

August 23, 2019

**VIA ELECTRONIC FILING**

Mark L. Johnson  
 Executive Director and Secretary  
 621 Woodland Square Loop SE  
 Lacey, WA 98503

**RE: Docket UE-190448—Pacific Power’s Revised 2019 Annual Renewable Portfolio Standard Report**

Pacific Power & Light Company (Pacific Power), a division of PacifiCorp, submitted its 2019 Annual Renewable Portfolio Standard (RPS) Report to the Washington Utilities and Transportation Commission on May 31, 2019. In response to feedback received at the August 8, 2019 open meeting, Pacific Power met with Staff, Public Counsel, and NWECA to reach an agreement on the treatment of confidential information in the company’s report.

Notwithstanding the company’s continued concern that customers may be exposed to a level of market price risk associated with public disclosure of compliance information, Pacific Power has agreed to publicly release certain components of the company’s report to accommodate requests from stakeholders.

The only remaining confidential information within the company’s 2019 report is resource-specific renewable energy credit (REC) prices and cost information that could be used to derive those prices. This information is redacted in the following places:

Location	Type of Information	Explanation
Narrative Report, p.9	Cost per REC Column	This column contains confidential REC prices for individual resources or contracts.
Narrative Report, p.9	Annual Cost of Renewable Energy Credits Column	This column contains cost information that could be used to derive the confidential REC prices for each individual resource or contract. Alternatively, a total value is provided across all contracts to enable calculation of an average cost/REC.
Attachment C, Tab 1	Incremental Levelized Cost Column	Redacted cells in this column contain confidential REC prices for individual resources or contracts.
Attachment C, Tab 2	Sum of incremental costs of all eligible resources Column	Redacted cells in this column contain cost information that could be used to derive the confidential REC prices for each individual resource or contract.
Attachment C, Tab 3	Sum of incremental costs of all eligible resources Column	Redacted cells in this column contain cost information that could be used to derive the confidential REC prices for each individual resource or contract.
Attachment C, Tab 4	Total Incremental Cost (as dollar \$ amt.) Column	Redacted cells in this column contain cost information that could be used to derive the confidential REC prices for each individual resource or contract.

Attachment C, Tab 4	Total Incremental Cost (\$/MWh) Column	Redacted cells in this column contain confidential REC prices for individual resources or contracts. The incremental cost of unbundled REC purchases equals the REC price.
Attachment C, Tab 4	Total Incremental Cost (\$/MWh) Multiplied by Number of Megawatt-hours Needed for Target Year Compliance Column	Redacted cells in this column contain cost information that could be used to derive the confidential REC prices for each individual resource or contract. Because the company anticipates using all available MWh from these resources in the compliance year, the numbers in this column are equal to the Total Incremental Cost (as dollar \$ amt.) column.
Cost Analysis Workpaper, Summary Tab	Dollars Per REC / MWh Column, Wind and Solar REC contracts	These cells contain confidential REC prices for individual resources or contracts.
Cost Analysis Workpaper, Summary Tab	Total Dollars Column, Wind and Solar REC contracts	Redacted cells in these columns contain cost information that could be used to derive the confidential REC prices for each individual resource or contract.
Cost Analysis Workpaper, Summary Tab	2018 Subtotal Wind Resource Cost	This cell contains cost information that could be used to derive the confidential REC prices for the single Bennet Creek and Hot Springs REC contract (cell J25 - sum of cells J13-J21). *This subtotal is not provided elsewhere in any of the attachments or workpapers in this report.
Cost Analysis Workpaper, Summary Tab	2018 Subtotal Solar Resource Cost	This cell contains cost information that would only aggregate REC contract prices across two contracts. *This subtotal is not provided elsewhere in any of the attachments or workpapers in this report.
Cost Analysis Workpaper, Summary Tab	2019 Subtotal Wind Resource Cost	This cell contains cost information that could be used to derive the confidential REC prices for the single Bennet Creek and Hot Springs REC contract (cell U24 - sum of cells U13-J20). *This subtotal is not provided elsewhere in any of the attachments or workpapers in this report.
Cost Analysis Workpaper, Summary Tab	2019 Subtotal Solar Resource Cost	This cell contains cost information that could be used to derive the confidential REC prices for the single Bennet Creek and Hot Springs REC contract (cell U46 - U44 - U35 - sum of cells U13-U20). *This subtotal is not provided elsewhere in any of the attachments or workpapers in this report.
PacifiCorp Hydro Analysis Workpapers (for JC Boyle 2, Lemolo 1 and 2, Prospect 21)	All columns left of the summary table and graph	These cells contain monthly, daily, and hourly hydroelectric generation and flow data. The company has protected hourly and finer information under the Federal Freedom of Information Act as confidential business information and requests consistent treatment here.

Pacific Power requests confidential treatment of the above referenced information in accordance with WAC 480-07-160. The documents labeled as confidential include proprietary cost data related to renewable energy credits and compliance with RCW 19.285. This confidential business information is of significant commercial value, which could expose the company to competitive injury if disclosure is unrestricted. PacifiCorp Hourly Incremental Hydro Analysis workpapers labeled as confidential include proprietary hourly hydroelectric data. This confidential business information could also expose the company to competitive injury if disclosure is unrestricted. Accordingly, Pacific Power requests confidential treatment on the basis that the documents contain “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 RCW 80.04.095 and in accordance with WAC 480-07-160(2)(b).

Please direct informal questions to Ariel Son, Regulatory Affairs Manager, at (503) 813-5410.

Sincerely,

\_\_\_\_\_/s/\_\_\_\_\_  
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Etta Lockey  
Vice President, Regulation  
Pacific Power & Light Company  
825 NE Multnomah Street, Suite 2000  
Portland, OR 97232  
(503) 813-5701  
etta.lockey@pacificorp.com

Enclosures:

190448-PPL-RPS-Rpt-8-23-19 (C).pdf  
190448-PPL-RPS-Rpt-8-23-19 (R).pdf  
190448-PPL-RPS-Attach-A-8-23-19.pdf  
190448-PPL-RPS-Attach-B-8-23-19.pdf  
190448-PPL-RPS-Attach-C-8-23-19 (R).pdf  
190448-PPL-RPS-Attach-C-8-23-19 (C).pdf  
190448-PPL-RPS-WPs-8-23-19 (C).zip  
190448-PPL-RPS-WPs-8-23-19 (R).zip  
190448-PPL-RPS-Natives-8-23-19 (C).zip  
190448-PPL-RPS-Native-8-23-19 (R).zip



Pacific Power & Light Company

Washington

Annual Renewable Portfolio Standard Report

**REDACTED per WAC 480-07-160**

**August 23, 2019**

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## Introduction

Pacific Power & Light Company (Pacific Power), a division of PacifiCorp, submits this 2019 Annual Renewable Portfolio Standard Report (Renewable Report) to the Washington Utilities and Transportation Commission (Commission) and the Washington Department of Commerce (Commerce) in accordance with reporting requirements established as part of the Energy Independence Act (EIA). The report is consistent with RCW 19.285.070 which states, in relevant part:

- (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.*
- (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.*

This report is consistent with the collaborative workshop documents addressing annual reporting requirements, in Docket UE-110523, Order 01 in Docket UE-120813, Order 01 in Docket UE-140802, and Docket UE-131723.

## Executive Summary

Under RCW 19.285.040(2)(a), each qualifying utility must use eligible renewable resources, acquire equivalent renewable energy credits (RECs), or a combination of both, to meet annual targets. As demonstrated in this report, the company will meet the targets in accordance with WAC 480-109-200(1). The company met the 2018 renewable energy target with a combination of eligible renewable resources and RECs and the company is positioned to use eligible renewable resources and RECs to supply at least nine percent of its average Washington load to satisfy the 2019 renewable energy target.

A summary of the company's 2018 and 2019 renewable targets and eligible renewable resources and RECs are provided below:

**Table 1**

<b>PacifiCorp Renewable Target, Eligible Resource and RECs</b>		
	<b>2018</b>	<b>2019</b>
Average Retail Sales (MWh)	4,101,476	4,085,207
Percentage Target	9%	9%
<b>Renewable Target</b>	<b>369,133</b>	<b>367,669</b>
<b>Qualifying Resources &amp; RECs (MWh)</b>	<b>369,133</b>	<b>367,669</b>

The company does not intend to rely on any of the alternative compliance mechanisms provided in WAC 480-109-210 for meeting either the 2018 or 2019 renewable energy targets.

## Annual Load for Previous Two Years and Renewable Energy Target

Under RCW 19.285.040(2)(c) and WAC 480-109-200(1), a utility must calculate its annual target based on its average load for the previous two years. Accordingly, using the average of the Washington annual retail loads for the previous two years, Table 2 calculates the annual renewable targets for 2018 and 2019.

**Table 2**

<b>Target Year 2018</b>	
Prior Year Retail Sales (2016)	3,981,654 MWh
Prior Year Retail Sales (2017)	4,221,298 MWh
Average Retail Sales	4,101,476 MWh
Percentage Target	9%
Renewable Target	<b>369,133 MWh/RECs</b>
<b>Target Year 2019</b>	
Prior Year Retail Sales (2017)	4,221,298 MWh
Prior Year Retail Sales (2018)	3,949,116 MWh
Average Retail Sales	4,085,207 MWh
Percentage Target	9%
Renewable Target	<b>367,669 MWh/RECs</b>



## Renewable Energy Acquired to Meet Renewable Energy Target

The company met its 2018 renewable resource target and plans to meet its 2019 renewable resource target with a combination of eligible RECs, company- and third-party-owned wind resources, and hydroelectric facilities with upgrades completed after March 1999.

The company is submitting the Commission's Renewable Portfolio Standard (RPS) Report Tool as Attachment A. The RPS Report Tool details the renewable resource target for 2018 and 2019 and the RECs and renewable resources identified to meet the 2018 and 2019 targets.

PacifiCorp will use the following company- and third-party-owned wind facilities for 2019:

**Table 3**

<b>Resource Name</b>	<b>Location</b>
Goodnoe Hills	Washington
Leaning Juniper	Oregon
Marengo I	Washington
Marengo II	Washington
Dunlap I	Wyoming
Glenrock Wind I	Wyoming
Campbell Hill/Three Buttes	Wyoming
Top of the World	Wyoming

Four of these eight wind facilities are located in the Pacific Northwest. The remainder are located in Wyoming and qualify as eligible to meet Washington's RPS.<sup>1</sup> Descriptions of the projects are referenced in the Supporting Documents for Renewable Report section of this Renewable Report. Renewable resources identified to meet the 2019 target also includes energy from wind projects that are forecasted to be repowered by the end of 2019. Facilities that are expected to be repowered in 2019 are: Glenrock Wind I, Goodnoe Hills, Marengo I, Marengo II, and Leaning Juniper.

Additionally, the company identified upgrades to hydroelectric facilities located in the Pacific Northwest that were completed after March 31, 1999, listed in Table 4 below.

**Table 4**

<b>Resource Name</b>	<b>Upgrade Date</b>
Prospect 2	1999
Lemolo 1	2003
JC Boyle	2005
Lemolo 2	2009

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<sup>1</sup> In Docket UE-151162, Order 01, the Commission found all of these resources to be eligible renewable resources under RCW 19.285.030(12)(e).

The company performed analyses to determine the incremental energy associated with upgrades to hydroelectric facilities, consistent with Method two, as identified in WAC 480-109-200(7)(c). The methodology, described in more detail in Attachment B of this report, is consistent with the methodology the company submitted to the Oregon Department of Energy to certify these facilities and calculate the percentage of the incremental energy for the Oregon RPS program. The company performed an analysis of the incremental energy for upgrades to hydroelectric facilities that includes actual generation data from 2007 through 2012. The company re-submitted the analysis to the Oregon Department of Energy in December 2013 and the Oregon Department of Energy approved the updated incremental hydropower efficiency percentages, effective January 2014. The eligibility was reviewed and made effective once again by the Oregon Department of Energy in December 2015. The company is providing the analyses in Confidential Work Papers—PacifiCorp Hourly Incremental Hydro Analyses.

In January 2017, PacifiCorp contracted to purchase the RECs from six Washington RPS-eligible solar projects over a consecutive ten-year term.

The following pages contain the company's Renewable Report which will be resubmitted to the Washington Department of Commerce upon Commission approval of this report, and include a summary of the forecasted number of megawatt-hours and RECs to meet the 2019 compliance target.

Please see Table 5 of this report for a summary of PacifiCorp's expected Washington-allocated resource costs compared to the annual revenue requirement.

# Energy Independence Act (I-937) Commerce Renewable Report – 2019

Energy Independence Act (EIA) **Renewable Energy Report 2019**

<b>Utility</b>	<b>Pacific Power &amp; Light Company</b>
Report Date	August 23, 2019
Utility Contact Name/Dept	Ariel Son
Phone	503-813-5410
Email	ariel.son@pslcorp.com

Loads and Resources	
2017 Annual Load (MWh)	4,221,298
2018 Annual Load (MWh)	3,943,116
Average of 2017 & 2018 Annual Loads (MWh)	4,085,207
2019 Renewable Target (% of load)	<b>9%</b>
2019 Eligible Renewable Energy Target (MWh)	367,669
2019 Eligible Renewable Resources and RECs	367,669

**2019 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)]

Expenditures on Renewable Resources and RECs - 2019	
Amount invested in incremental cost of eligible renewable resources and the cost of RECs	\$1,893,965
Total annual retail revenue requirement - 2019	\$330,209,153
Investment in renewables and RECs as a percent of retail revenue requirement	0.57%

	Water	Wind	Solar	Geothermal	Landfill Gas	Wave, Ocean, Tidal	Gas from Sewage Treatment	Biodiesel	Biomass	Qualified Biomass (pre-1999)	Apprentice Labor Credit	Distributed Generation Credit
Eligible Renewable Resources (MWh)	1,846	199,712	-	-	-	-	-	-	-	-	-	-
Renewable Energy Credits	-	5,139	160,972	-	-	-	-	-	-	-	-	-
Total Renewables (MWh+RECs)	1,846	204,851	160,972	-	-	-	-	-	-	-	-	-

**2019 Reporting Year:**

This renewable energy report summarizes the eligible renewables resources and renewable energy credits (RECs) that the utility has acquired by January 1, 2019 for the purpose of meeting its Energy Independence Act (EIA) renewables target for 2019. The actual resources and RECs used to comply with the 2019 EIA target may vary from those reported here. Utilities will report in June of 2021 on the actual results for 2019.

**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 2019 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 2019 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.*

## Energy Independence Act (I-937) Commerce Renewable Report – 2019

### Renewable Resources

Utility Pacific Power & Light Company  
Compliance Year 2019

WREGIS ID	Facility Name	Resource Type	Apprentice Labor Eligibility	Generation Amount (MWh)	Apprentice Labor Amount (MWh equiv.)	Explanatory Notes (as needed)
W536	Goodnoe Hills - Goodnoe Hills		No	16,098	-	
W200	Leaning Juniper I - Leaning Juniper I	Wind	No	16,388	-	
W185	Marengo - Marengo	Wind	No	26,067	-	
W772	Marengo II - Marengo II	Wind	No	12,516	-	
W1749	Top of the World - Top of the World	Wind	No	48,616	-	
W1687	Dunlap I - Dunlap I	Wind	No	29,430	-	
W964	Glenrock I - Glenrock I	Wind	No	24,118	-	
W1383	Campbell Hill - Campbell Hill	Wind	No	26,479	-	
W180	JC Boyle - JC Boyle	Water	No	246	-	
W157	Lemolo 1 - Lemolo 1	Water	No	1,208	-	
W140	Prospect 2 - Prospect 2	Water	No	283	-	
W158	Lemolo 2 - Lemolo 2	Water	No	109	-	
<b>Total</b>				<b>201,558</b>		

### Renewable Energy Credits

Utility Pacific Power & Light Company  
Compliance Year 2019

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)
W542	Bennett Creek Windfarm - Bennett Creek Windfarm	2018	Wind	No	No	3,216	-	-	
W543	Hot Springs Windfarm - Hot Springs Windfarm	2018	Wind	No	No	1,923	-	-	
W7039	Adams Solar	2018	Solar	No	No	588	-	-	
W7047	Bear Creek Solar	2018	Solar	No	No	677	-	-	
W7046	Bly Solar	2018	Solar	No	No	129	-	-	
W7044	Elbe Solar	2018	Solar	No	No	648	-	-	
W4938	Enterprise Solar, LLC - Enterprise Solar, LLC	2018	Solar	No	No	35,344	-	-	
W4619	Pavant Solar, LLC - Pavant Solar, LLC	2018	Solar	No	No	26,773	-	-	
W7039	Adams Solar	2019	Solar	No	No	4,434	-	-	
W7047	Bear Creek Solar	2019	Solar	No	No	4,455	-	-	
W7046	Bly Solar	2019	Solar	No	No	3,930	-	-	
W7044	Elbe Solar	2019	Solar	No	No	4,374	-	-	
W4619	Pavant Solar, LLC - Pavant Solar, LLC	2019	Solar	No	No	26,688	-	-	
W4938	Enterprise Solar, LLC - Enterprise Solar, LLC	2019	Solar	No	No	47,360	-	-	
W4938	Enterprise Solar, LLC - Enterprise Solar, LLC	2020	Solar	No	No	5,572	-	-	
<b>Total</b>						<b>166,111</b>			

**Designated Information is Confidential per WAC 480-07-160  
Energy Independence Act (I-937) Commerce Renewable Report – 2019**

**Incremental Cost of Renewable Resources**

			Utility					
			Compliance Year		Pacific Power & Light Company			
			2019					
Facility Name	WREGIS ID	MWh	Resource	Renewable	Description of Substitute Resource	Substitute	Substitute	Incremental Cost of Renewable Resource in 2019
			Annual Cost in 2019	Resource Cost per MWh		Resource Annual Cost in 2019	Resource Cost per MWh	
Goodnoe Hills - Goodnoe Hills	W536	16,098	227,492	14.13			-	\$227,492
Leaning Juniper I - Leaning Juniper I	W200	16,388	58,734	3.58			-	\$58,734
Marengo - Marengo	W185	26,067	168,665	6.47			-	\$168,665
Marengo II - Marengo II	W772	12,516	151,524	12.11			-	\$151,524
Lemolo 1 - Lemolo 1	W157	1,208	(54,638)	(45.23)			-	-\$54,638
Lemolo 2 - Lemolo 2	W158	109	(7,188)	(65.95)			-	-\$7,188
JC Boyle - JC Boyle	W180	246	(16,343)	(66.44)			-	-\$16,343
Prospect 2 - Prospect 2	W140	283	(11,397)	(40.27)			-	-\$11,397
Top of the World - Top of the World	W1749	48,616	413,651	8.51			-	\$413,651
Dunlap I - Dunlap I	W1687	29,430	250,406	8.51			-	\$250,406
Glenrock I - Glenrock I	W964	24,118	205,209	8.51			-	\$205,209
Campbell Hill - Campbell Hill	W1383	26,479	225,298	8.51			-	\$225,298
<b>Totals</b>		<b>201,558</b>	<b>\$1,611,412</b>					<b>\$1,611,412</b>

**Cost of Renewable Energy Credits**

			Utility					
			Compliance Year		Pacific Power & Light Company			
			2019					
Facility Name	WREGIS ID	REC Vintage (Year)	Number of RECs	Annual Cost of Renewable Energy Credits	Cost per REC	Documentation of the calculation and inputs for percentage of revenue requirement invested in renewables:		
Hot Springs Windfarm - Hot Springs Windfarm	W543	2018	1,923					
Adams Solar	W7039	2019	4,434					
Bear Creek Solar	W7047	2019	4,455					
Bly Solar	W7046	2019	3,930					
Elbe Solar	W7044	2019	4,374					
Pavant Solar, LLC - Pavant Solar, LLC	W4619	2019	26,688					
Enterprise Solar, LLC - Enterprise Solar, LLC	W4938	2019	47,360					
Adams Solar	W7039	2018	588					
Bear Creek Solar	W7047	2018	677					
Bly Solar	W7046	2018	129					
Elbe Solar	W7044	2018	648					
Enterprise Solar, LLC - Enterprise Solar, LLC	W4938	2018	35,344					
Enterprise Solar, LLC - Enterprise Solar, LLC	W4938	2020	5,572					
Pavant Solar, LLC - Pavant Solar, LLC	W4619	2018	26,773					
<b>Total</b>			<b>166,111</b>	<b>\$282,553</b>				

The 'Cost per REC' column is redacted to protect the confidential REC price for each individual resource.  
The 'Annual Cost of Renewable Energy Credits' is redacted to prohibit calculation of the confidential REC price.

## **Alternative Compliance**

Under WAC 480-109-210(2)(b), the utility must state in its report if it is relying on one of the alternative compliance mechanisms provided in WAC 480-109-220 instead of meeting its renewable resource target. The company has fully met its 2018 obligations and anticipates fully meeting its 2019 obligations without the need for an alternative compliance mechanism.

## **Resource Cost Compared to Annual Retail Revenue Requirement**

Under RCW 19.285.070(1), a utility must report the percentage of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of RECs. Similarly, under WAC 480-109-210, a utility must report the incremental cost of eligible renewable resources and RECs, and the ratio of this investment relative to the utility's total annual retail revenue requirement.

The incremental cost of an eligible renewable resource is defined in RCW 19.285.050(1)(b) 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 resource that does not qualify as eligible, where the resources being compared have the same contract length or facility life.

With the adoption of General Order R-578 in Docket UE-131723, the Commission revised rules implementing RCW 19.285, the EIA, including the application of a new methodology for calculating incremental cost. The company performed the incremental cost calculations as defined in WAC 480-109-210; please refer to the company's confidential work paper labeled as PacifiCorp Resource Incremental Cost Methodology.

### REC Costs for REC-only Purchases

The cost of RECs from the REC-only purchase is based on the contractual price set forth in the applicable bilateral agreement between the company and the counterparty.

### Incremental Costs for Wind Resources

The estimated cost of the RECs from renewable wind resources is the calculated levelized cost of each eligible renewable resource at the time of acquisition, compared to an equivalent amount of the lowest-reasonable-cost resource available to the utility at the time of the eligible resource's acquisition. The cost of RECs from PacifiCorp's resource(s) located outside of the west control area are not included in Washington customers' rates. To determine the ratio of incremental cost to revenue requirement, resource costs *outside* the west control area are calculated using the weighted average cost of the resources *within* the west control area (Goodnoe Hills, Leaning Juniper, Marengo I and Marengo II). The incremental costs associated with resources that will be repowered in 2019 were not included in the incremental costs.

## Incremental Costs for Renewable Energy from Incremental Hydro Upgrades

The estimated cost of eligible renewable energy from incremental hydro represents the calculated levelized cost of each hydro upgrade at the time of investment in the upgrade, compared to an equivalent amount of the lowest-reasonable-cost resource available to the utility at the time of the eligible resource's acquisition.

The company's confidential work papers provided with this report and labeled as PacifiCorp Resource Cost Analysis provide the key assumptions and analysis that the Company used to forecast the estimated resource costs associated with the renewable resources and RECs for the target years 2018 and 2019.

### Revenue Requirement

The revenue requirement amounts used in this Renewable Report are from the most recent general rate case, Docket UE-152253. The 2018 revenue requirement is \$330,209,153 from and the 2019 revenue requirement from is \$330,209,153.<sup>2</sup>

### Resource Costs Compared to Revenue Requirement

Table 5 shows the expected Washington-allocated resource costs (incremental cost of eligible renewable resources and the cost of RECs) compared to the annual revenue requirement for 2018 and 2019.

**Table 5**

<b>Calendar Year</b>	<b>Total Washington Allocated Resource Costs</b>	<b>Washington Annual Revenue Requirement</b>	<b>% of Washington Expected Allocated Resource Costs to Annual Revenue Requirement</b>
2018	\$ 2,325,266	\$ 330,209,153	0.70%
2019	\$ 1,893,965	\$ 330,209,153	0.57%

Based on this analysis, the company is able to meet its compliance obligations without exceeding the four percent of annual revenue requirement threshold that would allow for alternative compliance.

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<sup>2</sup> The revenue requirement number for 2018 reported in the company's 2018 report was \$346,967,880. This number has been revised to reflect the impacts of the Tax Cuts and Jobs Act.

## Multistate Allocations

Under WAC 480-109-210(e)(i), a utility serving retail customers in more than one state must allocate certificates consistent with the utility's most recent commission-approved interstate cost allocation methodology. This section explains how the company applied the current allocation methodology to arrive at the number of RECs allocated to Washington ratepayers.

PacifiCorp is a multijurisdictional utility providing electric retail service to more than 1.9 million customers in California, Idaho, Oregon, Utah, Washington, and Wyoming. Of those customers, the company serves approximately 133,000 customers in the state of Washington.

PacifiCorp allocates RECs to its states consistent with the inter-jurisdictional allocation methodologies approved in each state. California uses the 2010 Protocol inter-jurisdictional cost allocation methodology; Idaho, Oregon, Utah and Wyoming use the 2017 Protocol inter-jurisdictional allocation methodology. Both the 2010 and 2017 Protocol allocate all generation-related costs, revenues, rate base balances, and RECs to each state using the system generation (SG) allocation factor. The SG factor is calculated based on each state's contribution to PacifiCorp's energy and capacity requirements for its entire six-state system. Using this methodology, Washington's SG factor is approximately 8 percent (*i.e.* Washington comprises approximately 8 percent of PacifiCorp's six-state system).

In Washington, however, PacifiCorp uses the West Control Area Inter-Jurisdictional Allocation Methodology (WCA). This methodology allocates west control area generation resources, primarily located in California, Oregon, and Washington, using the control area generation west (CAGW) allocation factor. The CAGW factor is calculated based on each state's contribution to PacifiCorp's energy and capacity requirements for the west control area (California, Oregon, and Washington). Washington's CAGW factor is approximately 22 percent (*i.e.* Washington comprises approximately 22 percent of the west control area).

As a result of Washington's use of the WCA methodology, PacifiCorp's Washington rates reflect a CAGW share, approximately 22 percent, of west control area generation resources. Accordingly, Washington customers are entitled to approximately 22 percent of RECs from these facilities. Using different inter-jurisdictional allocation methodologies for different states, however, creates challenges because the sum of each state's allocated share may not equal 100 percent. To address this issue, PacifiCorp first allocates each state its share of RECs using the state's SG factor. Using this process, Washington receives approximately 8 percent of RECs from west control area resources.

The WCA contains the following eligible resources:

- Goodnoe Hills (wind)
- Leaning Juniper (wind)
- Marengo I (wind)
- Marengo II (wind)
- Prospect 2 (incremental hydro)
- Lemolo 1 (incremental hydro)
- Lemolo 2 (incremental hydro)
- JC Boyle (incremental hydro)



PacifiCorp addresses the variance between Washington’s SG share of west control area resources (approximately 8 percent) and Washington’s CAGW share (approximately 22 percent) by providing Washington RECs from other eligible resources. The EIA allows PacifiCorp to use RECs from PacifiCorp facilities in other states where PacifiCorp makes retail sales.<sup>3</sup> This means that the actual RECs used to fulfill Washington’s CAGW share may include RECs from resources located in any of PacifiCorp’s jurisdictions or include REC purchases, but the total RECs will equal Washington’s CAGW share of west control area resources.

In 2019, PacifiCorp plans to use company-owned generation from the following resources to provide Washington with its full CAGW allocation:

- Top of the World (wind – Wyoming)
- Dunlap I (wind – Wyoming)
- Glenrock I (wind – Wyoming)
- Campbell Hill/Three Buttes (wind – Wyoming)

PacifiCorp does not plan to use any third-party REC purchases to supply Washington’s CAGW allocation in 2019. Table 6 summarizes how PacifiCorp plans to supply Washington with its CAGW share of renewable generation in 2019.

**Table 6: Allocation of PacifiCorp’s Eligible Generation to Washington\***

<b>Year</b>	<b>Total WCA Eligible Generation (Projected)</b>	<b>Washington CAGW Allocation Factor<sup>4</sup></b>	<b>Washington CAGW Allocation<sup>5</sup></b>	<b>SG Allocation of WCA Generation</b>	<b>Adjustments from Other Eligible (Company) Resources</b>	<b>Adjustments from Purchased RECs</b>	<b>Final Allocation</b>
2019	905,839	22.251%	201,558	72,915	128,643	166,111	367,669

\*see Attachment C, “(2)(a)(ii)Annual-2019, estimate” tab for detail.

Any REC purchases necessary for RPS compliance in excess of Washington’s CAGW share of west control area resources will be reflected in Washington customers’ rates.<sup>6</sup> This treatment ensures that Washington customers receive an allocation of costs and benefits of RECs proportionate to its share of renewable resource costs reflected in rates.

PacifiCorp follows the Western Renewable Energy Generation Information System (WREGIS) and state RPS requirements to ensure that under no circumstances are any RECs double-counted.

<sup>3</sup> RCW 19.285.030(12)(e)

<sup>4</sup> Washington’s forecast CAGW factor for 2019.

<sup>5</sup> Washington’s allocation of all RPS-eligible WCA resources - wind and incremental hydro.

## **Prior Year Progress**

As evidenced in this report, the company met its Washington 2018 renewable compliance target with a combination of eligible renewable resources, REC purchases and renewable energy from hydroelectric facilities with upgrades completed after March 1999. The company has set aside the WREGIS certificates for the 2018 compliance target and upon Commission approval, will retire these WREGIS certificates. The company is providing a listing of the WREGIS certificates in its work papers labeled WREGIS Certificates for Washington Compliance for 2018.

The company does not rely on any alternative compliance mechanisms to meet its renewable resource targets for 2018.

## **Current Year Progress**

The company is positioned to meet its Washington 2019 renewable compliance target with a combination of eligible renewable resources, REC purchases and renewable energy from hydroelectric facilities with upgrades completed after March 1999. The company has also identified, to date, the WREGIS certificates that it intends to use toward the 2019 compliance target. The company is providing a listing of the WREGIS certificates in its work papers labeled WREGIS Certificates for Washington Compliance for 2019.

The company does not anticipate relying on any alternative compliance mechanisms to meet its renewable resource targets for 2019.

## **Supporting Documents for Renewable Report**

Further information about PacifiCorp's renewable portfolio standard resources may be found at:  
<https://www.pacificorp.com/energy/wind-solar.html>

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## **List of Attachments**

Attachment A – Washington Utilities and Transportation Commission RPS Report Tool

Attachment B – PacifiCorp Description of Incremental Hydro Methodology and Oregon Department of Energy Correspondence on Updated Certification for Efficiency Upgrades at Eleven Hydropower Generating Units

Attachment C – PacifiCorp Incremental Cost Report (Redacted)

# **Attachment A**

**WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**Pacific Power & Light Company**

**Renewable Report**

**RPS Reporting Tool**

**August 23, 2019**

## 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
	1	Reporting Entity	Text	B2	Enter the name of the reporting entity
	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
<b>Instructions in the section are for the cells B2:F31. Each row represents a different facility.</b>					
	1	Facility Name	Text	B2:B31	Enter the name of the qualifying facility or contract
	2	WREGIS ID	Text	C2:C31	Enter the WREGIS ID for the qualifying facility
	3	Facility Type	Toggle	D2:D31	Select the generation type for the qualifying facility
	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.
	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
<b>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.</b>					
	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
	16	Adjustment for Events Beyond Control	Number	D62:F62	Enter the annual MWh not produced due to events beyond control as outlined in RCW 19.285.040 (2)(i)



**Reporting Entity:**

<b>Pacific Power &amp; Light Company</b>
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**Reporting Date:**

<b>August 23, 2019</b>
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**RCW 19.285 Compliance Need**

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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Delivered Load to Retail Customers (MWh)	3,984,631	4,005,863	4,041,898	4,092,688	4,117,646	4,108,270	3,981,654	4,221,298	3,949,116	4,032,706
WA State RCW 19.285 Requirement		0%	3%	3%	3%	3%	9%	9%	9%	9%
<b>Quantity Required for Compliance</b>		0	119,857	120,716	122,019	123,155	370,166	364,047	369,133	367,669

**Eligible Quantity Acquired**

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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Qualifying MWh Allocated to WA		104,826	107,711	107,158	114,902	270,792	373,982	285,492	293,213	292,799
Quantity from Non REC Eligible Generation		-	-	-	-	-	-	-	-	-
<b>Total Quantity Available for RCW 19.285 Compliance</b>		<b>104,826</b>	<b>107,711</b>	<b>107,158</b>	<b>114,902</b>	<b>270,792</b>	<b>373,982</b>	<b>285,492</b>	<b>293,213</b>	<b>292,799</b>

**Sales and Transfers**

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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Quantity of RECs Sold		-	-	-	-	-	-	-	-	-
Bonus Incentives Transferred		-	-	-	-	-	-	-	-	-
Bonus Incentives Not Realized		-	-	-	-	-	-	-	-	-
<b>Total Sold / Transferred / Unrealized</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
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 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 2020 Surplus Applied to 2019  
 2020 Surplus Applied to 2021  
**Net Surplus Adjustments**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2011 Surplus Applied to 2012		(104,826)	104,826							
2012 Surplus Applied to 2011		-								
2012 Surplus Applied to 2013			(92,679)	92,679						
2013 Surplus Applied to 2012				-						
2013 Surplus Applied to 2014				(79,121)	79,121					
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015					(72,004)	72,004				
2015 Surplus Applied to 2014						-				
2015 Surplus Applied to 2016						(219,641)	219,957			
2016 Surplus Applied to 2015										
2016 Surplus Applied to 2017							(223,773)	223,773		
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018								(145,218)	145,218	
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019									(69,298)	69,298
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										-
2020 Surplus Applied to 2019										5,572
2020 Surplus Applied to 2021										
<b>Net Surplus Adjustments</b>		<b>(104,826)</b>	<b>12,147</b>	<b>13,558</b>	<b>7,117</b>	<b>(147,637)</b>	<b>(3,816)</b>	<b>78,555</b>	<b>75,920</b>	<b>74,870</b>

**Adjustment for Events Beyond Control**

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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>RCW 19.285 Compliance Surplus / (Deficit)</b>		<b>0</b>	<b>1</b>	<b>(0)</b>	<b>0</b>	<b>(0)</b>	<b>(0)</b>	<b>1</b>	<b>0</b>	<b>0</b>

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

**Note 1:** Any surplus or deficit in row 43 (RCW 19.285 Compliance Surplus / (Deficit)) is a result of rounding in the Facility Detail tab. The correct target amount of RECs have been/will be retired for all compliance years

**PACIFICORP Notes and Assumptions**

**Retail Sales:**

2010 - 2018 actual retail sales. 2019 load forecast based on 2017 IRP Update

**Facility Generation:**

2011 - 2018 is based on actual generation or REC purchase data. Generation forecast begins February 2019.

The Company uses one of three patterning methods to model wind resources. First, and if the appropriate data is available, historical monthly/seasonal patterns are developed using hourly data available over the life of the plant. This is the Company's preferred method. Second, if historical information is unavailable, but hourly data from wind site studies is, on/off peak engineering estimate patterns are developed. Third, if neither of the first two types of data is available, Energy Information Agency (EIA) wind patterning is used.

The forecasts for wind resources include generation attributed to the Company's planned repowering efforts.

**Allocation Factors:**

2011 - 2018 actual System Generation (SG) and Control Area Generation West (CAGW) allocation factors. Forecast factors (2019 onward) from 2018 Business Plan.

**REC Sales:**

The company does not plan to sell any excess RECs and will hold any excess RECs and apply to a future year target.

Facility Name:	Facility WREGIS ID:	Facility Type	Extra Apprenticeship Credit Eligibility:	Distributed Generation Bonus Eligibility:	Online Date:
Goodnoe Hills	W536	Wind	Not Eligible	Not Eligible	31-May-08
Leaning Juniper	W200	Wind	Not Eligible	Not Eligible	14-Sep-06
Marengo I	W185	Wind	Not Eligible	Not Eligible	1-Aug-07
Marengo II	W772	Wind	Not Eligible	Not Eligible	28-Jun-08
Bennett Creek Windfarm - REC Only	W542	Wind	Not Eligible	Not Eligible	30-Sep-08
Hot Springs Windfarm - REC Only	W543	Wind	Not Eligible	Not Eligible	30-Sep-08
*Tuana Springs - REC Only	W1503	Wind	Not Eligible	Not Eligible	14-May-10
Wanapum (Upgrade)	NA	ater (Incremental Hydr	Not Eligible	Not Eligible	1-Jul-63
Prospect 2 (Upgrade 1999)	W140	ater (Incremental Hydr	Not Eligible	Not Eligible	1-Oct-58
Lemolo 1 (Upgrade 2003)	W157	ater (Incremental Hydr	Not Eligible	Not Eligible	1-Jul-55
JC Boyle (Upgrade 2005)	W180	ater (Incremental Hydr	Not Eligible	Not Eligible	1-Jan-28
Lemolo 2 (Upgrade 2009)	W158	ater (Incremental Hydr	Not Eligible	Not Eligible	1-Nov-56
Seven Mile Hill I	W975	Wind	Not Eligible	Not Eligible	31-Dec-08
Nine Canyon Wind Project - REC Only	W684	Wind	Not Eligible	Not Eligible	1-Sep-02
Top of the World	W1749	Wind	Not Eligible	Not Eligible	1-Oct-10
Dunlap I	W1687	Wind	Not Eligible	Not Eligible	1-Oct-10
Campbell Hill/Three Buttes	W1383	Wind	Not Eligible	Not Eligible	31-Dec-09
Glenrock Wind I	W964	Wind	Not Eligible	Not Eligible	31-Dec-08
Rolling Hills	W928	Wind	Not Eligible	Not Eligible	17-Jan-09
SPI Aberdeen - REC Only	W1640	Biomass	Not Eligible	Not Eligible	15-Mar-03
Hidden Hollow - REC Only	W1634	Landfill Gas	Not Eligible	Not Eligible	11-Oct-05
Fighting Creek - REC Only	W2659	Landfill Gas	Not Eligible	Not Eligible	5-Mar-12
Lower Snake -- Phalen Gulch - REC Only	W2670	Wind	Not Eligible	Not Eligible	29-Feb-12
Elkhorn Valley Wind - REC Only	W186	Wind	Not Eligible	Not Eligible	20-Nov-07
Condon Wind Power Project - Condon Phase II - REC Only	W833	Wind	Not Eligible	Not Eligible	1-Jun-02
Condon Wind Power Project - Condon Wind Power Project	W774	Wind	Not Eligible	Not Eligible	31-Dec-01
Klondike I - Klondike Wind Power LLC - REC Only	W238	Wind	Not Eligible	Not Eligible	1-Jan-02
Meadow Creek Wind Farm - Five Pine Project - REC Only	W3186	Wind	Not Eligible	Not Eligible	22-Dec-12
Meadow Creek Wind Farm - North Point Wind Farm - REC	W3185	Wind	Not Eligible	Not Eligible	11-Dec-12
Nine Canyon Wind Project - Nine Canyon Phase 3 - REC On	W697	Wind	Not Eligible	Not Eligible	1-May-08
Stateline (WA) - FPL Energy Vansycle LLC - REC Only	W248	Wind	Not Eligible	Not Eligible	14-Dec-01
Adams Solar	W7039	Solar	Not Eligible	Not Eligible	27-Jul-18
Bear Creek Solar	W7047	Solar	Not Eligible	Not Eligible	28-Sep-18
Bly Solar	W7046	Solar	Not Eligible	Not Eligible	21-Dec-18
Elbe Solar	W7044	Solar	Not Eligible	Not Eligible	10-Aug-18
Enterprise Solar	W4938	Solar	Not Eligible	Not Eligible	29-Jul-16
Pavant Solar	W4619	Solar	Not Eligible	Not Eligible	30-Dec-15
Element Markets - REC Only	TBD	TBD	---	---	
			---	---	

\*Note: Includes eligible substitute RECs from Power County Wind Park South (WREGIS ID W2533)

Facility Name:

Goodnoe Hills

**MWh Allocated to WA Compliance**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Goodnoe Hills	239,431	221,156	227,258	216,762	186,746	223,899	191,917	230,513	200,003	
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	8%	8%	8%	8%	8%	8%	8%	8%	8%	
Eligible MWh Available for RCW 19.285 Compliance	18,896	17,608	17,896	17,392	15,039	18,292	15,514	18,315	16,098	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	18,896	18,896								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		17,608	17,608							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			17,896	17,896						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				11,234	11,234					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					5,383	5,383				
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								-		
2018 Surplus Applied to 2019									-	
2019 Surplus Applied to 2018									-	
2019 Surplus Applied to 2020										-
Net Surplus Adjustments	(18,896)	1,288	(288)	6,662	5,851	5,383	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	18,896	17,608	24,054	20,890	23,675	15,514	18,315	16,098	-
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Facility Name:

Leaning Juniper

**MWh Allocated to WA Compliance**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Leaning Juniper	234,789	190,905	206,164	215,245	188,567	202,605	155,685	201,665	203,599	
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	8%	8%	8%	8%	8%	8%	8%	8%	8%	
Eligible MWh Available for RCW 19.285 Compliance	18,530	15,200	16,235	17,270	15,187	16,552	12,585	16,022	16,388	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
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 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	18,530	18,530								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		15,200	15,200							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			16,235	16,235						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				17,270	17,270					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					15,187	15,187				
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									-	
2018 Surplus Applied to 2019										-
2019 Surplus Applied to 2018										-
2019 Surplus Applied to 2020										-
Net Surplus Adjustments	(18,530)	3,330	(1,035)	(1,035)	2,083	15,187	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	18,530	15,200	16,235	17,270	31,739	12,585	16,022	16,388	-
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Facility Name:

Marengo I

**MWh Allocated to WA Compliance**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Marengo I	403,408	358,669	331,240	367,390	298,771	356,053	315,543	336,426	323,826	-
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Eligible MWh Available for RCW 19.285 Compliance	31,837	28,557	26,084	29,478	24,062	29,087	25,507	26,729	26,067	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold	-	-	-	-	-	-	-	-	-	-
Bonus Incentives Transferred	-	-	-	-	-	-	-	-	-	-
Bonus Incentives Not Realized	-	-	-	-	-	-	-	-	-	-
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	31,837	31,837								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		28,557	28,557							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			26,084	26,084						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				29,478	29,478					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					24,062	24,062				
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										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	(31,837)	3,280	2,473	(3,394)	5,416	24,062	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	31,837	28,557	26,084	29,478	53,149	25,507	26,729	26,067	-
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Facility Name:

Marengo II

**MWh Allocated to WA Compliance**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Marengo II	194,378	177,552	154,612	174,766	137,848	170,369	153,361	164,436	155,513	-
Percent of MWh Qualifying Under RCW 19.285	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Eligible MWh Available for RCW 19.285 Compliance	15,341	14,137	12,175	14,022	11,102	13,918	12,396	13,065	12,516	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold	-	-	-	-	-	-	-	-	-	-
Bonus Incentives Transferred	-	-	-	-	-	-	-	-	-	-
Bonus Incentives Not Realized	-	-	-	-	-	-	-	-	-	-
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	15,341	15,341								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		14,137	14,137							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			12,175	12,175						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				14,022	14,022					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					11,102	11,102				
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										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	(15,341)	1,204	1,962	(1,847)	2,920	11,102	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	15,341	14,137	12,175	14,022	25,020	12,396	13,065	12,516	-
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Facility Name:

**Bennett Creek Windfarm - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Bennett Creek Windfarm - REC Only	12,259				8,656	11,174	9,667	3,216		
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	12,259	-	-	-	8,656	11,174	9,667	3,216	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	12,259	12,259								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-	-							
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016					8,656	8,656				
2016 Surplus Applied to 2015						-				
2016 Surplus Applied to 2017							11,174			
2017 Surplus Applied to 2016								11,174		
2017 Surplus Applied to 2018									9,667	
2018 Surplus Applied to 2017										9,667
2018 Surplus Applied to 2019										
2018 Surplus Applied to 2018								3,216		
2019 Surplus Applied to 2019									3,216	
Net Surplus Adjustments	(12,259)	12,259	-	-	(8,656)	(2,518)	1,507	6,451	3,216	

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	12,259	-	-	-	8,656	11,174	9,667	3,216	-
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Facility Name:

**Hot Springs Windfarm - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Hot Springs Windfarm - REC Only	7,963				8,028	10,218	8,846	1,923		
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%		
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	<b>7,963</b>	-	-	-	<b>8,028</b>	<b>10,218</b>	<b>8,846</b>	<b>1,923</b>	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	7,963	7,963								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013										
2014 Surplus Applied to 2015					-					
2015 Surplus Applied to 2014										
2015 Surplus Applied to 2016					8,028	8,028				
2016 Surplus Applied to 2015										
2016 Surplus Applied to 2017							10,218			
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018							8,846	8,846		
2018 Surplus Applied to 2017									1,923	1,923
2018 Surplus Applied to 2019										
<b>Net Surplus Adjustments</b>	<b>(7,963)</b>	<b>7,963</b>	<b>-</b>	<b>-</b>	<b>(8,028)</b>	<b>(2,190)</b>	<b>1,372</b>	<b>6,923</b>	<b>1,923</b>	<b>-</b>

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	7,963	-	-	-	8,028	10,218	8,846	1,923	-
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Facility Name:

**\*Tuana Springs - REC Only**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from \*Tuana Springs - 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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from *Tuana Springs - REC Only		29,430	32,556	35,021						
Percent of MWh Qualifying Under RCW 19.285		100%	100%	100%						
Percent of Qualifying MWh Allocated to WA		100%	100%	100%						
Eligible MWh Available for RCW 19.285 Compliance	-	29,430	32,556	35,021	-	-	-	-	-	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		17,177	17,177							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			6,731	6,731						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				-	-					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					-					
Net Surplus Adjustments	-	(17,177)	10,446	6,731	-	-				

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	12,253	43,002	41,752	-	-	-	-	-	-
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1,063 RECs from Power County Wind Park South

Facility Name:

**Wanapum (Upgrade)**

**MWh Allocated to WA Compliance**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Wanapum (Upgrade)		8,509	8,015							
Percent of MWh Qualifying Under RCW 19.285		100%	100%							
Percent of Qualifying MWh Allocated to WA		8%	8%							
Eligible MWh Available for RCW 19.285 Compliance	-	678	631	-	-	-	-	-	-	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
Net Surplus Adjustments	-	-	-	-	-	-	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	678	631	-	-	-	-	-	-	-
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Facility Name:

**Prospect 2 (Upgrade 1999)**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Prospect 2 (Upgrade 1999)  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
 Eligible MWh Available for RCW 19.285 Compliance

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Prospect 2 (Upgrade 1999)		4,118	3,722	3,469	2,802	4,030	4,305	3,347	3,512	
Percent of MWh Qualifying Under RCW 19.285		100%	100%	100%	100%	100%	100%	100%	100%	200%
Percent of Qualifying MWh Allocated to WA		8%	8%	8%	8%	8%	8%	8%	8%	
Eligible MWh Available for RCW 19.285 Compliance	-	328	293	278	226	329	346	266	283	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	-	-	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	328	293	278	226	329	346	266	283	-
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Facility Name:

**Lemolo 1 (Upgrade 2003)**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Lemolo 1 (Upgrade 2003)  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
 Eligible MWh Available for RCW 19.285 Compliance

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Lemolo 1 (Upgrade 2003)		17,021	12,661	14,311	12,553	13,621	17,773	12,686	15,023	
Percent of MWh Qualifying Under RCW 19.285		100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA		8%	8%	8%	8%	8%	8%	8%	8%	8%
Eligible MWh Available for RCW 19.285 Compliance	-	1,355	997	1,148	1,011	1,113	1,438	1,007	1,208	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015					-					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016						-				
2016 Surplus Applied to 2015							-			
2016 Surplus Applied to 2017								-		
2017 Surplus Applied to 2016									-	
2017 Surplus Applied to 2018										-
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	-	-	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	1,355	997	1,148	1,011	1,113	1,438	1,007	1,208	-
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Facility Name:

JC Boyle (Upgrade 2005)

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from JC Boyle (Upgrade 2005)  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
 Eligible MWh Available for RCW 19.285 Compliance

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from JC Boyle (Upgrade 2005)		3,462	2,402	2,295	2,130	2,857	4,238	2,581	3,054	
Percent of MWh Qualifying Under RCW 19.285		100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA		8%	8%	8%	8%	8%	8%	8%	8%	8%
Eligible MWh Available for RCW 19.285 Compliance	-	276	189	184	172	235	342	205	246	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015					-					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016						-				
2016 Surplus Applied to 2015					-					
2016 Surplus Applied to 2017							-			
2017 Surplus Applied to 2016						-				
2017 Surplus Applied to 2018								-		
2018 Surplus Applied to 2017									-	
2018 Surplus Applied to 2019										-
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	-	-	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	276	189	184	172	235	342	205	246	-
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Facility Name:

**Lemolo 2 (Upgrade 2009)**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Lemolo 2 (Upgrade 2009)  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
 Eligible MWh Available for RCW 19.285 Compliance

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Lemolo 2 (Upgrade 2009)		1,781	1,290	1,355	1,066	1,144	1,567	1,038	1,309	-
Percent of MWh Qualifying Under RCW 19.285		100%	100%	100%	100%	100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA		8%	8%	8%	8%	8%	8%	8%	8%	8%
Eligible MWh Available for RCW 19.285 Compliance	-	142	102	109	86	95	127	84	109	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015					-					
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016						-				
2016 Surplus Applied to 2015							-			
2016 Surplus Applied to 2017								-		
2017 Surplus Applied to 2016									-	
2017 Surplus Applied to 2018										-
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	-	-	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	142	102	109	86	95	127	84	109	-
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Facility Name:

**Nine Canyon Wind Project - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Nine Canyon Wind Project - REC Only					2,500	8,225				
Percent of MWh Qualifying Under RCW 19.285					100%	100%	100%	100%	100%	300%
Percent of Qualifying MWh Allocated to WA					100%	100%				
Eligible MWh Available for RCW 19.285 Compliance	-	-	-	-	2,500	8,225	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	-									
2012 Surplus Applied to 2011		-								
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012				-						
2013 Surplus Applied to 2014					-					
2014 Surplus Applied to 2013						-				
2014 Surplus Applied to 2015							-			
2015 Surplus Applied to 2014								-		
2015 Surplus Applied to 2016						2,500				
2016 Surplus Applied to 2015							2,500			
2016 Surplus Applied to 2017								8,225		
2017 Surplus Applied to 2016									8,225	
2017 Surplus Applied to 2018										8,225
Net Surplus Adjustments	-	-	-	-	(2,500)	(5,725)	8,225	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	2,500	8,225	-	-	-
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Facility Name:

Top of the World

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Top of the World  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
 Eligible MWh Available for RCW 19.285 Compliance

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Top of the World					570,069	651,049	611,543	532,188	603,949	
Percent of MWh Qualifying Under RCW 19.285					100%	100%	100%	100%	100%	
Percent of Qualifying MWh Allocated to WA					8%	8%	8%	8%	8%	
Eligible MWh Available for RCW 19.285 Compliance	-	-	-	-	45,911	53,189	49,434	42,284	48,616	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012	-									
2012 Surplus Applied to 2011		-								
2012 Surplus Applied to 2013			-							
2013 Surplus Applied to 2012				-						
2013 Surplus Applied to 2014					-					
2014 Surplus Applied to 2013						-				
2014 Surplus Applied to 2015							-			
2015 Surplus Applied to 2014								-		
2015 Surplus Applied to 2016						45,911				
2016 Surplus Applied to 2015							45,911			
2016 Surplus Applied to 2017								53,189		
2017 Surplus Applied to 2016									53,189	
2017 Surplus Applied to 2018										-
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	(45,911)	(7,278)	53,189	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	-	-	-	-	45,911	102,623	42,284	48,616	-
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Facility Name:

Dunlap I

**MWh Allocated to WA Compliance**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Dunlap I					339,706	388,498	351,261	391,874	365,607	
Percent of MWh Qualifying Under RCW 19.285					100%	100%	100%	100%	100%	
Percent of Qualifying MWh Allocated to WA					8%	8%	8%	8%	8%	
Eligible MWh Available for RCW 19.285 Compliance	-	-	-	-	27,359	31,741	25,412	31,135	29,430	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018		
2011 Surplus Applied to 2012	-	-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012		-	-							
2013 Surplus Applied to 2014			-	-						
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				-						
2015 Surplus Applied to 2014					-					
2015 Surplus Applied to 2016					27,359	27,359				
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							24,513	24,513		
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	(27,359)	27,359	(24,513)	24,513	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	-	-	-	-	59,100	899	55,648	29,430	-
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Facility Name:

**Campbell Hill/Three Buttes**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Campbell Hill/Three Buttes  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
 Eligible MWh Available for RCW 19.285 Compliance

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
Total MWh Produced / Purchased from Campbell Hill/Three Buttes					294,027	333,872	311,597	309,188	328,969	
Percent of MWh Qualifying Under RCW 19.285					100%	100%	100%	100%	100%	
Percent of Qualifying MWh Allocated to WA					8%	8%	8%	8%	8%	
Eligible MWh Available for RCW 19.285 Compliance	-	-	-	-	23,680	27,276	25,187	24,567	26,479	

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016					23,680	23,680				
2016 Surplus Applied to 2015							-			
2016 Surplus Applied to 2017								-		
2017 Surplus Applied to 2016									25,187	
2017 Surplus Applied to 2018										25,187
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019										
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
Net Surplus Adjustments	-	-	-	-	(23,680)	23,680	(25,187)	25,187	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	-	-	-	-	50,956	-	49,754	26,479	-
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Facility Name:

Rolling Hills

**MWh Allocated to WA Compliance**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
				5,468					
				100%					
				100%					
-	-	-	-	5,468	-	-	-	-	-

**Non REC Eligible Generation**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 Net Surplus Adjustments

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	-								
-									
	-								
		-							
			-						
				-					
					-				
					5,468				
						5,468			
							-	-	-
								-	-
-	-	-	-	(5,468)	5,468	-	-	-	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

-	-	-	-	-	5,468	-	-	-	-
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Facility Name:

**SPI Aberdeen - REC Only**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from SPI Aberdeen - 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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from SPI Aberdeen - REC Only					40,000					
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	-	-	-	-	40,000	-	-	-	-	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
Net Surplus Adjustments	-	-	-	-	-	-	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	-	-	-	40,000	-	-	-	-	-
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Facility Name:

**Fighting Creek - REC Only**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Fighting Creek - 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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Fighting Creek - REC Only					730					
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	-	-	-	-	730	-	-	-	-	-

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 Net Surplus Adjustments

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016						730				
2016 Surplus Applied to 2015							-			
2016 Surplus Applied to 2017								-		
2017 Surplus Applied to 2016									-	
2017 Surplus Applied to 2018										-
Net Surplus Adjustments	-	-	-	-	(730)	730	-	-	-	-

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

Contribution to RCW 19.285 Compliance	-	-	-	-	-	730	-	-	-	-
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Facility Name:

**Lower Snake – Phalen Gulch - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Lower Snake – Phalen Gulch - REC Only					1,300					
Percent of MWh Qualifying Under RCW 19.285					100%		100%	100%	200%	300%
Percent of Qualifying MWh Allocated to WA					100%					
Eligible MWh Available for RCW 19.285 Compliance	-	-	-	-	1,300	-	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			-							
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				-						
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					1,300					
2016 Surplus Applied to 2015						1,300				
2016 Surplus Applied to 2017							-			
2017 Surplus Applied to 2016							-	-		
2017 Surplus Applied to 2018								-	-	
Net Surplus Adjustments	-	-	-	-	(1,300)	1,300	-	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	1,300	-	-	-	-
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Facility Name:

**Elkhorn Valley Wind - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Elkhorn Valley Wind - REC Only					4,468					
Percent of MWh Qualifying Under RCW 19.285					100%					
Percent of Qualifying MWh Allocated to WA					100%					
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	4,468	-	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016					4,468	4,468				
2016 Surplus Applied to 2015										
2016 Surplus Applied to 2017										
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	(4,468)	4,468	-	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	4,468	-	-	-	-
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Facility Name:

**Condon Wind Power Project - Condon Phase II - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Condon Wind Power Project - Condon Phase II - REC Only						7,725				
Percent of MWh Qualifying Under RCW 19.285						100%	100%	100%	200%	300%
Percent of Qualifying MWh Allocated to WA						100%				
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	<b>7,725</b>	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	(7,725)	7,725	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	7,725	-	-	-
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Facility Name:

**Condon Wind Power Project - Condon Wind Power Project - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Condon Wind Power Project - Condon Wind Power Project - REC Only						8,286				
Percent of MWh Qualifying Under RCW 19.285						100%	100%	100%	200%	300%
Percent of Qualifying MWh Allocated to WA						100%				
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	<b>8,286</b>	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	(8,286)	8,286	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	8,286	-	-	-
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Facility Name: **Meadow Creek Wind Farm - Five Pine Project - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Meadow Creek Wind Farm - Five Pine Project - REC Only						29,719				
Percent of MWh Qualifying Under RCW 19.285						100%				
Percent of Qualifying MWh Allocated to WA						100%				
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	29,719	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	(29,719)	29,719	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	29,719	-	-	-
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Facility Name: **Klondike I - Klondike Wind Power LLC - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Klondike I - Klondike Wind Power LLC - REC Only						8,543				
Percent of MWh Qualifying Under RCW 19.285						100%				
Percent of Qualifying MWh Allocated to WA						100%				
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	<b>8,543</b>	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	(8,543)	8,543	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	8,543	-	-	-
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Facility Name:

**Meadow Creek Wind Farm - North Point Wind Farm - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Total MWh Produced / Purchased from Meadow Creek Wind Farm - North Point Wind Farm - REC Only						2,644				
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	-	-	-	-	-	2,644	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
Total Quantity from Non REC Eligible Generation	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
Total Sold / Transferred / Unrealized	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			-							
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				-						
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					-					
2016 Surplus Applied to 2015						-				
2016 Surplus Applied to 2017							-			
2017 Surplus Applied to 2016								-		
2017 Surplus Applied to 2018									-	
Net Surplus Adjustments	-	-	-	-	-	(2,644)	2,644	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	2,644	-	-	-
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Facility Name:

**Nine Canyon Wind Project - Nine Canyon Phase 3 - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Total MWh Produced / Purchased from Nine Canyon Wind Project - Nine Canyon Phase 3 - REC Only						4,668				
Percent of MWh Qualifying Under RCW 19.285						100%				
Percent of Qualifying MWh Allocated to WA						100%				
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	<b>4,668</b>	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017										-
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	(4,668)	4,668	-	-	-

**Adjustment for Events Beyond Control**

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	4,668	-	-	-
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Facility Name:

**Stateline (WA) - FPL Energy Vansycle LLC - REC Only**

**MWh Allocated to WA Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Total MWh Produced / Purchased from Stateline (WA) - FPL Energy Vansycle LLC - REC Only						12,946				
Percent of MWh Qualifying Under RCW 19.285						100%				
Percent of Qualifying MWh Allocated to WA						100%				
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	<b>12,946</b>	-	-	-	-

**Non REC Eligible Generation**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

	2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012		-								
2013 Surplus Applied to 2014			-							
2014 Surplus Applied to 2013			-							
2014 Surplus Applied to 2015				-						
2015 Surplus Applied to 2014				-						
2015 Surplus Applied to 2016					-					
2016 Surplus Applied to 2015						-				
2016 Surplus Applied to 2017						12,946	12,946			
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	<b>(12,946)</b>	<b>12,946</b>	-	-	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

	-	-	-	-	-	-	<b>12,946</b>	-	-	-
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Facility Name:

Adams Solar

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Adams Solar  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
**Eligible MWh Available for RCW 19.285 Compliance**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
							12,017	19,929	
							100%	100%	
							22%	22%	
-	-	-	-	-	-	-	588	4,434	-

**Non REC Eligible Generation**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

2011	2012	2013	2014	2015	2016	2017	2017	2018	2019
-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
**Net Surplus Adjustments**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2019
	-								
-									
	-	-							
		-	-						
			-	-					
				-	-				
					-	-			
						-			
							-		
								-	
									-
							588	588	
									-
							(588)	588	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

-	-	-	-	-	-	-	-	5,022	-
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Facility Name:

**Bear Creek Solar**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Bear Creek Solar  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
**Eligible MWh Available for RCW 19.285 Compliance**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
							5,710	20,020	
							100%	100%	
							22%	22%	
-	-	-	-	-	-	-	677	4,455	-

**Non REC Eligible Generation**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
**Net Surplus Adjustments**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	-								
-									
	-	-							
		-	-						
		-	-						
			-	-					
				-	-				
					-	-			
						-			
							-		
								-	
									-
							677	677	
							(677)	677	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

-	-	-	-	-	-	-	-	5,132	-
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Facility Name:

Bly Solar

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Bly Solar  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
**Eligible MWh Available for RCW 19.285 Compliance**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
						-	587	17,663	
							100%	100%	
							22%	22%	
-	-	-	-	-	-	-	129	3,930	-

**Non REC Eligible Generation**

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

2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

2011	2012	2013	2014	2015	2016	2017	2018	2018	2018
-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
**Net Surplus Adjustments**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	-								
-									
	-	-							
		-	-						
			-	-					
				-	-				
					-	-			
						-			
							-		
								-	
									-
							129	129	
									-
						-	(129)	129	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

-	-	-	-	-	-	-	-	4,059	-
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Facility Name:

**Elbe Solar**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Elbe Solar  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
**Eligible MWh Available for RCW 19.285 Compliance**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
					-	-	10,628	19,659	-
							100%	100%	
					0%	0%	22%	22%	100%
-	-	-	-	-	-	-	648	4,374	-

**Non REC Eligible Generation**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
**Net Surplus Adjustments**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	-								
-									
	-	-							
		-	-						
			-	-					
				-	-				
					-	-			
						-			
							-		
								-	
									-
							648	648	
									-
							(648)	648	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

-	-	-	-	-	-	-	-	5,022	-
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Facility Name:

**Enterprise Solar**

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Enterprise Solar  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
**Eligible MWh Available for RCW 19.285 Compliance**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total MWh Produced / Purchased from Enterprise Solar						84,577	224,267	225,336	212,843	213,204
Percent of MWh Qualifying Under RCW 19.285						100%	100%	100%	100%	100%
Percent of Qualifying MWh Allocated to WA						23%	22%	22%	22%	22%
<b>Eligible MWh Available for RCW 19.285 Compliance</b>	-	-	-	-	-	<b>19,234</b>	<b>50,456</b>	<b>49,593</b>	<b>47,360</b>	<b>47,440</b>

**Non REC Eligible Generation**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Extra Apprenticeship Credit	-	-	-	-	-	-	-	-	-	-
Distributed Generation Bonus	-	-	-	-	-	-	-	-	-	-
<b>Total Quantity from Non REC Eligible Generation</b>	-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Quantity of RECs Sold										
Bonus Incentives Transferred										
Bonus Incentives Not Realized										
<b>Total Sold / Transferred / Unrealized</b>	-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
 2020 Surplus Applied to 2019  
 2020 Surplus Applied to 2021  
**Net Surplus Adjustments**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011 Surplus Applied to 2012		-								
2012 Surplus Applied to 2011	-									
2012 Surplus Applied to 2013		-								
2013 Surplus Applied to 2012			-							
2013 Surplus Applied to 2014				-						
2014 Surplus Applied to 2013					-					
2014 Surplus Applied to 2015						-				
2015 Surplus Applied to 2014							-			
2015 Surplus Applied to 2016								-		
2016 Surplus Applied to 2015									-	
2016 Surplus Applied to 2017						19,234	19,234			
2017 Surplus Applied to 2016										
2017 Surplus Applied to 2018							50,456	50,456		
2018 Surplus Applied to 2017										
2018 Surplus Applied to 2019								35,344	35,344	
2019 Surplus Applied to 2018										
2019 Surplus Applied to 2020										
2020 Surplus Applied to 2019										5,572
2020 Surplus Applied to 2021										
<b>Net Surplus Adjustments</b>	-	-	-	-	-	<b>(19,234)</b>	<b>(31,222)</b>	<b>15,112</b>	<b>40,916</b>	-

1+4-3-2

Adjustment for Events Beyond Control

Adjustment for Events Beyond Control										
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**Contribution to RCW 19.285 Compliance**

<b>Contribution to RCW 19.285 Compliance</b>	-	-	-	-	-	-	<b>19,234</b>	<b>64,705</b>	<b>88,276</b>	<b>47,440</b>
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Facility Name:

Pavant Solar

**MWh Allocated to WA Compliance**

Total MWh Produced / Purchased from Pavant Solar  
 Percent of MWh Qualifying Under RCW 19.285  
 Percent of Qualifying MWh Allocated to WA  
**Eligible MWh Available for RCW 19.285 Compliance**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
				1,391	109,951	118,002	121,657	119,939	
					100%	100%	100%	100%	
				23%	23%	22%	22%	22%	
-	-	-	-	316	25,003	26,549	26,773	26,688	-

**Non REC Eligible Generation**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

**REC Sales / Transfers**

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

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-

**Adjustments**

2011 Surplus Applied to 2012  
 2012 Surplus Applied to 2011  
 2012 Surplus Applied to 2013  
 2013 Surplus Applied to 2012  
 2013 Surplus Applied to 2014  
 2014 Surplus Applied to 2013  
 2014 Surplus Applied to 2015  
 2015 Surplus Applied to 2014  
 2015 Surplus Applied to 2016  
 2016 Surplus Applied to 2015  
 2016 Surplus Applied to 2017  
 2017 Surplus Applied to 2016  
 2017 Surplus Applied to 2018  
 2018 Surplus Applied to 2017  
 2018 Surplus Applied to 2019  
 2019 Surplus Applied to 2018  
 2019 Surplus Applied to 2020  
**Net Surplus Adjustments**

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	-								
-									
	-								
		-							
			-						
				-					
					-				
				316	316				
					25,003	25,003			
						26,549	26,549		
							26,773	26,773	
-	-	-	-	(316)	(24,687)	(1,546)	(224)	26,773	-

Adjustment for Events Beyond Control

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**Contribution to RCW 19.285 Compliance**

-	-	-	-	-	316	25,003	26,549	53,461	-
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# **Attachment B**

## **Attachment B**

### Description of Hydroelectric Efficiency Analysis

The incremental hydro generation resulting from efficiency gains from hydropower upgrades were calculated using the same method that PacifiCorp submitted to the Oregon Department of Energy for certification of PacifiCorp's facilities as eligible for the Oregon Renewable Portfolio Standard program.

Historical hourly generation data for the period 2007 through 2012 was collected for each unit that was upgraded. Each hour of generation was modified to create two additional hourly profiles representing the efficiency of the unit before and after the upgrade. The hourly pre- and post- efficiency values were based on curves developed from the unit index tests or manufacturer-provided theoretical curves. Efficiency gain for each hour was calculated by taking the difference between the new and old efficiency value and dividing it by the old efficiency value. This gain was then multiplied by the post upgrade generation value to produce an incremental megawatt-hour gain. The initial calculated incremental gain was subtracted from the pre/post upgraded generation profiles to exclude the generation associated with the upgrade.

Generation improvements were calculated for every instance when efficiency improvements were positive including those periods when the unit was ramping up to maximum efficiency. In some cases, portions of the post efficiency upgrade curve are less than the pre upgrade curve. In instances that the efficiency gain was negative, generation was not included in the calculation. Further, since in some cases the post upgrade curve extended beyond the pre upgrade curve (i.e. the new turbine had a higher generation capacity) generation improvements were capped at the point when flows on the pre and post upgrade curve were equal.



# Oregon

Kate Brown, Governor

Department of Energy

625 Marion St NE

Salem, OR 97301-3742

Phone: 503-378-4040

Toll Free: 1-800-221-8035

FAX: 503-373-7806

www.oregon.gov/energy

December 29, 2015

Pooja Kishore  
PacifiCorp  
825 NE Multnomah St.  
Portland, OR 97232



**RE: Updated Certification for Efficiency Upgrades at Eleven Hydropower Generating Units**

Dear Ms. Kishore:

The Oregon Department of Energy approved Pacific Power's request for an updated incremental hydropower efficiency percentage in April 2014 for the following eleven generating units. As part of the update, Pacific Power provided the department with hourly generation data for the time period 2007 through 2012. The Department is updating the Eligible Thru date for these facilities to reflect Oregon Administrative Rules adopted by the Department in 2014.

Generating Unit	WREGIS Number	Approval Number	Incremental Percentage	Eligible Thru Date
Prospect 2	W140	12alt002or	1.68%	January 2021
Yale 1 & 2	W141	12alt003wa	1.35%	January 2021
Copco 1	W142	12alt004ca	0.52%	January 2021
Cutler	W151	12alt005ut	3.10%	January 2021
Lemolo 1	W157	12alt006or	10.16%	January 2021
Lemolo 2	W158	12alt007or	0.78%	January 2021
Oneida	W160	12alt008id	7.87%	January 2021
Pioneer	W162	12alt009ut	6.74%	January 2021
Prospect 3	W164	12alt010or	10.71%	January 2021
Big Fork	W179	12alt011mt	4.22%	January 2021
JC Boyle	W180	12alt012or	1.33%	January 2021

If any changes are made to these facility that could affect their eligibility for the Oregon RPS, the Department must be notified.

Please contact me with any questions about this letter or approval.

Best,

Julie Peacock  
WREGIS Program Administrator-Oregon  
Oregon Department of Energy  
503.373.2125  
Julie.peacock@state.or.us



**CONFIDENTIAL**

**Attachment C**

## One Time Calculation of Incremental Cost for Each (All) Eligible Resource(s)

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

Resource	Incremental Levelized Cost (\$/REC/MWh)	Levelized Cost Eligible Renewable Resource (\$/MWh)	\$	Energy	Capacity	Capacity	\$	\$
			Total Annual Cost (\$)	Levelized Cost	Levelized Cost	Total Alternative Cost (\$)	Incremental Cost (\$)	Washington Share (\$)
Goodnoe Hills	14.13	89.86	23,998,180	66.28	9.44	20,223,968	3,774,212	-
Leaning Juniper	3.58	76.91	23,505,014	64.26	9.06	22,409,681	1,095,332	-
Marengo I	6.47	81.28	31,977,638	65.53	9.28	29,431,936	2,545,702	-
Marengo II	12.11	87.89	16,471,142	66.28	9.50	14,202,225	2,268,916	-
Lemolo 1 (Upgrade 2003)	(45.23)	3.91	51,351	37.76	11.37	645,674	(594,322)	-
Lemolo 2 (Upgrade 2009)	(65.95)	51.55	886,739	92.87	24.62	2,021,147	(1,134,408)	-
JC Boyle (Upgrade 2005)	(66.44)	3.26	113,445	39.00	28.09	2,336,870	(2,223,425)	-
Prospect 2 (Upgrade 1999)	(40.27)	4.31	39,062	34.93	10.47	411,164	(372,102)	-
Top of the World	8.51							
Dunlap I	8.51							
Seven Mile Hill I	8.51							
Glenrock I	8.51							
Campbell Hill	8.51							
Bennett Creek								
Hot Springs								
Pavant I								
Enterprise								
Adams Solar								
Bear Creek Solar								
Bly Solar								
Elbe Solar								
<b>Total Renewable Resource Cost</b>			97,042,570			91,682,665	5,359,905	-

Note: Washington's share of the resource varies from year to year, depending on the state's actual System Generation (SG) Allocation factor.

Note: Please refer to confidential workbook '190448-PPL-WP-2a-Resource-Cost-Anlys-2018-WA-RPS-Rpt-r-8-23-19 (C)' for details

<b>Washington Share:</b>	
2018 ALL RESOURCES	
TOTAL INCREMENTAL COST = ENERGY + CAPACITY	-

## 2018 Actual 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

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	TARGET YEAR: ALL AVAILABLE RESOURCES BASED ON ACTUAL RESULTS			TARGET YEAR: FORECAST SUBJECT TO CHANGE		
	sum of incremental costs of all eligible resources	RECs Generated or Purchased	Revenue from REC sales	sum of incremental costs of all eligible	RECs purchased	Revenue from REC sales
Goodnoe Hills	258,822	18,315	0			
Leaning Juniper	57,422	16,022	0			
Marengo I	172,949	26,729	0			
Marengo II	158,170	13,065	0			
Lemolo 1 (Upgrade 2003)	(45,547)	1,007	0			
Lemolo 2 (Upgrade 2009)	(5,539)	84	0			
JC Boyle (Upgrade 2005)	(13,619)	205	0			
Prospect 2 (Upgrade 1999)	(10,713)	266	0			
<b>SG Total</b>		<b>75,693</b>				
Top of the World	359,775	42,284	0			
Dunlap I	473,483	55,648	0			
Seven Mile Hill I	100,775	11,844	0			
Glenrock I	205,422	24,143	0			
Campbell Hill	423,334	49,754	0			
<b>CAGW Total</b>		<b>183,673</b>				
WIND REC Only						
Bennett Creek Windfarm - REC Only		9,667	0			
Hot Springs Wind Farm - REC Only		8,846	0			
Solar REC Only						
Pavant		26,549	0			
Enterprise		64,705	0			
<b>REC Only Total</b>		<b>109,767</b>				
Total	2,325,266	369,133	0			
<b>WA Share</b>	<b>2,325,266</b>	<b>369,133</b>	<b>0</b>			

Annual Revenue Requirement (most recent rate case)	330,209,153	
CALCULATION 1 :	2,325,266	CALCULATION 2:
	0.70%	



## 2019 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

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	ALL AVAILABLE RESOURCES ESTIMATED			TARGET YEAR: BASED ON EXPECTED COMPLIANCE RESOURCES		
	sum of incremental costs of all eligible resources	RECs Generated or Purchased	Revenue from REC sales	sum of incremental costs of all eligible resources	RECs Generated or Purchased	Revenue from REC sales
Goodnoe Hills	227,492	16,098	0	227,492	16,098	0
Leaning Juniper	58,734	16,388	0	58,734	16,388	0
Marengo I	168,665	26,067	0	168,665	26,067	0
Marengo II	151,524	12,516	0	151,524	12,516	0
Lemolo 1 (Upgrade 2003)	(54,638)	1,208	0	(54,638)	1,208	0
Lemolo 2 (Upgrade 2009)	(7,188)	109	0	(7,188)	109	0
JC Boyle (Upgrade 2005)	(16,343)	246	0	(16,343)	246	0
Prospect 2 (Upgrade 1999)	(11,397)	283	0	(11,397)	283	0
<b>SG Total</b>		<b>72,915</b>			<b>72,915</b>	
Top of the World	413,651	48,616	0	413,651	48,616	0
Dunlap I	250,406	29,430	0	250,406	29,430	0
Glenrock I	205,209	24,118	0	205,209	24,118	0
Campbell Hill	225,298	26,479	0	225,298	26,479	0
<b>CAGW Total</b>		<b>128,643</b>			<b>128,643</b>	
<b>WIND REC Only</b>						
Bennett Creek Windfarm		3,216	0		3,216	0
Hot Springs Wind Farm		1,923	0		1,923	0
<b>SOLAR REC Only</b>						
Adams Solar		5,022	0		5,022	0
Bear Creek Solar		5,132	0		5,132	0
Bly Solar		4,059	0		4,059	0
Elbe Solar		5,022	0		5,022	0
Pavant		53,461	0		53,461	0
Enterprise		88,276	0		88,276	0
<b>REC Only Total</b>		<b>166,111</b>			<b>166,111</b>	
<b>Total</b>	<b>1,893,965</b>	<b>367,669</b>	<b>0</b>	<b>1,893,965</b>	<b>367,669</b>	<b>0</b>
<b>WA Share</b>	<b>1,893,965</b>	<b>367,669</b>		<b>1,893,965</b>	<b>367,669</b>	

Annual Revenue Requirement (most recent rate case)		330,209,153		330,209,153
	CALCULATION 1:	1,893,965	CALCULATION 2:	1,893,965
		0.574%		0.574%

**(iii)(A) & (B) Annual Reporting Summary Data: 2018 and 2019**

**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.

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
Goodnoe Hills	258,822	18,315	14.13	18,315	258,822
Leaning Juniper	57,422	16,022	3.58	16,022	57,422
Marengo I	172,949	26,729	6.47	26,729	172,949
Marengo II	158,170	13,065	12.11	13,065	158,170
Lemolo 1 (Upgrade 2003)	(45,547)	1,007	(45.23)	1,007	(45,547)
Lemolo 2 (Upgrade 2009)	(5,539)	84	(65.95)	84	(5,539)
JC Boyle (Upgrade 2005)	(13,619)	205	(66.44)	205	(13,619)
Prospect 2 (Upgrade 1999)	(10,713)	266	(40.27)	266	(10,713)
Top of the World - Top of the World	359,775	42,284	8.51	42,284	359,775
Dunlap I - Dunlap I	473,483	55,648	8.51	55,648	473,483
Seven Mile Hill I	100,775	11,844	8.51	11,844	100,775
Glenrock I - Glenrock I	205,422	24,143	8.51	24,143	205,422
Campbell Hill	423,334	49,754	8.51	49,754	423,334
Bennett Creek Windfarm - Bennett Creek Windfarm		9,667		9,667	
Hot Springs Windfarm - Hot Springs Windfarm		8,846		8,846	
Adams Solar	0	0		0	0
Bear Creek Solar	0	0		0	0
Bly Solar	0	0		0	0
Elbe Solar	0	0		0	0
Pavant Solar		26,549		26,549	
Enterprise Solar		64,705		64,705	
<b>TOTAL</b>	<b>2,325,266</b>	<b>369,133</b>		<b>369,133</b>	<b>2,325,266</b>

\*NOTE: does not include 2018 vintage RECs carried forward to 2019 compliance period

**2019**

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.

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
Goodnoe Hills	227,492	16,098	14.13	16,098	227,492
Leaning Juniper	58,734	16,388	3.58	16,388	58,734
Marengo I	168,665	26,067	6.47	26,067	168,665
Marengo II	151,524	12,516	12.11	12,516	151,524
Lemolo 1 (Upgrade 2003)	(54,638)	1,208	(45.23)	1,208	(54,638)
Lemolo 2 (Upgrade 2009)	(7,188)	109	(65.95)	109	(7,188)
JC Boyle (Upgrade 2005)	(16,343)	246	(66.44)	246	(16,343)
Prospect 2 (Upgrade 1999)	(11,397)	283	(40.27)	283	(11,397)
Top of the World - Top of the World	413,651	48,616	8.51	48,616	413,651
Dunlap I - Dunlap I	250,406	29,430	8.51	29,430	250,406
Glenrock I - Glenrock I	205,209	24,118	8.51	24,118	205,209
Campbell Hill - Campbell Hill	225,298	26,479	8.51	26,479	225,298
Bennett Creek Windfarm - Bennett Creek Windfarm		3,216		3,216	
Hot Springs Windfarm - Hot Springs Windfarm		1,923		1,923	
Adams Solar		5,022		5,022	
Bear Creek Solar		5,132		5,132	
Bly Solar		4,059		4,059	
Elbe Solar		5,022		5,022	
Pavant Solar		53,461		53,461	
Enterprise Solar		88,276		88,276	
<b>TOTAL</b>	<b>1,893,965</b>	<b>367,669</b>		<b>367,669</b>	<b>1,893,965</b>

\*NOTE: does not include 2019 vintage RECs carried forward to 2020 compliance period