906
Total Quantity Available for RCW 19.285 Compliance	2,352,991	2,097,897	2,401,023	2,096,722	351,879

Sales and Transfers

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

	2014	2015	2016	2017	2018
Quantity of RECs Sold	(1,616,355)	(238,199)	(401,270)	-	-
Bonus Incentives Transferred	-	-	-	-	-
Bonus Incentives Not Realized	(99,710)	(4,546)	-	-	-
Total Sold / Transferred / Unrealized	(1,716,065)	(242,745)	(401,270)	-	-

Adjustments

2014 Surplus Applied to 2015
2015 Surplus Applied to 2014
2015 Surplus Applied to 2016
2016 Surplus Applied to 2015
2016 Surplus Applied to 2017
2017 Surplus Applied to 2016
2017 Surplus Applied to 2018
2018 Surplus Applied to 2017
Net Surplus Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015	(588,088)	588,088			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		(1,757,710)	1,757,710		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			(1,880,729)	1,880,729	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				(1,991,534)	1,991,534
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	658,708	(1,169,622)	(123,018)	(110,805)	1,991,534

Adjustment for Events Beyond Control

	-	-	-	-	-
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RCW 19.285 Compliance Surplus / (Deficit)

	2014	2015	2016	2017	2018
RCW 19.285 Compliance Surplus / (Deficit)	23,506	58,866	28,192	142,798	463,996

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	W4865	Water (Incremental Hydro)	Not Eligible	---	
Snoqualmie Falls Project	W4866	Water (Incremental Hydro)	Not Eligible	---	
Klondike 1--REC only**	W238	Wind	Not Eligible	---	
Stateline WA Wind--REC Only **	W248	Wind	Not Eligible	---	
Horse Butte Wind--REC only **	W3260	Wind	Not Eligible	---	
Grand View 5 East--REC Only**	W5069	Solar	Not Eligible	---	
Grand View 2 West--REC Only **	W5070	Solar	Not Eligible	---	
ID Solar 1 -- REC Only **	W5076	Solar	Not Eligible	---	
Condon Wind Power -- REC Only **	W774	Wind	Not Eligible	---	
Condon Wind Power Phase II -- REC Only *	W833	Wind	Not Eligible	---	
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

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Wild Horse	546,457	512,757	564,671	516,263	45,509
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	546,457	512,757	564,671	516,263	45,509

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-

REC Sales / Transfers

	2014	2015	2016	2017	2018
Quantity of RECs Sold	541,930	43,254	138,677	-	-
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	541,930	43,254	138,677	-	-

Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015	4,527	4,527			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		469,503	469,503		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			425,994	425,994	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				516,263	516,263
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	(4,527)	(464,976)	43,509	(90,269)	516,263

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

	-	4,527	469,503	425,994	561,772
Actual 2016 RPS Compliance Retirements			469,503		

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	2017	2018
Total MWh Produced / Purchased from Hopkins Ridge	423,662	348,166	398,058	329,544	40,694
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	423,662	348,166	398,058	329,544	40,694

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
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	2017	2018
Quantity of RECs Sold	423,662	109,781	190,560	-	-
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	423,662	109,781	190,560	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
Net Surplus Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015	-	-			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		238,385	238,385		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			207,498	207,498	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				329,544	329,544
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	-	(238,385)	30,887	(122,046)	329,544

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control					
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Contribution to RCW 19.285 Compliance

Actual2016 RPS Compliance Retirements

Contribution to RCW 19.285 Compliance		-	238,385	207,498	370,238
Actual2016 RPS Compliance Retirements			238,385		

Facility Name:

Klondike III

May be used for Target Year 2018 Compliance

MWh Allocated to WA Compliance

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Klondike III	133,571	121,605	127,238	110,618	35,631
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	133,571	121,605	127,238	110,618	35,631

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-

REC Sales / Transfers

	2014	2015	2016	2017	2018
Quantity of RECs Sold	133,571	60,697	62,849	-	-
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	133,571	60,697	62,849	-	-

Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015	-	-			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		60,908	60,908		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			64,389	64,389	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				110,618	110,618
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	-	(60,908)	(3,481)	(46,229)	110,618

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

	-	-	60,908	64,389	146,249
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Actual 2016 RPS Compliance Retirements

32,714

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	2017	2018
Total MWh Produced / Purchased from Wild Horse Phase II	105,180	98,693	108,686	99,368	8,759
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	105,180	98,693	108,686	99,368	8,759

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	21,036	19,739	21,737	19,874	1,752
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	21,036	19,739	21,737	19,874	1,752

REC Sales / Transfers

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

	2014	2015	2016	2017	2018
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

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
 Net Surplus Adjustments

	2014	2015	2016	2017	2018
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		-	-		
2016 Surplus Applied to 2017			130,423	130,423	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				119,242	119,242
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	(8,021)	(98,411)	(23,992)	11,182	119,242

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control					
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Contribution to RCW 19.285 Compliance

Actual RPS Compliance Retirements

Contribution to RCW 19.285 Compliance	-	8,021	106,432	130,423	129,752
Actual RPS Compliance Retirements			106,432		

Facility Name:

Hopkins Ridge Phase II

MWh Allocated to WA Compliance

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Hopkins Ridge Phase II	18,641	16,614	19,184	15,881	1,961
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	18,641	16,614	19,184	15,881	1,961

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-

REC Sales / Transfers

	2014	2015	2016	2017	2018
Quantity of RECs Sold	18,641	1,735	9,184	-	-
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	18,641	1,735	9,184	-	-

Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015	-	-			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		14,879	14,879		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			10,000	10,000	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				15,881	15,881
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	-	(14,879)	4,879	(5,881)	15,881

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

	-	-	14,879	10,000	17,842
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Actual RPS Compliance Retirements

14,879

Facility Name:

Lower Snake River - Dodge Junction

MWh Allocated to WA Compliance

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Lower Snake River - Dodge Junction	500,349	421,560	500,734	413,806	48,766
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	500,349	421,560	500,734	413,806	48,766

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	100,070	84,312	100,147	82,761	9,753
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	100,070	84,312	100,147	82,761	9,753

REC Sales / Transfers

	2014	2015	2016	2017	2018
Quantity of RECs Sold	230,247	-	-	-	-
Bonus Incentives Transferred	-	-	-	-	-
Bonus Incentives Not Realized	46,049	-	-	-	-
Total Sold / Transferred / Unrealized	276,296	-	-	-	-

Adjustments

	2014	2015	2016	2017	2018
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		-	-		
2016 Surplus Applied to 2017			600,881	600,881	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				496,567	496,567
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	(324,122)	(181,750)	(95,009)	104,314	496,567

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

	-	324,122	505,872	600,881	555,086
Actual RPS Compliance Retirements		323,934	323,934		

Lower Snake River - Phalen Gulch

MWh Allocated to WA Compliance

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Lower Snake River - Phalen Gulch	379,323	314,175	367,953	299,266	32,005
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	379,323	314,175	367,953	299,266	32,005

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	75,865	62,835	73,591	59,853	6,401
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	75,865	62,835	73,591	59,853	6,401

REC Sales / Transfers

	2014	2015	2016	2017	2018
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

	2014	2015	2016	2017	2018
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		-	-		
2016 Surplus Applied to 2017			441,544	441,544	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				359,119	359,119
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	(251,418)	(110,314)	(79,812)	82,424	359,119

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

	-	251,418	361,732	441,544	397,525
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Actual RPS Compliance Retirements

205,228 361,732

Facility Name:

Wanapum Fish Bypass

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	2017	2018
		Not Eligible	Not Eligible	Not Eligible	Not Eligible
	100%	100%	100%	100%	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	2017	2018
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

REC Sales / Transfers

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

	2014	2015	2016	2017	2018
	-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
Net Surplus Adjustments

	2014	2015	2016	2017	2018
	-	-			
	-	-			
		-	-		
		-	-	-	
			-	-	
				-	-
				-	-
	-	-	-	-	-

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

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

		-	-	-	-
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Facility Name:

Baker River Project

MWh Allocated to WA Compliance

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Baker River Project	121,480	308,611	358,833	313,000	359,865
Percent of MWh Qualifying Under RCW 19.285	28.3%	28.3%	28.3%	28.3%	28.3%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	34,379	87,337	101,550	88,579	101,842

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-

REC Sales / Transfers

	2014	2015	2016	2017	2018
Quantity of RECs Sold					
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	-	-	-	-	-

Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015		-			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		-	-		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			-	-	
2017 Surplus Applied to 2016			-	-	
2017 Surplus Applied to 2018				-	-
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	-	-	-	-	-

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

Actual RPS Compliance Retirements	34,379	87,337	101,550	88,579	101,842
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Baker estimated RPS Eligible generation based on Incremental Hydro Calculation Method 2. Baker Project WREGIS Registration was completed June, 2016

Facility Name:

Snoqualmie Falls Project

MWh Allocated to WA Compliance

	2014	2015	2016	2017	2018
Total MWh Produced / Purchased from Snoqualmie Falls Project	170,104	118,871	205,584	195,400	221,251
Percent of MWh Qualifying Under RCW 19.285	8.5%	8.5%	8.5%	8.5%	8.5%
Percent of Qualifying MWh Allocated to WA	100%	100%	100%	100%	100%
Eligible MWh Available for RCW 19.285 Compliance	14,459	10,104	17,475	16,609	18,806

Non REC Eligible Generation

	2014	2015	2016	2017	2018
Extra Apprenticeship Credit	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-

REC Sales / Transfers

	2014	2015	2016	2017	2018
Quantity of RECs Sold					
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	-	-	-	-	-

Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015		-			
2015 Surplus Applied to 2014	-				
2015 Surplus Applied to 2016		-	-		
2016 Surplus Applied to 2015		-			
2016 Surplus Applied to 2017			-	-	
2017 Surplus Applied to 2016			-		
2017 Surplus Applied to 2018				-	-
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	-	-	-	-	-

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

	14,459	10,104	17,475	16,609	18,806
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Actual Retirement

	14,459	10,104	17,475
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Snoqualmie Falls Project estimated RPS Eligible generation based on Incremental Hydro Calculation Method 2. Snoqualmie Falls Project WREGIS Registration was completed June, 2016

Facility Name:

Klondike 1--REC only**

MWh Allocated to WA Compliance

Purchased from Klondike 1--REC only**
 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	2017	2018
			968	
			100%	
-	-	-	968	

Non REC Eligible Generation

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

2014	2015	2016	2017	2018
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

REC Sales / Transfers

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

2014	2015	2016	2017	2018
-	-	-		

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017

2014	2015	2016	2017	2018
-	-			
-	-			
	-	-		
	-	-		
		-	-	
		-	968	968
			-	-

Net Surplus Adjustments

- - - (968) 968

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

-	-	-	-	968
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Facility Name:

Stateline WA Wind--REC Only **

MWh Allocated to WA Compliance

Purchased from Stateline WA Wind--REC Only **
 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	2017	2018
				3,890	
				100%	
				100%	
	-	-	-	3,890	

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

REC Sales / Transfers

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

	2014	2015	2016	2017	2018
	-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
Net Surplus Adjustments

	2014	2015	2016	2017	2018
	-	-			
	-	-			
		-	-		
		-	-	-	
			-	-	
				3,890	3,890
				-	-
	-	-	-	(3,890)	3,890

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

	-	-	-	-	3,890
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Facility Name:

Horse Butte Wind--REC only **

MWh Allocated to WA Compliance

Purchased from Horse Butte Wind--REC only **
 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	2017	2018
			27	
			100%	
			100%	
-	-	-	27	-

Non REC Eligible Generation

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

2014	2015	2016	2017	2018
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

REC Sales / Transfers

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

2014	2015	2016	2017	2018
-	-	-		

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
 Net Surplus Adjustments

2014	2015	2016	2017	2018
-	-			
-	-			
	-	-		
	-	-		
		-	-	
		-	-	
			27	27
			-	-
-	-	-	(27)	27

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

-	-	-	-	27
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Facility Name:

Grand View 5 East--REC Only**

MWh Allocated to WA Compliance

Purchased from Grand View 5 East--REC Only**
 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	2017	2018
Purchased from Grand View 5 East--REC Only**				6,741	
Percent of MWh Qualifying Under RCW 19.285				100%	
Percent of Qualifying MWh Allocated to WA				100%	
Eligible MWh Available for RCW 19.285 Compliance	-	-	-	6,741	-

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
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	2017	2018
Quantity of RECs Sold					
Bonus Incentives Transferred					
Bonus Incentives Not Realized					
Total Sold / Transferred / Unrealized	-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
Net Surplus Adjustments

	2014	2015	2016	2017	2018
2014 Surplus Applied to 2015	-	-			
2015 Surplus Applied to 2014	-	-			
2015 Surplus Applied to 2016		-	-		
2016 Surplus Applied to 2015		-	-		
2016 Surplus Applied to 2017			-	-	
2017 Surplus Applied to 2016				-	
2017 Surplus Applied to 2018				6,741	6,741
2018 Surplus Applied to 2017				-	-
Net Surplus Adjustments	-	-	-	(6,741)	6,741

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control					
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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

Contribution to RCW 19.285 Compliance	-	-	-	-	6,741
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Facility Name:

Grand View 2 West--REC Only **

MWh Allocated to WA Compliance

Purchased from Grand View 2 West--REC Only **
 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	2017	2018
				18,511	
				100%	
				100%	
	-	-	-	18,511	-

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

REC Sales / Transfers

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

	2014	2015	2016	2017	2018
	-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
 Net Surplus Adjustments

	2014	2015	2016	2017	2018
	-	-			
	-	-			
		-	-		
		-	-		
			-	-	
			-	-	
				18,511	18,511
				-	-
	-	-	-	(18,511)	18,511

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

	-	-	-	-	18,511
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Facility Name:

ID Solar 1 -- REC Only **

MWh Allocated to WA Compliance

Purchased from ID Solar 1 -- REC Only **
 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	2017	2018
			12,048	
			100%	
			100%	
-	-	-	12,048	-

Non REC Eligible Generation

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

2014	2015	2016	2017	2018
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

REC Sales / Transfers

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

2014	2015	2016	2017	2018
-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
Net Surplus Adjustments

2014	2015	2016	2017	2018
-	-			
-	-			
	-	-		
	-	-	-	
		-	-	
			-	
			12,048	12,048
			-	-
-	-	-	(12,048)	12,048

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

-	-	-	-	12,048
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Facility Name:

Condon Wind Power -- REC Only **

MWh Allocated to WA Compliance

Purchased from Condon Wind Power -- REC Only **
 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	2017	2018
				1,046	
				100%	
				100%	
	-	-	-	1,046	-

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

REC Sales / Transfers

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

	2014	2015	2016	2017	2018
	-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
 Net Surplus Adjustments

	2014	2015	2016	2017	2018
	-	-			
	-	-			
		-	-		
		-	-		
			-	-	
			-	-	
				1,046	1,046
				-	-
	-	-	-	(1,046)	1,046

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

	-	-	-	-	1,046
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Facility Name:

Condon Wind Power Phase II -- REC Only **

MWh Allocated to WA Compliance

Purchased from Condon Wind Power Phase II -- REC Only **
 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	2017	2018
				1,069	
				100%	
				100%	
	-	-	-	1,069	-

Non REC Eligible Generation

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

	2014	2015	2016	2017	2018
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

REC Sales / Transfers

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

	2014	2015	2016	2017	2018
	-	-	-	-	-

Adjustments

2014 Surplus Applied to 2015
 2015 Surplus Applied to 2014
 2015 Surplus Applied to 2016
 2016 Surplus Applied to 2015
 2016 Surplus Applied to 2017
 2017 Surplus Applied to 2016
 2017 Surplus Applied to 2018
 2018 Surplus Applied to 2017
Net Surplus Adjustments

	2014	2015	2016	2017	2018
	-	-			
	-	-			
		-	-		
		-	-		
			-	-	
				-	
				1,069	1,069
				-	-
	-	-	-	(1,069)	1,069

Adjustment for Events Beyond Control

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Contribution to RCW 19.285 Compliance

** REC purchase only, no generation provided with purchase

	-	-	-	-	1,069
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PUGET SOUND ENERGY 2018 RPS REPORT

Compliance Contribution by Generation Type

	2014	2015	2016	2017	2018
Wind	-	588,088	1,757,710	1,880,729	2,185,465
Solar	-	-	-	-	37,300
Water (Incremental Hydro)		97,441	119,024	105,188	120,648
Biomass	-	-	-	-	-
Geothermal	-	-	-	-	-
Landfill Gas	-	-	-	-	-
Sewage Treatment Gas	-	-	-	-	-
Wave, Ocean, Tidal	-	-	-	-	-
Biodiesel Fuel	-	-	-	-	-

Facility Name	Facility Type	2014	2015	2016	2017	2018
Wild Horse	Wind	-	4,527	469,503	425,994	561,772
Hopkins Ridge	Wind	-	-	238,385	207,498	370,238
Klondike III	Wind	-	-	60,908	64,389	146,249
Wild Horse Phase II	Wind	-	8,021	106,432	130,423	129,752
Hopkins Ridge Phase II	Wind	-	-	14,879	10,000	17,842
Lower Snake River - Dodge Junction	Wind	-	324,122	505,872	600,881	555,086
Lower Snake River - Phalen Gulch	Wind	-	251,418	361,732	441,544	397,525
Wanapum Fish Bypass	Water (Incremental Hydro)	-	-	-	-	-
Baker River Project	Water (Incremental Hydro)		87,337	101,550	88,579	101,842
Snoqualmie Falls Project	Water (Incremental Hydro)		10,104	17,475	16,609	18,806
Klondike 1--REC only**	Wind	-	-	-	-	968
Stateline WA Wind--REC Only **	Wind	-	-	-	-	3,890
Horse Butte Wind--REC only **	Wind	-	-	-	-	27
Grand View 5 East--REC Only**	Solar	-	-	-	-	6,741
Grand View 2 West--REC Only **	Solar	-	-	-	-	18,511
ID Solar 1 -- REC Only **	Solar	-	-	-	-	12,048

Condon Wind Power -- REC Only *	Wind	-	-	-	-	1,046
Condon Wind Power Phase II -- RE	Wind	-	-	-	-	1,069
Facility 19		-	-	-	-	-
Facility 20		-	-	-	-	-
Facility 21		-	-	-	-	-
Facility 22		-	-	-	-	-
Facility 23		-	-	-	-	-
Facility 24		-	-	-	-	-
Facility 25		-	-	-	-	-
Facility 26		-	-	-	-	-
Facility 27		-	-	-	-	-
Facility 28		-	-	-	-	-
Facility 29		-	-	-	-	-
Facility 30		-	-	-	-	-

Puget Sound Energy - 2018 RPS Report


DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160

REDACTED VERSION

Attachment 4

DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160

REC Revenues by Year by Resource

Source	WREGIS #	Vintage				Total
		2012	2013	2014	2015	2016 REC Revenues
Wild Horse	W183					
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 - 2018 RPS Report

Deferred REC Revenue Proceeds

A/C 25400221

Vintages 2012 through 2016

Attachment 4

DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160

REDACTED

Facility	Transaction				REC	Total Qty	Total REC		
	Vintage	Mo/Yr	WREGIS #	Qty	Revenues		Revenues		
Wild Horse Phase II	2012-01WH2	May-12	W1364	11,460	REDACTED	54,206	REDACTED	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					
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	2013-10WH2	Jan-15	W1364	1,600					
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	2013-12WH2	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	2014-06WH2	Aug-15	W1364	3,314					
Wild Horse Phase II	2014-07WH2	Apr-15	W1364	5,008					
Wild Horse Phase II	2014-08WH2	Mar-16	W1364	290					
Wild Horse Phase II	2014-09WH2	Apr-15	W1364	6,626					
Wild Horse Phase II	2014-09WH2	Dec-15	W1364	1,440					
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	2014-12WH2	Dec-15	W1364	500					
Wild Horse Phase II	2014-12WH2	Dec-15	W1364	7,678					
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	

PUGET SOUND ENERGY - 2018 RPS Report
Deferred REC Revenue Proceeds
 A/C 25400221

Attachment 4
DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160
REDACTED

Vintages 2012 through 2016

Facility	Transaction			Qty	REC	Total Qty	Total REC		
	Vintage	Mo/Yr	WREGIS #		Revenues		Revenues		
Hopkins Ridge Phase II	2013-09HR2	Oct-14	W1382	1,486	REDACTED	1,735	REDACTED	2015 Vintage	
Hopkins Ridge Phase II	2013-10HR2	Oct-14	W1382	819		9,184		2016 Vintage	
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					
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					
Hopkins Ridge Phase II	2016-07HR2	Mar-18	W1382	1,583					
Hopkins Ridge Phase II	2016-08HR2	Mar-18	W1382	1,129					
Hopkins Ridge Phase II	2016-09HR2	Mar-18	W1382	1,478					
Hopkins Ridge Phase II	2016-10HR2	Mar-18	W1382	1,724					
Hopkins Ridge Phase II	2016-11HR2	Mar-18	W1382	1,705					
Hopkins Ridge Phase II	2016-12HR2	Mar-18	W1382	1,565					
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		43,254		2015 Vintage	
Wild Horse	2012-10WH	Dec-13	W183	45,454		138,677		2016 Vintage	
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					

PUGET SOUND ENERGY - 2018 RPS Report

Deferred REC Revenue Proceeds

A/C 25400221

Vintages 2012 through 2016

Attachment 4

DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160

REDACTED

Facility	Transaction			Qty	REC	Total Qty	Total REC
	Vintage	Mo/Yr	WREGIS #		Revenues		Revenues
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			
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	REDACTED		REDACTED
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	2014-03WH	Apr-15	W183	160			
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	2014-06WH	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	2014-10WH	Dec-15	W183	882			
Wild Horse	2014-11WH	Jun-15	W183	30,000			
Wild Horse	2014-11WH	Jan-16	W183	24,038			
Wild Horse	2014-11WH	Feb-16	W183	1,653			
Wild Horse	2014-12WH	May-15	W183	20,000			
Wild Horse	2014-12WH	Dec-15	W183	22,000			
Wild Horse	2014-12WH	Mar-16	W183	883			
Wild Horse	2015-07WH	Mar-17	W183	43,254			
Wild Horse	2016-07WH	Dec-17	W183	39,127			
Wild Horse	2016-07WH	Dec-17	W183	4,603			
Wild Horse	2016-07WH	Feb-18	W183	4,837			
Wild Horse	2016-08WH	Feb-18	W183	19,294			
Wild Horse	2016-08WH	Mar-18	W183	17,912			

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Facility	Transaction				REC	Total Qty	Total REC
	Vintage	Mo/Yr	WREGIS #	Qty	Revenues		Revenues
Wild Horse	2016-09WH	Mar-18	W183	50,678			
Wild Horse	2016-10WH	Mar-18	W183	2,226			
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		109,781	2015 Vintage
Hopkins Ridge	2012-10HR	Nov-13	W184	833		190,560	2016 Vintage
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	2014-07HR	Jan-15	W184	11,371			
Hopkins Ridge	2014-08HR	Oct-14	W184	5,970			
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			
Hopkins Ridge	2015-07HR	Mar-17	W184	33,651			
Hopkins Ridge	2015-08HR	Mar-17	W184	32,313			

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Vintages 2012 through 2016

Facility	Transaction				REC	Total Qty	Total REC
	Vintage	Mo/Yr	WREGIS #	Qty	Revenues		Revenues
Hopkins Ridge	2015-09HR	Mar-17	W184	8,284			
Hopkins Ridge	2016-07HR	Nov-17	W184	32,841			
Hopkins Ridge	2016-08HR	Nov-17	W184	23,440			
Hopkins Ridge	2016-09HR	Nov-17	W184	30,662			
Hopkins Ridge	2016-10HR	Nov-17	W184	35,770			
Hopkins Ridge	2016-11HR	Nov-17	W184	14,438			
Hopkins Ridge	2016-11HR	Feb-18	W184	20,940			
Hopkins Ridge	2016-12HR	Feb-18	W184	32,469			
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		60,697	2015 Vintage
Klondike III	2012-11K3	Oct-13	W237	4,082	REDACTED	62,849	2016 Vintage
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			
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	2014-07K3	Oct-14	W237	14,575			
Klondike III	2014-08K3	Oct-14	W237	13,120			

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Vintages 2012 through 2016

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REDACTED

Facility	Transaction				REC	Total Qty	Total REC
	Vintage	Mo/Yr	WREGIS #	Qty	Revenues		Revenues
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			
Klondike III	2015-07K3	Feb-17	W237	17,267			
Klondike III	2015-08K3	Feb-17	W237	10,233			
Klondike III	2015-08K3	Mar-17	W237	4,674			
Klondike III	2015-09K3	Mar-17	W237	10,578			
Klondike III	2016-07K3	Nov-17	W237	17,398			
Klondike III	2016-08K3	Nov-17	W237	13,079			
Klondike III	2016-09K3	Nov-17	W237	12,312			
Klondike III	2016-10K3	Nov-17	W237	6,457	REDACTED		REDACTED
Klondike III	2016-11K3	Nov-17	W237	5,775			
Klondike III	2016-12K3	Nov-17	W237	7,828			
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			
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			

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Deferred REC Revenue Proceeds

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REDACTED

Facility	Transaction			Qty	REC	Total Qty	Total REC
	Vintage	Mo/Yr	WREGIS #		Revenues		Revenues
Lower Snake River-Phalen Gulch	2013-10PG	Oct-14	W2670	16,782			
Lower Snake River-Phalen Gulch	2013-11PG	Oct-14	W2670	27,555			
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	REDACTED		REDACTED
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				3,657,226		3,657,226	

DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160

REDACTED VERSION

480-109-210(2)(a)(i) Utility must make a one-time calculation of incremental cost for each eligible resource at the time of acquisition or, for historic acquisitions, the best information available at the time of acquisition
 Formula **One Time Calculation** of Incremental Cost:

Energy-Levelized Incremental Cost:
 [Levelized Cost Eligible Renewable Resource – Levelized Cost Alternative]

Capacity-Levelized Incremental Cost:
 [Levelized Cost Eligible Renewable Resource – Levelized Cost Alternative]

Energy + Capacity = Incremental Cost

*Note:
 Levelized cost
 of eligible
 renewable
 resource
 should include
 integration*

Resource	ENERGY	\$	Energy	Capacity	Capacity	\$	\$
	Levelized Cost Eligible Renewable Resource (\$/REC/MWh)	Total Annual Cost (\$)	Levelized Cost Alternative (\$/MWh)	Levelized Cost Alternative (\$/kW-yr)	Total Alternative Cost (\$)	Incremental Cost (\$)	Washington Share
Baker River Project - Lower Baker	78.54	8,600,000	7.92	120	9,290,000	(690,000)	(690,000)
Snoqualmie Falls - Snoqualmie Fall	112.69	3,850,000	2.44	65	3,180,000	670,000	670,000
Wild Horse - Wild Horse	54.34	34,940,000	26.53	281	29,740,000	5,200,000	5,200,000
Hopkins Ridge - Hopkins Ridge	40.20	18,770,000	19.26	150	20,970,000	(2,200,000)	(2,200,000)
Wild Horse - Wild Horse - Phase II	109.05	10,030,000	5.09	71	5,900,000	4,130,000	4,130,000
Hopkins Ridge - Hopkins Ridge Pha	60.88	1,280,000	1.19	15	1,360,000	(80,000)	(80,000)
Lower Snake River - Dodge Junctio	78.63	39,330,000	48.51	148	27,960,000	11,370,000	11,370,000
Lower Snake River - Phalen Gulch	78.65	31,280,000	48.51	148	22,230,000	9,050,000	9,050,000
Klondike III - Klondike Wind Power	65.13	10,270,000	8.98	81	9,910,000	360,000	360,000
						-	-
						-	-
Total Renewable Resource Cost		158,350,000			130,540,000	27,810,000	27,810,000

Note 1: WAC 480-109-210 (2) (G): Legacy resources. Any eligible resource that the utility acquired prior to March 31, 1999, is deemed to have an incremental cost of zero.

Washington Share:	100.00%
ALL RESOURCES TOTAL INCREMENTAL COST = ENERGY + CAPACITY	27,810,000

2018 Estimated Data: Annual Calculation of Revenue Requirement Ratio

480-109-210(2)(a)(ii) Utility must annually calculate its revenue requirement ratio for 1) All Resources 2) Required Resources Target Year

Formula **Annual Calculation** of Incremental Cost (Revenue Requirement Ratio):

1) Total Incremental Cost All* Resources:

{[sum of incremental costs of All* eligible resources + cost of unbundled RECs] - [revenue RECs]} / annual revenue requirement

**required because of excess generation, Avista needs to report 2 incremental costs*

2) Total Incremental Cost Required Resources for Target Year:

{[sum of incremental costs of Target Year* eligible resources used for target year compliance + cost of unbundled RECs] - [revenue RECs]} / annual revenue requirement

Resource--Washington Only	ALL AVAILABLE RESOURCES ESTIMATED			TARGET YEAR: FORECAST SUBJECT TO CHANGE		
	sum of incremental costs of all eligible resources	RECs purchased	Revenue from REC sales/Note 1	sum of incremental costs of all eligible resources	RECs purchased	Revenue from REC sales/Note 1
Baker River Project - Lower Baker Unit 3	(690,000)			(690,000)		
Snoqualmie Falls - Snoqualmie Falls Units 1-4	670,000			670,000		
Wild Horse - Wild Horse	5,200,000			5,200,000		
Hopkins Ridge - Hopkins Ridge	(2,200,000)			(2,200,000)		
Wild Horse - Wild Horse - Phase II	4,130,000			4,130,000		
Hopkins Ridge - Hopkins Ridge Phase II	(80,000)			(80,000)		
Lower Snake River - Dodge Junction - LSR-Dodge	11,370,000			11,370,000		
Lower Snake River - Phalen Gulch - LSR-Phalen	9,050,000			9,050,000		
Klondike III - Klondike Wind Power III LLC	360,000			360,000		
Various REC purchases-(Note 4)	0			0	0	0
	0			0		
	0			0		
	0			0		
Total	27,810,000	0	0	27,810,000	0	0
Total WA Only Resources	27,810,000	0	0	27,810,000	0	0

	0	0	0	0	0	0
Total WA Share of Costs	27,810,000	0	0	27,810,000	0	0

Annual Revenue Requirement (most recent rate case) (Note 3)	1,996,287,283	1,996,287,283
CALCULATION 1 (Note 2):	29,134,145	CALCULATION 2 (Note 2 & Note 4): 29,139,374
	1.459%	1.460%

NOTES

Note 1: Benefit of REC sales during 2012 to 2017 period were considered and included in original one time calculation of incremental costs, therefore would not be appropriate to include again in annual costs. Additionally, no vintage 2017 RECS sold to date.

Note 2: To calculate revenue requirements all costs/revenues are multiplied by 1.047614 to account for Washington's share Excise Tax, Uncollectibles and Commission Fees.

Note 3: Figure reflects Revenue Requirement from PSE's 2017 General Rate Case, after adjusting for Tax Cuts and Job Acts ("Tax Reform") updates approved by the Commission in Docket UE-18020. Electric Revenue Requirement as originally approved in UE-170033 was \$2,069,159,344. Utilizing the pre-tax reform revenue requirement results in a 1.408% revenue requirement ratio.

Note 4: Due to negative power market pricing, PSE wind generation resources were curtailed which impacted the level of generation at various PSE owned facilities.

In order to manage ERU supply for potential CAR compliance and to ensure adequate RECs for RPS compliance, part of the curtailment strategy included purchasing REC volume equivalent to the MWh of wind generation curtailed. The power cost savings associated with the strategy resulted in approximately \$252,000, or a net benefit of \$144,000 (\$252k - \$108k).

(iii)(A) & (B) Annual Reporting Summary Data: 2018

Utility must (A) report its total incremental cost as a dollar amount and in dollars per megawatt-hour of renewable energy generated by all eligible renewable resources in the calculation (a)(i) of this subsection; and (B) multiply the dollars per megawatt-hour cost calculated in (a)(iii)(A) of this subsection by the number of megawatt-hours needed for target year compliance.

2018

Resource	(A)			(B)	
	Total Incremental Cost (as dollar \$ amt.)	MWh	Total Incremental Cost (\$/MWh)	Number of Megawatt-hours Needed for Target Year Compliance	Total Incremental Cost (\$/MWh) Multiplied by Number of Megawatt-hours Needed for Target Year Compliance
Baker River Project - Lower Baker Unit 3	(690,000)	109,500	\$ (6.30)	101,842	(641,744)
Snoqualmie Falls - Snoqualmie Falls Units 1-4	670,000	34,164	\$ 19.61	18,806	368,810
Wild Horse - Wild Horse	5,200,000	642,984	\$ 8.09	431,416	3,488,988
Hopkins Ridge - Hopkins Ridge	(2,200,000)	466,908	\$ (4.71)	329,544	(1,552,762)
Wild Horse - Wild Horse - Phase II **	4,130,000	91,980	\$ 44.90	99,368	4,461,729
Hopkins Ridge - Hopkins Ridge Phase II	(80,000)	21,024	\$ (3.81)	15,881	(60,430)
Lower Snake River - Dodge Junction - LSR-Dodge Junction**	11,370,000	500,172	\$ 22.73	413,806	9,406,713
Lower Snake River - Phalen Gulch - LSR-Phalen Gulch**	9,050,000	397,728	\$ 22.75	299,266	6,809,572
Klondike III - Klondike Wind Power III LLC	360,000	157,680	\$ 2.28		-
Various REC Purchases (Note 1))			\$ -	7,000	-
Apprenticeship Credits for Eligible Resources				162,488	
Total Renewable Portfolio	27,810,000	2,422,140	\$ 11.48	1,879,417	22,280,875

11.86

**Note--These facilities qualify for apprenticeship credits therefore requiring less MWh for compliance

(Avg cost/MWH for resources used)

Note 1: Due to negative power market pricing, PSE wind generation resources were curtailed which impacted the level of generation at various PSE owned facilities. In order to manage ERU supply for potential CAR compliance and to ensure adequate RECs for RPS compliance, part of the curtailment strategy included purchasing REC volume equivalent to the MWh of wind generation curtailed. The power cost savings associated with the strategy resulted in approximately \$252,000, or a net benefit of \$144,000 (\$252k - \$108K)

DESIGNATED INFORMATION IS CONFIDENTIAL PER WAC 480-07-160

REDACTED VERSION

	Cost/REC	RECs	Total Cost
Total Solar REC Purchases		-	
Total Wind REC Purchases		7,000	
Total REC Purchases		7,000	\$ -

Deadline: June 1, 2018

Submission: Email this workbook and all supporting documentation to EIA@commerce.wa.gov

Questions: Glenn Blackmon, State Energy Office, (360) 725-3115, glenn.blackmon@commerce.wa.gov

Enter information in green-shaded fields.

Do not modify blue-shaded fields.

RCW 19.285.070

Reporting and public disclosure.

(1) On or before June 1, 2012, and annually thereafter, each qualifying utility shall report to the department on its progress in the preceding year in meeting the targets established in RCW 19.285.040, including expected electricity savings from the biennial conservation target, expenditures on conservation, actual electricity savings results, the utility's annual load for the prior two years, the amount of megawatt-hours needed to meet the annual renewable energy target, the amount of megawatt-hours of each type of eligible renewable resource acquired, the type and amount of renewable energy credits acquired, and 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. For each year that a qualifying utility elects to demonstrate alternative compliance under RCW 19.285.040(2) (d) or (i) or 19.285.050(1), it must include in its annual report relevant data to demonstrate that it met the criteria in that section. A qualifying utility may submit its report to the department in conjunction with its annual obligations in chapter 19.29A RCW.

(2) A qualifying utility that is an investor-owned utility shall also report all information required in subsection (1) of this section to the commission, and all other qualifying utilities shall also make all information required in subsection (1) of this section available to the auditor.

(3) A qualifying utility shall also make reports required in this section available to its customers.

WAC 194-37-060

Conservation reporting requirements.

<Conservation targets and achievement are reported in a separate worksheet.>

WAC 194-37-110

Renewable resource energy reporting.

Each utility must submit a renewable resource energy report to the department by June 1st of each year using a form provided by the department. The report must reflect the actions that the utility took by the previous January 1st to meet the renewable requirements of chapter [19.285](#) RCW for that year. For example, a utility must report by June 1, 2015, the actions it took by January 1, 2015, to meet requirements applicable to the 2015 target year.

(1) **Reporting requirements applicable to all utilities.** Each utility must report the following information:

(a) The compliance method:

(i) Renewable energy target using renewable resources and RECs – RCW [19.285.040](#) (2)(a);

(ii) Incremental cost – RCW [19.285.050](#); or

(iii) No-growth cost – RCW [19.285.040](#) (2)(d)

RENEWABLE ENERGY WORKSHEET – REVISIONS TO 2016 REPORT

In addition to submitting the 2018 report, each qualifying utility should review the renewable energy report it submitted in 2016. In many cases, the specific resources and quantities actually used to comply with the 2016 target differ from what the utility reported in June 2016. Utilities should submit a revised 2016 report if the actual values differ from the values reported in 2016.

WAC 194-37-110(4): Final compliance report. A utility must submit a final renewable compliance report by the later of (a) two years after the filing of the report required in subsections (1) through (3) of this section; or (b) ninety days after the issuance of the auditor's report for the target year. The final renewable compliance report must provide an update of any revisions to the information previously reported pursuant to this section or, if no revisions were made, notify the department that the initial report should be considered the final report.

Please use the 2016 template and mark it as "revised." Contact Commerce to obtain a copy of the 2016 reporting template if necessary.

Energy Independence Act (EIA) Renewable Energy Report 2018

Utility	Puget Sound Energy
Report Date	June 1, 2018
Utility Contact Name/Dept	Puget Sound Energy
Phone	425-456-2932
Email	chris.schaefer@pse.com

2018 Compliance Method:

- RPS Target [RCW 19.285.040(2)(a)]
- Resource Cost [RCW 19.285.050]
- No Load Growth [RCW 19.285.040(2)(d)]

Loads and Resources	
2016 Annual Load (MWh)	20,448,423
2017 Annual Load (MWh)	21,316,397
Average of 2016 & 2017 Annual Loads (MWh)	20,882,410
2018 Renewable Target (% of load)	9%
2018 Eligible Renewable Energy Target (MWh)	1,879,417
2018 Eligible Renewable Resources and RECs	2,112,182

Expenditures on Renewable Resources and RECs - 2018

Amount invested in incremental cost of eligible renewable resources and the cost of RECs	\$27,810,000
Total annual retail revenue requirement - 2018	\$1,996,287,283
Investment in renewables and RECs as a percent of retail revenue requirement	1.4%

	Water	Wind	Solar	Geothermal	Landfill Gas	Wave, Ocean, Tidal	Gas from Sewage Treatment	Biodiesel	Biomass	Qualified Biomass	Apprentice Labor Credit	Distributed Generation Credit
Eligible Renewable Resources (MWh)	120,648	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy Credits	-	1,791,746	37,300	-	-	-	-	-	-	-	162,488	-
Total Renewables (MWh+RECs)	120,648	1,791,746	37,300	-	-	-	-	-	-	-	162,488	-

2018 Reporting Year:

This renewable energy report summarizes the eligible renewables resources and renewable energy credits (RECs) that the utility has acquired by January 1, 2018 for the purpose of meeting its Energy Independence Act (EIA) renewables target for 2018. The actual resources and RECs used to comply with the 2018 EIA target may vary from those reported here. Utilities will report in June of 2020 on the actual results for 2018.

Compliance Methods:

The EIA provides three compliance methods for utilities:

- Meet the renewable energy target using any combination of renewable resources and RECs. The target for 2018 is 9% of the utility's load.
- Invest at least 4% of the utility's annual revenue requirement in the incremental cost of renewable resources and RECs.
- Invest at least 1% of its annual revenue requirement in renewable resources and RECs. This option is available only to certain utilities that are not growing.

All utilities must report the renewable resources and RECs acquired for the 2018 target year. Utilities that elect to use a compliance method based on renewable investments must provide additional information demonstrating compliance with that method. Refer to WAC 194-37-110(2) and (3) for specific requirements.

NOTE: This is a general explanation of the renewable energy requirements of the Energy Independence Act, intended to help members of the public understand the information reported by the utility. Consult Chapter 19.285 RCW and Chapter 194-37 WAC for details.

Renewable Energy Credits

Utility Puget Sound Energy
 Compliance Year 2018

WREGIS ID	Facility Name	REC Vintage (Year)	Resource Type	Apprentice Labor Eligibility	Distributed Generation Eligibility	Quantity RECs	Apprentice Labor Amount MWh equiv.	Distributed Generation Amount MWh equiv.	Explanatory Notes (as needed)
W183	Wild Horse - Wild Horse	2017	Wind	No	No	516,263	-	-	Quantity reflects planned RPS Compliance Usage Only
W184	Hopkins Ridge - Hopkins Ridge	2017	Wind	No	No	329,544	-	-	Quantity reflects planned RPS Compliance Usage Only
W1364	Wild Horse - Wild Horse - Phase II	2017	Wind	Yes	No	99,368	19,874	-	Quantity reflects planned RPS Compliance Usage Only
W1382	Hopkins Ridge - Hopkins Ridge Phase II	2017	Wind	No	No	15,881	-	-	Quantity reflects planned RPS Compliance Usage Only
W2669	Lower Snake River - Dodge Junction - LS	2017	Wind	Yes	No	413,806	82,761	-	Quantity reflects planned RPS Compliance Usage Only
W2670	Lower Snake River - Phalen Gulch - LSR	2017	Wind	Yes	No	299,266	59,853	-	Quantity reflects planned RPS Compliance Usage Only
W237	Klondike III - Klondike Wind Power III LLC	2017	Wind	No	No	110,618	-	-	Quantity reflects planned RPS Compliance Usage Only
W238	Klondike I - Klondike Wind Power LLC	2017	Wind	No	No	968	-	-	Quantity reflects planned RPS Compliance Usage Only
W248	Stateline (WA) - FPL Energy Vansycle LL	2017	Wind	No	No	3,890	-	-	Quantity reflects planned RPS Compliance Usage Only
W3260	Horse Butte Wind - Horse Butte Wind	2017	Wind	No	No	27	-	-	Quantity reflects planned RPS Compliance Usage Only
W5069	Grand View 5 East - Grand View 5 East	2017	Solar	No	No	6,741	-	-	Quantity reflects planned RPS Compliance Usage Only
W5070	Grand View 2 West - Grand View 2 West	2017	Solar	No	No	18,511	-	-	Quantity reflects planned RPS Compliance Usage Only
W5076	ID Solar 1 - ID Solar 1, LLC	2017	Solar	No	No	12,048	-	-	Quantity reflects planned RPS Compliance Usage Only
W774	Condon Wind Power Project - Condon Wi	2017	Wind	No	No	1,046	-	-	Quantity reflects planned RPS Compliance Usage Only
W833	Condon Wind Power Project - Condon Ph	2017	Wind	No	No	1,069	-	-	Quantity reflects planned RPS Compliance Usage Only
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	
				No	No		-	-	

Utility Puget Sound Energy
 Compliance Year 2018

Other notes and explanations:

Please note actual resources and RECs used to comply with the 2018 EIA Target may vary from those reported here. PSE will report in June of 2020 on the actual results for 2018.

Energy Independence Act (EIA) Incremental Cost and REC Cost Report 2018

Incremental Cost of Renewable Resources

Utility	Puget Sound Energy
Compliance Year	2018

Facility Name	WREGIS ID	MWh	Renewable Resource Annual Cost in 2018	Renewable Resource Cost per MWh	Description of Substitute Resource	Substitute Resource Annual Cost in 2018	Substitute Resource Cost per MWh	Incremental Cost of Renewable Resource in 2018
Baker River Project - Lower Baker Un	W4865	109,500	\$8,600,000	79	Long Term PPA	\$9,290,000	85	-\$690,000
Snoqualmie Falls - Snoqualmie Falls	W4866	34,164	\$3,850,000	113	Long Term PPA	\$3,180,000	93	\$670,000
Wild Horse - Wild Horse	W183	642,984	\$34,940,000	54	Peaker + LT Mkt Purchase	\$29,740,000	46	\$5,200,000
Hopkins Ridge - Hopkins Ridge	W184	466,908	\$18,770,000	40	Peaker + LT Mkt Purchase	\$20,970,000	45	-\$2,200,000
Wild Horse - Wild Horse - Phase II	W1364	91,980	\$10,030,000	109	Peaker + LT Mkt Purchase	\$5,900,000	64	\$4,130,000
Hopkins Ridge - Hopkins Ridge Phase	W1382	21,024	\$1,280,000	61	Peaker + LT Mkt Purchase	\$1,360,000	65	-\$80,000
Lower Snake River - Dodge Junction	W2669	500,172	\$39,330,000	79	Peaker + LT Mkt Purchase	\$27,960,000	56	\$11,370,000
Lower Snake River - Phalen Gulch - L	W2670	397,728	\$31,280,000	79	Peaker + LT Mkt Purchase	\$22,230,000	56	\$9,050,000
Klondike III - Klondike Wind Power III	W237	157,680	\$10,270,000	65	Peaker + LT Mkt Purchase	\$9,910,000	63	\$360,000
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
	0	-						\$0
Totals		2,422,140	\$158,350,000			\$130,540,000		\$27,810,000



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES
Apprenticeship Section
PO Box 44530; Olympia, Washington 98504-4530
(360) 902-5320; fax (360) 902-4248
website: www.apprenticeship.lni.wa.gov

April 25, 2012

Puget Sound Energy
Attn: Brian Doughty, Consulting Project Manager
Lower Snake River Wind Project - Phase 1
P.O. Box 97034
Bellevue, WA 98009-9734

RE: Certification of Apprentice Labor Standard on Lower Snake River Wind Project - Phase 1

Dear Brian Doughty:

Thank you for submitting a request for certification of the apprentice labor standard on your project to the Washington State Apprenticeship and Training Council (Council). Department staff completed a review and we received confirmation that you indeed provided sufficient evidence to verify the claim of greater than 15 percent Washington approved apprentice labor hours utilized on the Lower Snake River Wind Project - Phase 1.

The Council voted unanimously on April 19, 2012 to approve the apprentice labor standard certification request for this project. Please accept this letter as confirmation that Puget Sound Energy achieved greater than 15 percent of the total labor hours performed by registered apprentices in programs approved by the Washington State Apprenticeship and Training Council on the Lower Snake River Wind Project - Phase 1. Thank you for supporting the use of registered apprentices in the renewable energy field.

Sincerely,

Lee Newgent, Chair
Washington State Apprenticeship and Training Council

LN/jr

Cc: Council Members
Jose Rodriguez, Assistant Director/Secretary
Melinda Nichols, Apprenticeship Program Manager
Troy W. Nutter, PSE Manager for Training & Procedures



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES
Washington State Apprenticeship and Training Council
PO Box 44530; Olympia, Washington 98504-4530
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website: www.apprenticeship.lni.wa.gov

Scott Williams, Project manager
Puget Sound Energy
PO Box 90868
Bellevue, WA 98009-0868

RE: Apprentice Utilization on Wild Horse Wind Farm Expansion Project

Dear Mr. Williams:

Thank you for attending our recent Washington State Apprenticeship and Training Council (Council) meeting in Tumwater and the overview of the Wild Horse Wind Farm Expansion project. Department staff completed their review and I received confirmation that you have indeed provided sufficient evidence to verify your claim of greater than 15 percent Washington approved apprentice labor hours utilized during facility construction.

Please accept this letter as confirmation that Puget Sound Energy Company achieved greater than 15 percent of the total labor hours performed by registered apprentices in programs approved by the Council on the Wild Horse Wind Farm Expansion project.

Sincerely,

David D'Hondt, Chair
Washington State Apprenticeship and Training Council

DD/jr

Cc: Council Members
Steve McLain, Council Secretary
Elizabeth Smith, Apprenticeship Program Manager